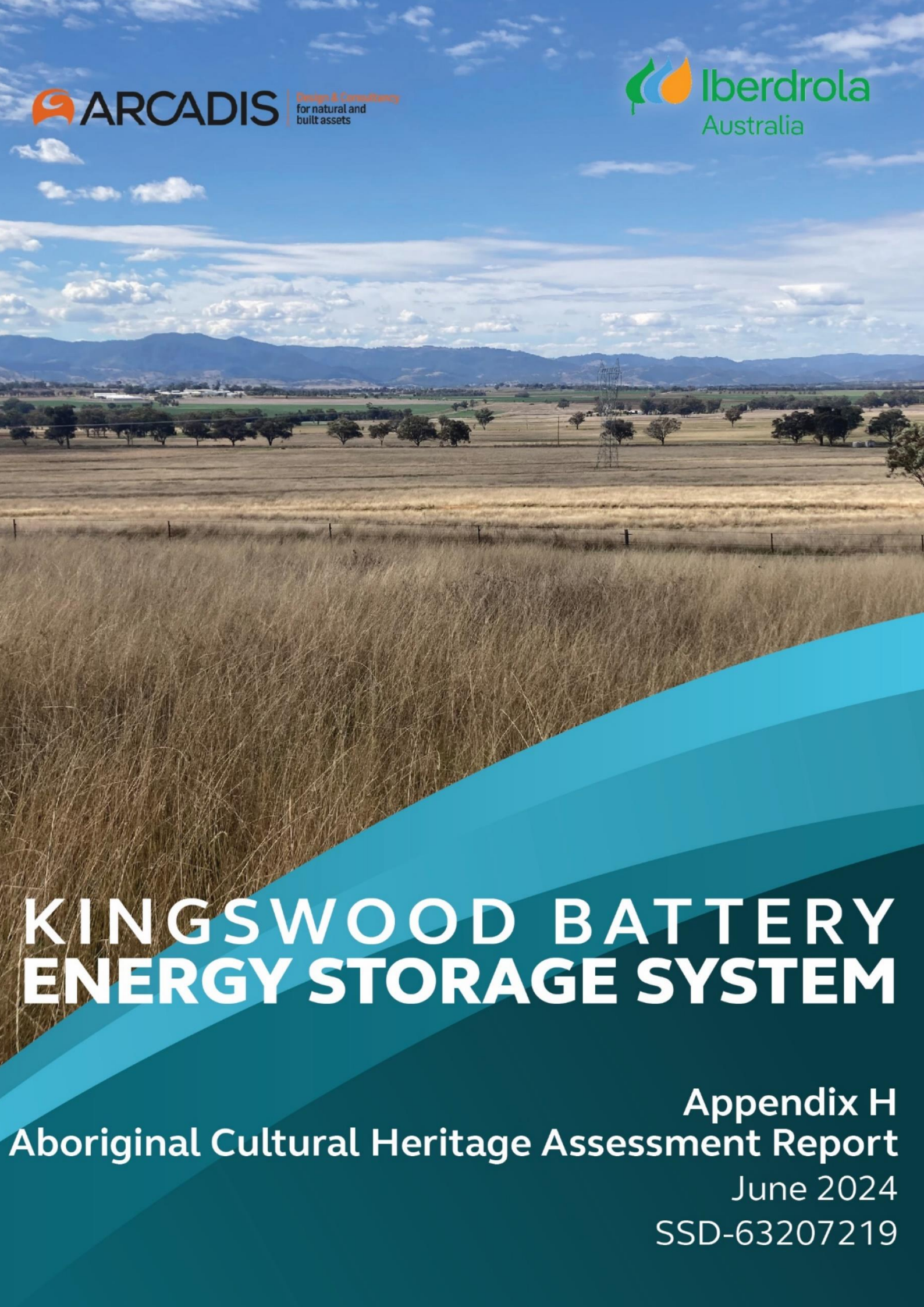




KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

Appendix H
Aboriginal Cultural Heritage Assessment Report
June 2024
SSD-63207219



View west across the Survey Area showing Tamworth substation in the background.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

TAMWORTH REGIONAL LOCAL GOVERNMENT AREA, NSW

MAY 2024

Report prepared by
OzArk Environment & Heritage
for Iberdrola Australia Development Pty Limited



OzArk Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

Phone: (02) 6882 0118

Fax: (02) 6882 0630

enquiry@ozarkehm.com.au

www.ozarkehm.com.au

This page has intentionally been left blank.



Heritage NSW



ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT COVER SHEET

Report Title	Aboriginal Cultural Heritage Assessment Report: Kingswood Battery Energy Storage System.
Author(s) Name	Dr. Bernadette Drabsch and Stephanie Rusden
Author(s)' Organisation Name (if applicable)	OzArk Environment & Heritage
Author(s) contact details	145 Wingewarra St DUBBO NSW 2830 Email: stephanie@ozarkehm.com.au Phone: 02 6882 0118
Address of Subject Area	Address: 744 Burgmanns Lane, Kingswood, NSW Title Reference: Lot 3 and 4 DP244399, Lot 6 DP219993, Lot 43 DP1064582 Local Government Area: Tamworth Regional Local Government Area
Report prepared for	Company Name: Iberdrola Australia Development Pty Limited Via Stephan Mitchell Principal Environmental Consultant Arcadis Australia Pacific Stephan.mitchell@arcadis.com
Date of Report	May 2024
Use of Report/ Confidentiality	This report is not confidential This report may be used by Heritage NSW in a number of ways including: placing it in a database generally making hard and electronic copies available to the public and communicating the report to the public.
Copyright owner of the report	© OzArk Environment & Heritage 2024 and © Iberdrola Australia Development Pty Limited 2024
Indemnity	If the person/entity who claims to be the copyright owner of the report is not entitled to claim copyright in the report, he/she/it indemnifies all persons using the report in accordance with the <i>National Parks & Wildlife Act 1974</i> , against any claim, action, damage, or loss in respect of breach of copyright

I hereby confirm:

- That this report does not contain confidential information
- That copyright is held jointly by OzArk Environment & Heritage and Iberdrola Australia Development Pty Limited
- That the copyright owners indemnify all persons using the report in accordance with the *National Parks & Wildlife Act 1974*, against any claim, action, damage, or loss in respect of breach of copyright.

Stephanie Rusden, OzArk Environment & Heritage Senior Archaeologist

This page has intentionally been left blank.

DOCUMENT CONTROLS

Proponent	Iberdrola Australia Development Pty Limited	
Client	Arcadis Australia Pacific	
Document Description	Aboriginal Cultural Heritage Assessment Report: Kingswood Battery Energy Storage System.	
File Location	OzArk Job No.	
S:\OzArk EHM Data\Clients\Arcadis\Kingswood BESS near Tamworth_June 2023\ACHAR	3965	
Document Status: V3.0 FINAL		Date: 13 May 2024
OzArk internal edits	V1.0 BD author 19/02/24 V1.1 SR review 22/02/24 V1.2 BD amends 23/03/24	
OzArk and client edits	V2.0 OzArk to client 23/2/24 V2.1 OzArk incorporates client comments 8/4/24 V2.2 OzArk issues to RAPs 9/4/24	
Final document	V3.0 OzArk finalises 13/5/24	
Prepared for	Prepared by	
Stephan Mitchell Principal Environmental Consultant Arcadis Australia Pacific Stephan.mitchell@arcadis.com	Dr. Bernadette Drabsch Heritage Consultant OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 bernie@ozarkehm.com.au	
COPYRIGHT		
© OzArk Environment & Heritage 2024 and © Iberdrola Australia Development Pty Limited 2024		
All intellectual property and copyright reserved.		
Apart from any fair dealing for private study, research, criticism, or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system, or adapted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without written permission.		
Enquiries should be addressed to OzArk Environment & Heritage.		

Acknowledgement

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

ABBREVIATIONS AND GLOSSARY

ACHAR	Aboriginal Cultural Heritage Assessment Report. As set out in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> , all developments where harm to Aboriginal objects is likely must be assessed in an ACHAR.
ACHCRs	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Guidelines for conducting Aboriginal community consultation for developments where harm to Aboriginal objects is likely.
AHIMS	Aboriginal Heritage Information Management System. AHIMS is the central register of all Aboriginal sites within NSW.
AHIP	Aboriginal Heritage Impact Permit. Issued by Heritage NSW to allow harm to Aboriginal objects.
BP	Years before present
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> under Part 6 NPW Act. 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. The test excavation program for this assessment was conducted under the Code of Practice.
Debitage:	The termdebitage refers to all the waste material produced during lithic reduction and the production of stone tools. This report usesdebitage to describe the small flakes and chips produced purely as a by-product of knapping.
DCCEEW (Commonwealth)	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	NSW Department of Planning and Environment. Former NSW department responsible for planning approvals. Now DPHI.
DPHI	NSW Department of Planning, Housing and Infrastructure. DPHI contains the Planning agency and administers the EP&A Act.

EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> . Act that institutes a system of environmental planning and assessment for the State of New South Wales
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> . Commonwealth legislation that governs matters of national and world heritage significance
GSE	Ground surface exposure. A measure of factors that may reveal surface artefacts such as erosion scalds.
GSV	Ground surface visibility. A measure of factors that may obscure the detection of surface artefacts such as leaf litter.
Heritage NSW	Government department tasked with ensuring compliance with the NPW Act. Heritage NSW is advised by the Aboriginal Cultural Heritage Advisory Committee (ACHAC).
NPW Act	<i>National Parks and Wildlife Act 1974</i> . Primary legislation governing Aboriginal cultural heritage within NSW.
PAD	Potential archaeological deposit. Indicates that a particular location has potential to contain subsurface archaeological deposits, although no Aboriginal objects are visible.
Pleistocene:	Geological epoch which lasted from about 2.5 million years ago to 10,000 BCE. This period spans the world's recent period of repeated glaciations. Aboriginal occupation of Australia occurs during the upper Pleistocene.
RAP	Registered Aboriginal Party. An individual or group who have indicated through the ACHCR process that they wish to be consulted regarding the project.
SEARs	Secretary's Environmental Assessment Requirements.

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by Arcadis Australia Pacific (Arcadis) on behalf of Iberdrola Australia Development Pty Limited (the Proponent) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed Kingswood Battery Energy Storage System (BESS) (the Project).

The Project is a State Significant Development (SSD-63207219). The purpose of the assessment is to form part of an *Environmental Impact Statement* (EIS) being prepared by Arcadis to accompany an application for development consent under Division 4.7 of Part 4 of the *Environmental Planning and Assessment Act 1979*.

This ACHAR has been undertaken to meet the Secretary's Environmental Assessment Requirements (SEARs) issued for SSD-63207219. It has also been prepared as per the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, and the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (the Code of Practice). The Aboriginal cultural heritage assessment of the Project has followed the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the ACHCRs).

The Study Area for the Project is located at 744 Burgmanns Lane, Kingswood, approximately 1.8 kilometres (km) west of the township of Calala and 7 km southeast of Tamworth, in the Tamworth Regional Local Government Area. The Study Area encompasses approximately 95-hectares (ha) of land across Lot 3 and 4 DP244399, Lot 6 DP219993 and Lot 43 DP1064582 and includes portions of Burgmanns Lane, Burgess Lane and Ascot-Calala Road.

The Survey Area for the assessment includes the area where Project components are proposed, encompassing approximately 62 ha of land within the Study Area.

A search of the Aboriginal Heritage Information Management System (AHIMS) completed prior to the survey shows there are no previously recorded Aboriginal sites within or near the Survey Area.

The field survey was completed by OzArk Principal Archaeologist and Director, Dr. Jodie Benton, on 12 February 2024, with the assistance of Mr Len Waters representing Tamworth Local Aboriginal Land Council. No Aboriginal sites were identified and no landforms within the Survey Area were assessed as having potential to contain subsurface archaeological deposits due to the extent of landform modification and a lack of elevated landforms adjacent to permanent or semi-permanent water sources. Further, no Aboriginal cultural heritage values have been identified within the Survey Area through consultation with the Aboriginal community.

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

1. Following development consent of the Project, the proposed work may proceed with caution. In the unlikely event that unexpected Aboriginal heritage items are encountered

during works, the *Unanticipated Finds Protocol* (**Appendix 3**) must be implemented. **Appendix 4** provides the appropriate procedure to be undertaken in the unlikely event that human remains are encountered.

2. This ACHAR concludes that the Project may proceed without further archaeological investigation under the following conditions:
 - a. All land and ground disturbance activities must be confined to within the Survey Area, as this will eliminate the risk of harm to potential Aboriginal objects in adjacent landforms. Should the parameters of the Project extend beyond the assessed Survey Area, then further archaeological assessment may be required.
 - b. All staff and contractors involved in the proposed work should undergo a cultural heritage induction to ensure they can recognise Aboriginal artefacts (see **Appendix 5**), and are aware of the legislative protection requirements for all Aboriginal sites and objects under the *National Parks and Wildlife Act 1974* and are familiar with the *Unanticipated Finds Protocol* and the skeletal remains protocol.

CONTENTS

ABBREVIATIONS AND GLOSSARY.....	IV
EXECUTIVE SUMMARY.....	VI
1 INTRODUCTION	1
1.1 Description of the Project.....	1
1.2 Proposed work.....	1
1.3 Study Area.....	4
1.4 Survey Area.....	4
2 THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT	7
2.1 Relevant legislation.....	7
2.1.1 Commonwealth legislation	7
2.1.1.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	7
2.1.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984.....	7
2.1.2 State legislation	8
2.1.2.1 Environmental Planning and Assessment Act 1979 (EP&A Act)	8
2.1.2.2 National Parks and Wildlife Act 1974 (NPW Act).....	9
2.1.2.3 Secretary's Environmental Assessment Requirements (SEARs)	9
2.2 Assessment approach	10
2.3 Purpose and objectives.....	10
2.4 Report compliance with the Code of Practice.....	11
2.5 Date of archaeological assessment	12
2.6 OzArk involvement.....	12
2.6.1 Field survey	12
2.6.2 Reporting	12
3 ABORIGINAL COMMUNITY CONSULTATION	13
3.1 Introduction to cultural values	13
3.2 Aboriginal community consultation.....	13
3.2.1 ACHCRs Stage 1.....	14
3.2.2 ACHCRs Stage 2.....	15
3.2.3 ACHCRs Stage 3.....	15
3.2.3.1 Aboriginal Focus Group Meeting.....	15
3.2.4 ACHCRs Stage 4.....	16
3.3 Aboriginal community involvement in the survey.....	17
3.4 Cultural values identified throughout the ACHCR process	17

4	LANDSCAPE CONTEXT	18
4.1	Topography.....	18
4.1.1	Survey units.....	18
4.2	Geology and soils	21
4.3	Hydrology	21
4.4	Vegetation	22
4.5	Land use history and existing levels of disturbance.....	23
4.6	Conclusion.....	23
5	ARCHAEOLOGICAL CONTEXT	25
5.1	Ethno-historic sources of regional Aboriginal culture.....	25
5.2	Regional archaeological context	27
5.3	Local archaeological context.....	31
5.3.1	Desktop database searches conducted.	31
5.3.2	Previous studies in or near the Survey Area	35
5.4	Predictive model for site location.....	35
5.4.1	Site types in the region of the Survey Area	36
5.4.2	Landform modelling of archaeological potential	36
5.4.3	Conclusion.....	37
5.5	Research questions	38
6	RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT	39
6.1	Sampling strategy and field methods	39
6.2	Effective survey coverage	39
6.3	Aboriginal sites recorded.....	40
6.4	Discussion	41
6.4.1	Responses to the research questions	41
7	SIGNIFICANCE ASSESSMENT	42
7.1	Introduction to significance assessment.....	42
7.1.1	Identifying cultural significance	42
7.1.1.1	Social or cultural value.....	42
7.1.1.2	Scientific (archaeological) value.....	43
7.1.1.3	Aesthetic value	43
7.1.1.4	Historic value	43
7.2	Assessed significance of the recorded sites.....	44
8	ASSESSING HARM	45

8.1	Avoiding and minimising harm	45
8.1.1	Conserving significant Aboriginal cultural heritage	45
8.1.2	Opportunities to conserve Aboriginal cultural heritage values	45
8.2	Likely impacts to Aboriginal heritage from the Project	45
8.3	Ecologically sustainable development principles	45
8.3.1	Intergenerational equity	45
8.3.2	The precautionary principle	46
8.3.3	Principle of Integration	46
8.3.4	Applicability to the Project	46
9	MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES	49
9.1	General management principles	49
9.2	Management and mitigation of recorded Aboriginal sites	49
10	RECOMMENDATIONS	50
	REFERENCES	51
	PLATES	54
	APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION	57
	Appendix 1 Figure 1: Aboriginal community consultation log	57
	Appendix 1 Figure 2: Stage 1 Advertisement placed in the Northern Daily Leader.	63
	Appendix 1 Figure 3: Stage 1 letter sent to agencies (sample)	64
	Appendix 1 Figure 4: Response from Office of the Registrar	66
	Appendix 1 Figure 5: Response from Heritage NSW	67
	Appendix 1 Figure 6: Response from NTSCORP	75
	Appendix 1 Figure 7: Example of letter sent to Aboriginal community groups	76
	Appendix 1 Figure 8: Stage 2/3 cover letter and assessment methodology	78
	Appendix 1 Figure 9: Responses from RAPs	110
	Appendix 1 Figure 10: Aboriginal Focus Group Meeting invitation	111
	Appendix 1 Figure 11: Responses to the Aboriginal Focus Group Meeting invitation	113
	Appendix 1 Figure 12: Stage 4 cover letter (sample)	115
	APPENDIX 2: EXTENSIVE AHIMS SEARCH RESULT	117
	APPENDIX 3: UNANTICIPATED FINDS PROTOCOL	121
	APPENDIX 4: UNANTICIPATED SKELETAL REMAINS PROTOCOL	122
	APPENDIX 5: ARTEFACT IDENTIFICATION	123

FIGURES

Figure 1-1: Conceptual layout of the Project.	3
Figure 1-2: Map showing the location of the Study Area for the Project.	5
Figure 1-3: Aerial showing the Survey Area.	6
Figure 4-1: Topography and hydrology of the Survey Area and close surrounds.....	19
Figure 4-2: Aerial of the Survey Area showing the location of survey units.....	20
Figure 5-1: Location of previously recorded AHIMS sites in relation to the Survey Area.....	34
Figure 6-1: Survey coverage across the Survey Area.	39

TABLES

Table 2-1: SEARs General Requirements regarding Aboriginal cultural heritage.	10
Table 2-2: Concordance between Heritage NSW input to the SEARs and this ACHAR.	10
Table 2-3: Report compliance with the Code of Practice.	11
Table 5-1: Aboriginal cultural heritage: desktop-database search results.	32
Table 5-2: Site types and frequencies of AHIMS sites near the Survey Area.	33
Table 5-3: Site types recorded in the region of the Survey Area.....	36
Table 5-4: Likelihood of landforms within the Survey Area to contain Aboriginal objects.	37
Table 5-5: Likelihood of certain site types being present in the Survey Area.	37
Table 6-1: Effective survey coverage within the Survey Area.	40
Table 6-2: Effective survey coverage and incidences of site recording.....	40
Table 8-1: Application of ESD principles to the Project.....	47

PLATES

Plate 1: Vegetation in the western portion of the Survey Area, looking north.....	54
Plate 2: Area of outcropping shale where soils have been depleted by erosion on the hill crest.	54
Plate 3: View north across the western boundary of the Survey Area from the hill crest.....	55
Plate 4: View south across the western boundary of the Survey Area looking towards the hill crest.	55
Plate 5: View south across the northern portion of the Survey Area showing the substation in the background.	56

1 INTRODUCTION

1.1 DESCRIPTION OF THE PROJECT

OzArk Environment & Heritage (OzArk) has been engaged by Arcadis Australia Pacific (Arcadis) on behalf of Iberdrola Australia Development Pty Limited (the Proponent) to complete an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) for the proposed Kingswood Battery Energy Storage System (BESS) (the Project).

The Project is a State Significant Development (SSD-63207219). The purpose of the assessment is to form part of an *Environmental Impact Statement* (EIS) being prepared by Arcadis to accompany an application for development consent under Division 4.7 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2 PROPOSED WORK

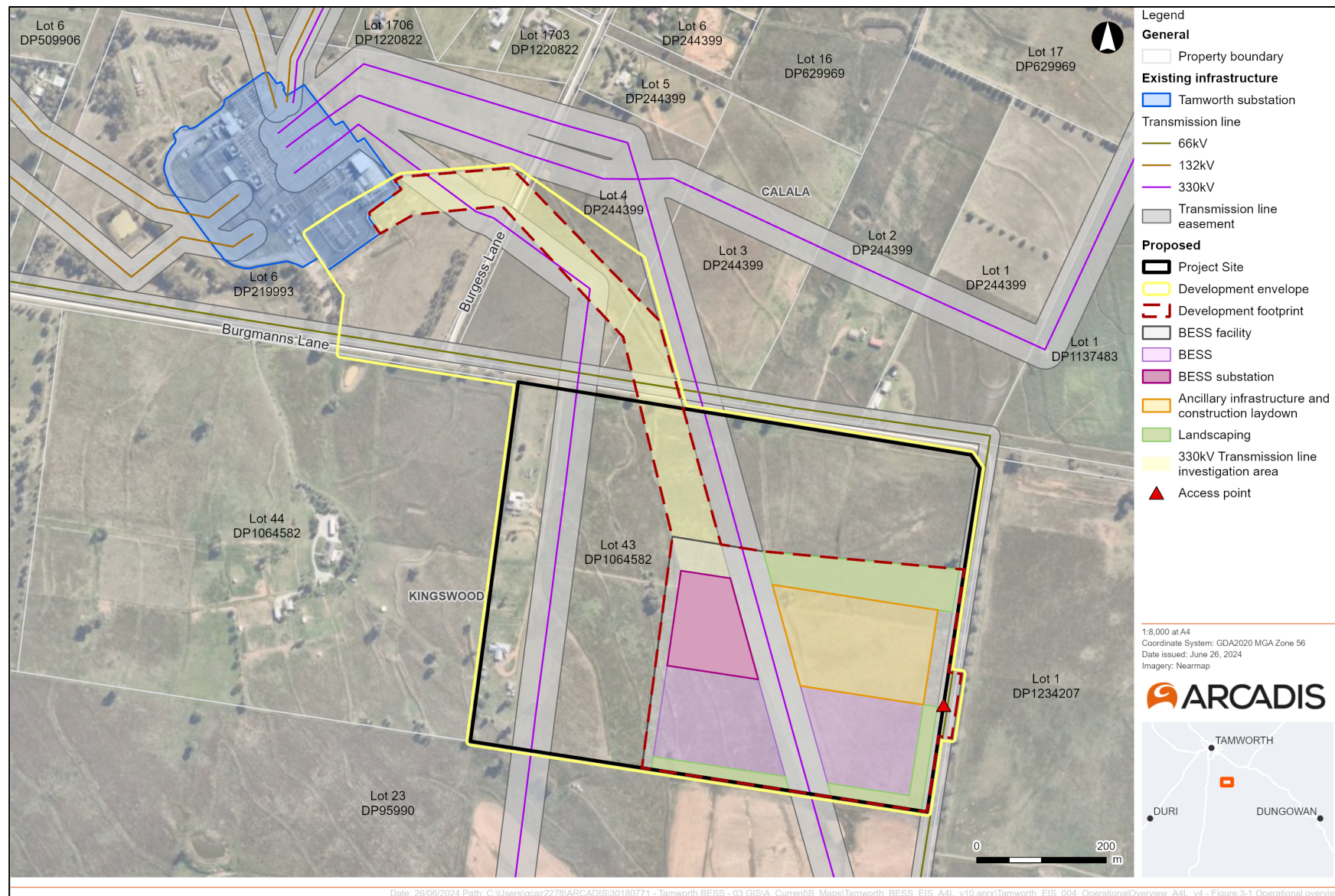
The Proponent is seeking development consent for the construction, operation, and maintenance of a large-scale BESS at 744 Burgmanns Lane, Kingswood, New South Wales (NSW) 2340 (Lot 43 Deposited Plan (DP) 1064582). The BESS will have a capacity of up to 270 Megawatts (MW) and up to 1080 Megawatt-hours (MWh) of battery storage capacity (the Project).

This Project would include (**Figure 1-1**):

- BESS including battery enclosures, inverters, transformers, switch gear and control building
- Onsite 33/330 kV substation to convert electricity between the high voltage transmission network and medium voltage BESS
- High voltage transmission connection (above ground and/or below ground) between the BESS and the nearby Tamworth substation
- Ancillary infrastructure and mitigative features including:
 - Site access to the BESS from Ascot-Calala Road
 - Internal site access road and parking
 - Permanent office and staff amenities
 - Operations and maintenance building
 - Stormwater management infrastructure
 - Services and utilities
 - Lighting, fencing and security devices
 - Noise acoustic barriers
 - Asset protection zone
 - Landscaping and screening vegetation.

The BESS would operate 24 hours a day, seven days a week and be monitored remotely, with infrastructure maintenance undertaken onsite.

Figure 1-1: Conceptual layout of the Project.



1.3 STUDY AREA

The Study Area for the Project is located at 744 Burgmanns Lane, Kingswood NSW 2340, approximately 1.8 kilometres (km) west of the township of Calala and 7 km southeast of Tamworth, in the Tamworth Regional Local Government Area (**Figure 1-2**).

The Study Area encompasses approximately 95-hectares (ha) of land across Lot 3 and 4 DP244399, Lot 6 DP219993 and Lot 43 DP1064582 and includes portions of Burgmanns Lane, Burgess Lane and Ascot-Calala Road.

1.4 SURVEY AREA

The Survey Area refers to the area where Project components are proposed, encompassing approximately 62 ha of land within the Study Area (**Figure 1-3**). All archaeological survey will be confined to the Survey Area and not the broader Study Area. The Survey Area allows a suitable buffer to allow movement of Project components if required.

Figure 1-2: Map showing the location of the Study Area for the Project.

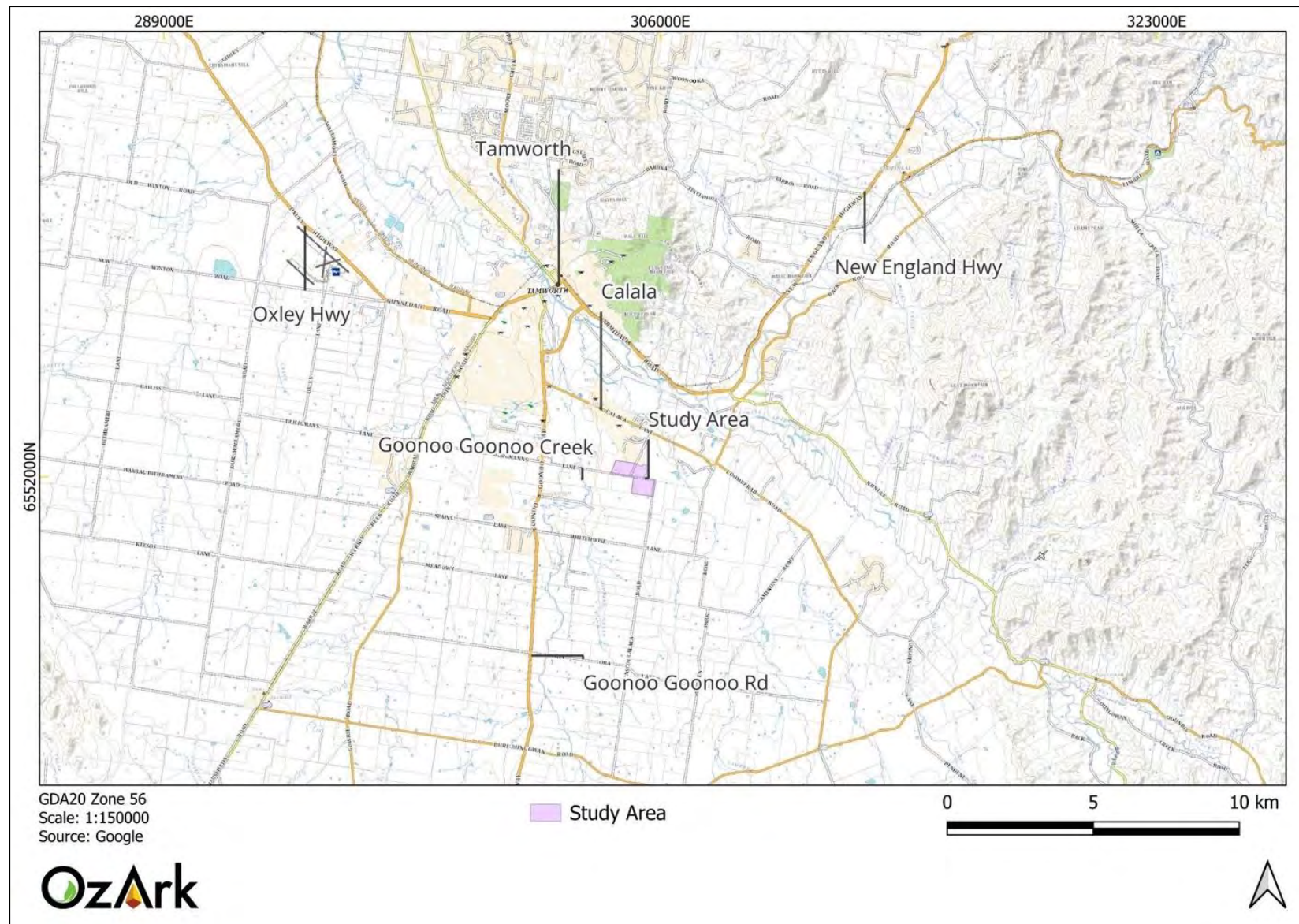


Figure 1-3: Aerial showing the Survey Area.



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 EPBC Act, administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water, provides a framework to protect nationally significant flora, fauna, ecological communities, and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for projects 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 Survey 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
 - o Division 4.7: Approvals process for state significant development

Applicability to the Project

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

As the Project is an SSD (SSD-63207219), 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 Survey 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 NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) 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 Survey 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)*

SEARs for the Project (SSD-63207219) were issued by the Department of Planning and Environment (now the Department of Planning, Housing and Infrastructure [DPHI]) on 30 October 2023.

Table 2-1 addresses the general requirements for Aboriginal cultural heritage in the SEARs for SSD-63207219.

To inform the SEARs, Heritage NSW provided input regarding Aboriginal cultural heritage. Heritage NSW input is set out in **Table 2-2** along with a concordance of where Heritage NSW's requirements are addressed in this ACHAR.

Table 2-1: SEARs General Requirements regarding Aboriginal cultural heritage.

General requirement	Where addressed in the ACHAR
An assessment of the impact to Aboriginal cultural heritage items (cultural and archaeological) in accordance with the <i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW</i> (OEH, 2011) and the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW, 2010), including results of archaeological test excavations (if required).	The Project has undertaken an extensive pedestrian survey across the Survey Area as reported in this ACHAR. All assessment has followed the applicable codes and guidelines.
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 <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010).	Section 3

Table 2-2: Concordance between Heritage NSW input to the SEARs and this ACHAR.

Heritage NSW requirement	Where addressed in the ACHAR
The ACHAR must be prepared in accordance with the <i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW</i> (OEH, 2011) and the <i>Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW, 2010), including results of thorough archaeological survey and test excavations (where required).	The Project has undertaken an extensive pedestrian survey across the Survey Area as reported in this ACHAR. All assessment has followed the applicable codes and guidelines.
Include evidence of adequate and continuous consultation with Aboriginal stakeholders in determining and assessing impacts, developing and selection options for avoidance of Aboriginal cultural heritage and mitigation measures (including the final proposed measures), having regard to the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010).	Section 3

2.2 ASSESSMENT APPROACH

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

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

2.3 PURPOSE AND OBJECTIVES

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

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

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

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

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

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

2.4 REPORT COMPLIANCE WITH THE CODE OF PRACTICE

The Code of Practice establishes requirements that should be followed by all archaeological investigations where harm to Aboriginal objects may be possible. **Table 2-3** tabulates the compliance of this report with the requirements established by the Code of Practice.

Table 2-3: 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 5.3
Requirement 2	Review the landscape context	Section 4
Requirement 3	Summarise and discuss the local and regional character of Aboriginal land use and its material traces	Section 5.4
Requirement 4a	Develop predictive model	Section 5.4
Requirement 4b	Present predictive model results	Section 5.4.2
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 5.4.1
Requirement 7a	Site recording information to be recorded	Not applicable to this report as no new sites were recorded.
Requirement 7b	Site recording: scales for photography	All artefact photographs employed a centimetre scale bar.
Requirement 8a	Geospatial information	All artefact locations were logged using a non-differential handheld GPS.
Requirement 8b	Datum and grid coordinates	All coordinates are provided in GDA 2020 Zone 56
Requirement 9	Record survey coverage data	Section 6.2
Requirement 10	Analyse survey coverage	Section 6.2
Requirement 11	Archaeological Report content and format	This report adheres to this Requirement.
Requirement 12	Records	OzArk undertakes to maintain all survey records for at least five years.
Requirement 13a	Notifying Heritage NSW of breaches	Not applicable
Requirement 13b	Providing Heritage NSW with information	Not applicable
Requirement 14	Test excavation which is not excluded from the definition of harm	The test excavation did not take place in any of the landforms identified in Requirement 14.
Requirement 15a	Consultation regarding test excavation	Not applicable
Requirement 15b	Developing a test excavation sampling strategy	Not applicable

Code of Practice Requirement	Context of the Requirement	Concordance in this report
Requirement 15c	Providing Heritage NSW with notification of the test excavation	Not applicable
Requirement 16a	Test excavation that can be carried out in accordance with the Code of Practice	Not applicable
Requirement 16b	Objects recovered during test excavations	Not applicable
Requirement 17	When to stop test excavations	Not applicable
Requirement 18–20	Artefact recording	Not applicable

2.5 DATE OF ARCHAEOLOGICAL ASSESSMENT

The field survey was undertaken by OzArk on 12 February 2024.

2.6 OZARK INVOLVEMENT

2.6.1 Field survey

The fieldwork survey was undertaken by Dr Jodie Benton, (OzArk Director and Principal Archaeologist; BA [Hons] Archaeology and PhD [Archaeology], University of Sydney).

2.6.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report author: Dr Bernadette Drabsch, Heritage Consultant, BA Ancient History [Hons], PhD University of Newcastle
- Reviewer: Stephanie Rusden (OzArk Senior Archaeologist, BS University of Wollongong, BA University of New England).

3 ABORIGINAL COMMUNITY CONSULTATION

3.1 INTRODUCTION TO CULTURAL VALUES

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

australianstogether.org.au

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**.

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 *Northern Daily* on 9 October 2023 to solicit expressions of interest (**Appendix 1 Figure 2**)

A letter seeking information from various agencies was sent on 9 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)
- Tamworth Local Aboriginal Land Council (LALC)
- Tamworth Regional Council
- North West Local Land Services.

Replies from government agencies are provided in **Appendix 1 Figure 4** to **Appendix 1 Figure 6**. Letters were sent to individuals and groups whose contact details had been provided by the government agencies (**Appendix 1 Figure 7**).

By the closing date for registration concerning this Project, 15 groups or individuals registered to be consulted as RAPs:

- Tamworth LALC
- Gomeroi Applicant
- Gomery Cultural Consultants
- AT Gomilaroi Cultural
- D F T V Enterprises
- Didge Ngunawal Clan
- Long Gully Cultural Services
- Konanggo Aboriginal Cultural Heritage Services
- Thomas Dahlstrom
- Cacatua General Service (Cacatua Culture Consultants)
- AGA Services

- Bawurra
- Bill Trewlynn
- Barraby Cultural Services
- Galamaay Cultural Consultants (GCC)

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 that was issued to all RAPs for their consideration on 16 November 2023 (**Appendix 1 Figure 8**).

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 16 November 2023 (**Appendix 1 Figure 8**). This document provided the archaeological context of the Survey 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 14 December 2023.

OzArk received responses on the draft assessment methodology from Gomery Cultural Consultants and Long Gully Cultural Services (**Appendix 1 Figure 9**). The response from Long Gully Cultural Services noted they agree with the methodology and advised there is a connection between Jerrys Plains in the Hunter Valley with Cooroona mission near Tamworth. The response from Gomery Cultural Consultants advised there are several sites recorded around Tamworth, Calala and Goonoo Goonoo Station.

3.2.3.1 *Aboriginal Focus Group Meeting*

On 5 December 2023, all RAPs were sent an invitation to attend an Aboriginal Focus Group Meeting (AFGM) on 18 December 2023 to be held at the location of the Project (**Appendix 1 Figure 10**).

Email responses were received from AT Gomilaroi Cultural, Gomery Cultural Consultants and Long Gully Cultural Services advising they would be attending the AFGM (**Appendix 1 Figure 11**). An email was also received from Tamworth LALC advising they would not be able to attend (**Appendix 1 Figure 11**).

On 6 December 2023, OzArk received a phone call from Bill Trewlynn advising that the proposed AFGM overlapped with a meeting being held over four days by Tamworth LALC. OzArk subsequently contacted Tamworth LALC who advised there was not a conflict with meetings. On 14 December 2023, OzArk received a call from Bill Trewlynn advising that he would be attending the AFGM.

The AFGM was attended by the following:

- OzArk Archaeologist Eleanore Martin
- Jose Opazo and Maria Caruda representing Iberdrola Australia (the proponent)
- Ethan Trewlynn representing Long Gully Cultural Services
- Bill Trewlynn (individual RAP).

Representatives from AT Gomilaroi Cultural and Gomery Cultural Consultants did not end up attending the AFGM.

Concerns raised by both Ethan Trewlynn representing Long Gully Cultural Services and Bill Trewlynn during the AFGM were as follows:

- Tamworth LALC had been engaged to undertake the forthcoming survey
- Attendance at the AFGM was not paid.

Bill Trewlynn also made the following comments:

- Was not happy that the AFGM was arranged on a date that conflicted with non-Project related meetings for the Gomeoi People (Native Title applicants).
 - o OzArk Archaeologist Eleanore Martin advised that there had been a miscommunication as OzArk was advised the meetings were with Tamworth LALC who subsequently advised this was incorrect.
- The landforms within the Survey Area are heavily disturbed by about 100 years of farming and have low to no potential for Aboriginal sites to be intact or present.

3.2.4 ACHCRs Stage 4

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

A copy of the draft ACHAR was sent to all RAPs for review on 10 April 2024 with a 28-day review period ending 10 May 2024 (**Appendix 1 Figure 12**). No comments were received on the draft ACHAR.

3.3 ABORIGINAL COMMUNITY INVOLVEMENT IN THE SURVEY

The field survey was undertaken with the assistance of Mr Len Waters representing Tamworth LALC.

3.4 CULTURAL VALUES IDENTIFIED THROUGHOUT THE ACHCR PROCESS

No specific cultural values have been identified to date by the RAP representative regarding the Survey Area, however, the strong cultural values of Aboriginal communities towards landscapes and cultural heritage sites are recognised. Cultural values relating the Tamworth region and surrounds during the ACHCRs process are listed below:

- Gomery Cultural Consultants: several sites recorded around Tamworth, Calala and Goonoo Goonoo Station
- Long Gully Services: there is a connection between Jerrys Plains in the Hunter Valley with Cooroona mission near Tamworth

A discussion was held during the survey between OzArk Director Dr Jodie Benton and Mr Len Waters representing of the Tamworth LALC regarding cultural values. It was acknowledged that the Survey Area was not close to any waterways and was not likely to contain Aboriginal cultural heritage sites.

4 LANDSCAPE CONTEXT

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

4.1 TOPOGRAPHY

The Survey Area is located within the Tamworth Keepit Slopes and Plains landscape unit (Mitchell 2011). This landscape unit comprises an extensive area of undulating to rolling slopes and plains with low hills and low ranges. The area has a general elevation 500 to 800 metres (m), and a local relief 250 m, with some peaks reaching 1100 m.

The topography of the study area itself consists of a hill crest located in the southwest at an elevation of 460 m. The remainder of the study area consist of gently inclined slopes which recede to the northeast (**Figure 4-2**).

4.1.1 Survey units

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

Based on the topography of the Survey Area two survey units have been identified, as follows (**Figure 4-2**):

- Survey Unit 1: Gently inclined slopes
- Survey Unit 2: Hill crest.

Figure 4-1: Topography and hydrology of the Survey Area and close surrounds.

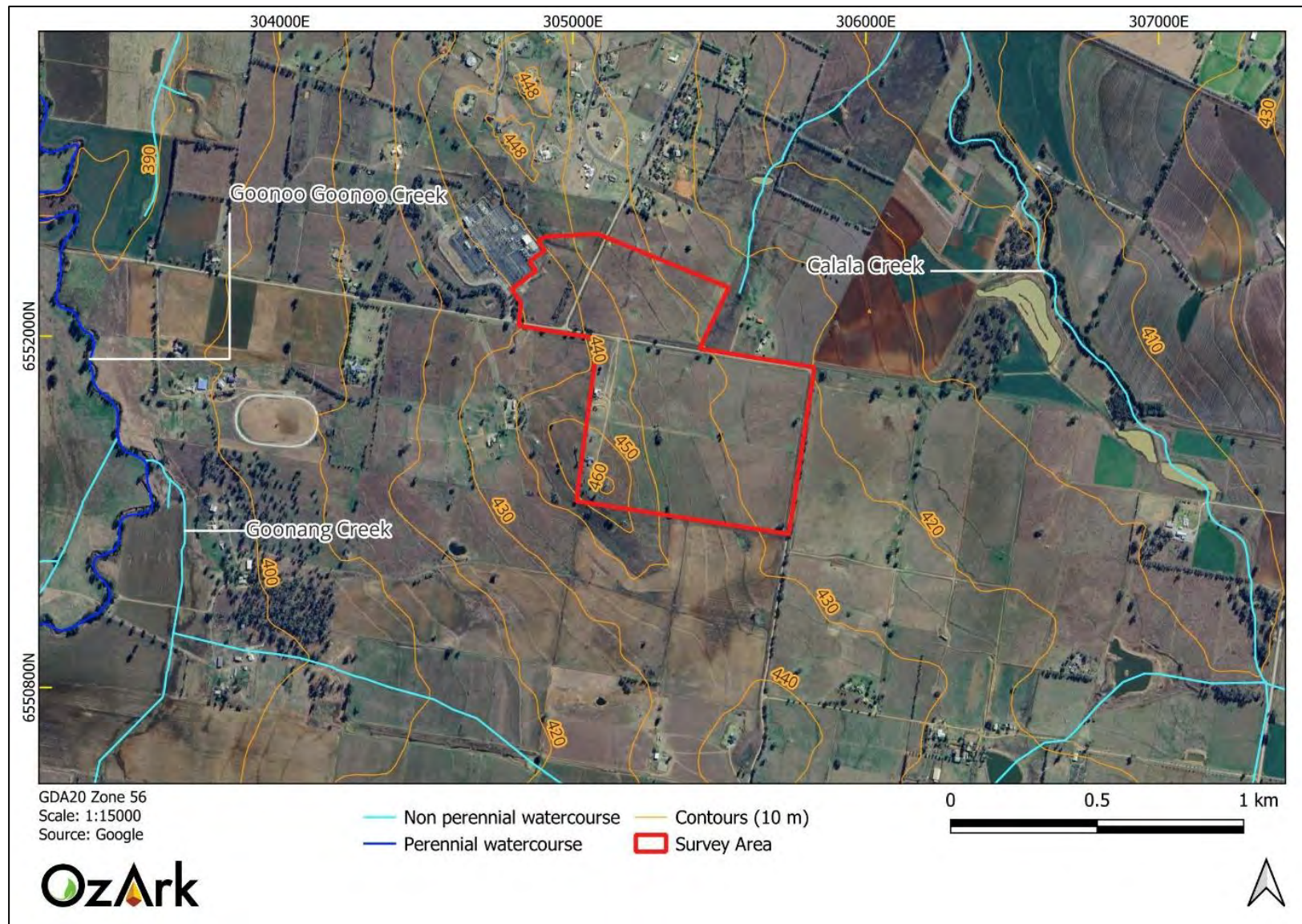
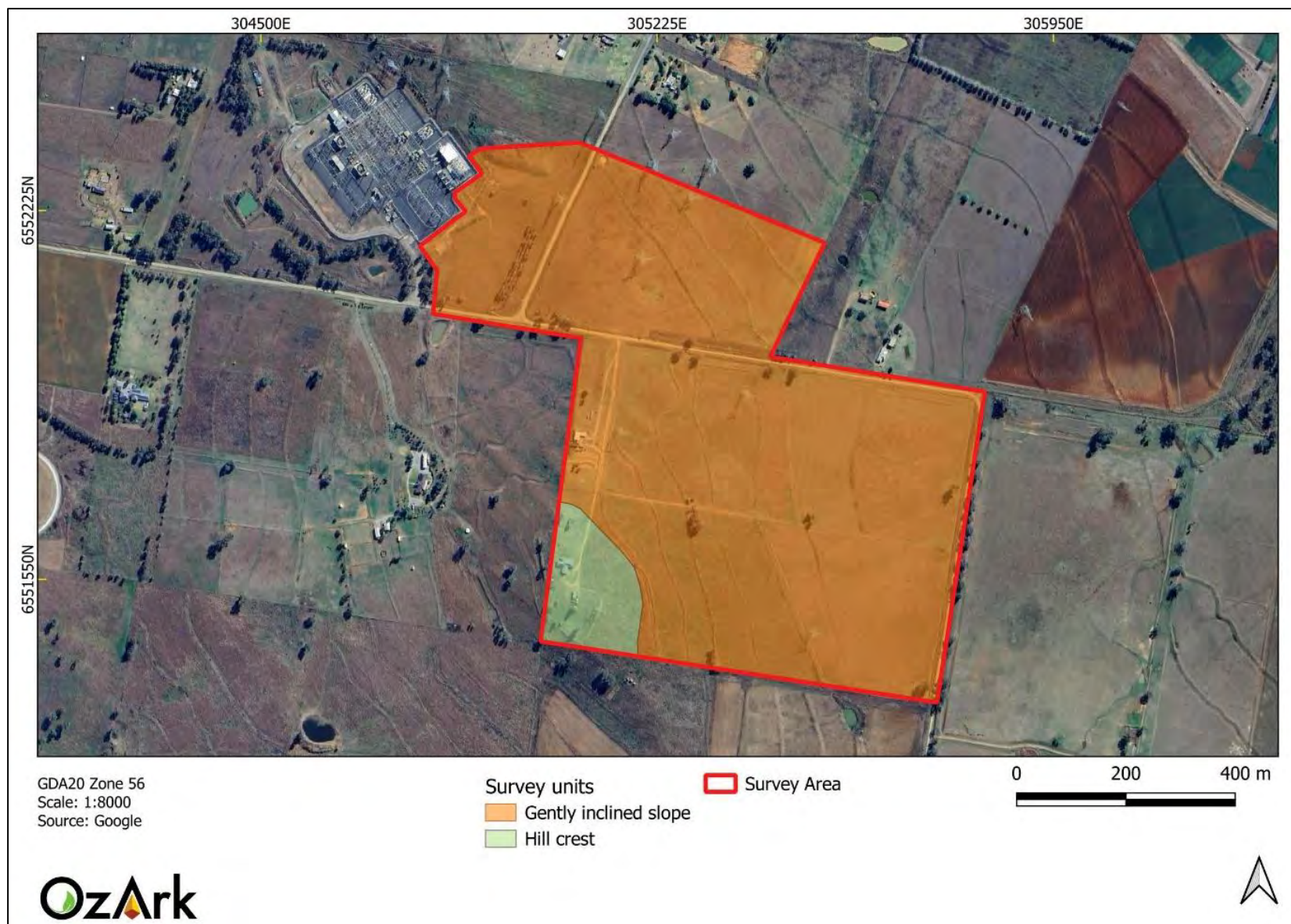


Figure 4-2: Aerial of the Survey Area showing the location of survey units.



4.2 GEOLOGY AND SOILS

The geology associated with the Tamworth Keepit Slopes and Plains landscape unit includes Silurian-Devonian chert, slate, phyllite, tuff, schist and Carboniferous conglomerate, sandstone, mudstone, andesite, and small areas of limestone (Mitchell 2011). Landforms which typically comprise outcropping rock are limited to the hill crest on the southwest of the Survey Area. If materials suitable for stone tool manufacture are present on this landform (i.e. chert, tuff or mudstone), then quarries may be present.

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 Survey Area extends across two soil landscapes described by Banks (2001): Fullwoods Hill and Duri. Most of the Survey Area is in the Fullwoods Hill landscape area described as having soils which can be highly variable over distances of “tens of metres” or homogenous, depending on how variable the underlying geology is (Banks 2001: 86). The Fullwoods Hill soil landscape is an erosional landscape and is located on rocky crests and steeper side slopes of hills and low hills. This soil landscape is a steeper and rockier version of the Duri soil landscape described below (Banks 2001, p.86). Sheet erosion is common across this soil landscape, with shallow soils present across some locations.

The Duri soil landscape consists of extensive rolling to undulating hills and low hills. It is an extremely complex landscape due to rapid changes in underlying lithology (Banks 2001, p.33). Generally, soils within this landscape comprise of moderately deep, moderately well-drained red and brown chromosols, with minor occurrences of shallow, very well-drained rudosols around rock outcrops (Banks 2001, p.33). Deep, imperfectly drained red clays and deep to very deep, imperfectly drained non-calcic brown soils occur along drainage lines and on sodic bedrock. While erosion is an issue with areas utilised for cropping or grazing, deep soil deposits have the potential to preserve in-situ archaeological deposits. Archaeological assessments conducted by Everick Heritage (2021) within the Duri landscape led to the location of a small site containing three silcrete artefacts between 50-150 millimetres (mm) below the surface (AHIMS 29-2-0412 / Barnes Gully 1) – approximately 3.6 km northwest of the Survey Area. Testing indicated the culturally sterile clay layer was present between 100-200 mm from the surface and the soils were unable to retain in situ artefacts and sites, particularly in areas impacted by historic tilling and pasture improvement, due to disturbance of the shallow soils (Everick Heritage 2021, p.54, 62).

4.3 HYDROLOGY

The closest non-perennial watercourses to the Survey Area are Calala Creek, located 840 m to the northeast, and Goonang Creek, located 1.3 km to the west (**Figure 4-2**). A minor unnamed

tributary of Calala Creek is located approximately 220 m northeast of the Survey Area and a minor unnamed tributary of Goonang Creek is located 820 m to the south.

Calala Creek is a tributary of the Peel River, while Goonang Creek is a tributary of Goono Goono Creek, both perennial watercourses. Additional perennial watercourses near the Survey Area include the Cockburn River and Piallamore Anabranh, both tributaries of the Peel River.

The Peel and Cockburn Rivers were also a source for raw material. Pebbles and cobbles of chert, cherty argillite, andesitic greywacke, quartz, hornfels, basalt and small amounts of chalcedony and petrified wood could also be sources from the banks of these Rivers (Wilson & McAdam 2000).

Throughout NSW there is a strong correlation between Aboriginal occupation sites and distance to water. The general proximity of the Survey Area to waterways, even minor ephemeral waterways, increases the likelihood of sites being present within the Survey Area, however, as distance to water increases the likelihood of sites being present decreases.

4.4 VEGETATION

The Survey Area has been cleared of most upper and mid stratum native vegetation with only isolated paddock trees remaining. The eastern corridor of Ascot-Calala Road also appears to contain remnant mature vegetation. Areas of vegetation to the east of the existing substation appear to be more recent plantings. Historical vegetation clearance significantly reduces the potential for culturally mature trees to be present.

While the Survey Area has been extensively cleared, the Duri and Fullwoods Hill soil landscapes would have typically supported the following species White box *Eucalyptus albens*, Blakely's Red gum *E. blakelyi*, Rough-barked apple *Angophora floribunda*, Native olive *Notelaea macrocarpa*, Poison pimelea *Pimelea neo-anglica*, Western golden wattle *Acacia decora*, Sticky daisy bush *Olearia elliptica*, Wilga *Geijera parviflora*, Yellow berry bush *Maytenus cunninghamii*, Turkeybush *Eremophila deserti*, Kangaroo grass *Themeda australis*, Yellow box *E. melliodora*, River red gum *E. camaldulensis*, Tumbledown red gum *E. dealbata*, White cypress pine *Callitris glaucophylla*, Silver senna *Senna artemisioides*, Blackthorn *Bursaria spinosa*, Cough bush *Cassinia laevis*, Kurrajong *Brachychiton populneus*, Smooth senna *S. barclayana*, Plains grass (dominates grassland) *Stipa aristiglumis*.

Many of these would have been used as resources by the Aboriginal people in addition to the native fauna present in the vicinity of the Survey Area, such as echidnas, wallabies, birds, snakes, possums, kangaroos and lizards.

4.5 LAND USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The Survey Area has been subject to disturbances associated with the development of the existing substation and associated facilities (i.e. transmission towers), dwellings, contour banking, road construction, vegetation clearance and agricultural practices (grazing and cropping).

Cultivation acts to redistribute artefacts both horizontally and vertically within the soil profile and ultimately impacts the integrity of artefact assemblages within the top 20 to 50 centimetres (cm) of the soil profile, while the presence of hooved livestock is likely to have resulted in trampling and compaction of the ground surface which accelerates soil loss. As noted above, initial vegetation clearing would also have significantly reduced the likelihood of culturally modified trees remaining. Disturbances from the substation and associated facilities, dwellings, roads and contour banks are relatively confined, and these disturbances often provide areas of exposure, thus enabling the identification of otherwise obscured artefacts.

4.6 CONCLUSION

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

- Topography and hydrology: the gently inclined slopes which dominate the Survey Area would not have hindered Aboriginal occupation in the past however relative to surrounding landforms, it does not contain key features such as permanent or semi-permanent water which would have encourage long-term Aboriginal occupation. As such, the size and density of any Aboriginal sites located within the Survey Area are likely to be smaller and sparser.
- Geology and soils: landforms which typically comprise outcropping rock, i.e., hill crests, are limited to the southwest of the Survey Area. If materials suitable for stone tool manufacture are present on this landform (i.e. chert, tuff or mudstone), then quarries may be present. However, raw materials are more likely to be procured from the Peel and Cockburn Rivers which contain pebbles and cobbles of chert, cherty argillite, andesitic greywacke, quartz, hornfels and basalt. Soils within the Survey Area are contained within two soil landscapes, Duri and Fullwoods Hill. These soil landscapes have a long history of cropping and feature extensive sheet erosion, with topsoils likely to have been removed. Soil erosion is an issue with areas utilised for cropping or grazing, suggesting that artefact bearing deposits, if present, are likely to be highly disturbed as a result and contain relatively thin A-Horizon soils.
- Vegetation: the Survey 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 Peel River. The broad-scale vegetation clearance which has taken place across the Survey Area largely for agricultural purposes reduces the likelihood that any culturally modified trees remain present.

- Land use: ground surface disturbances such as vegetation clearance, cultivation, grazing and infrastructure exist throughout the Survey Area. These activities are likely to have displaced Aboriginal objects and are likely to have reduced the potential for intact 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

Dates of the earliest occupation of the continent by Aboriginal people are subject to continued revision as more research is undertaken. Early archaeological sites within north-western NSW have been dated to 30 to 36,000 years before present (BP) at Cuddie Springs and 20,310 BP at the Crazyman Rockshelter in the Warrumbungles National Park (Australian Museum 2022 and Gaynor 1996). Archaeological dates from the wider Tamworth region include:

- Bendemeer II Rockshelter on Glendon Station, Bendemeer (30 km to the north-east of Tamworth) 4,950 BP (McBryde 1977).
- Moore Creek 4 Rockshelter at Moore Creek (10 km north of Tamworth) 3,600 BP (Binns & McBryde 1972, McBryde 1977)
- Moore Creek 6 Rockshelter at Moore Creek (10 km north of Tamworth) 3,000 BP (McBryde 1977).

According to Tindale (1974), Tamworth and the surrounding areas, encompassing the current Survey Area, falls within the limits of the lands occupied by the Gamilaraay (Kamilaroi) language group. This language group comprised people who spoke the sub-dialects Yuwaalaraay, Yuwaaliyaay (Euahlayi), Gamilaraay, Gawambaraay, Wirayaraay (Wiriwiri) and Walaraay (O'Rourke 1997).

The name 'Tamworth' is not derived from Indigenous language, however, prior to colonial settlement, the Kamilaroi people knew the area as 'Calala', thought to mean 'place of battle'. Colonial settlers identified several groups in the Tamworth region including the Goonoo Goonoo, Gunnedah, Manellae, and the Moonbi.

In 1844, William Telfer provided accounts of a corroboree at Tamworth with over 250 Aboriginal people in attendance. Oral history from members of the local Aboriginal community in Tamworth refers to 'clever men' using the site at Moore Creek for ceremony. In their site study of Tamworth, Wilson and McAdam (2000) predict that archaeological investigations at Moore Creek may locate ritual and ceremonial sites, including art and engraving sites.

Borah Crossing, in the vicinity of Keepit Dam, was another important ceremonial area in the local region. Thompson (1981) states:

Early this century Aboriginal people camped at Borah Crossing 25 kilometres southeast of Vickery. The site of this Aboriginal Reserve (AR35745, Parish Keepit, Gazetted 23/05/1903) of eight hectares was flooded by Keepit Dam in 1960. Another eight hectare Aboriginal Reserve (AR 32747) existed at Baan Baa 30 kilometres northwest of Vickery, between 1901 and 1918.

William Telfer was one of the original employees of the Australian Agricultural Company (A.A. Company) and brought the first consignment of sheep to the Peel River holdings in 1836, pioneering the overland route from the A.A. Company land at Port Stephens. His son, William Telfer Jr, was born in Tamworth in July 1841. The reminiscences of William Telfer Jr, known as the Wallabadah manuscript, provide one of the few contemporary accounts of the early years of European settlement in the Tamworth region (Millis 1980). Although he was relatively uneducated, and at times prone to exaggeration, Telfer's accounts provide an insight into relations between Aboriginal people and frontier colonial settlers and a unique picture of the lifeways of the Gamilaroi people (Gardner 1978). For example, Telfer vividly describes a corroboree near Tamworth that he witnessed in his childhood:

...there was a tribe of Aboriginals on Tamworth in those days about 1844 two hundred and fifty males and females there was a great corroboree or dance all male Aboriginals were painted with white chalk or pipeclay the long lines of fires and the dark night amongst the white gum and apple trees with the figures of the blacks had a most striking appearance glyding from tree to tree flourishing their boomerangs. Some of them looked like demons whooping and shouting in their own language some with figures of Emus cut out of bark carrying in their hands also figures of Kangaroos made the same way astonished us Children. Some of the gentlemen said there were fully three hundred aboriginals in the performance...

Social interchange occurred between the Kamilaroi and other language and tribal groups such as the Gweagal (Scone district), the Wonnarua (Hunter Valley), Darkinjung (Central Coast) and the Anaiwan (New England Tablelands). Such interchanges included conflicts and alliances, marriage, songs, stories, dances, and ceremonial practices. Resources from stone axe quarries at Daruka, were exchanged throughout these social networks (McBryde and Binns 1970).

O'Rourke (1997) estimates that there were at least 60 Kamilaroi clans, with perhaps 160 adult men, women, adolescents, and children in each, suggesting a total regional population in central-northern NSW of around 10,000 people. Each clan probably resided most of the year at a small number of established, favourable locations within their tribal area.

The Kamilaroi caught fish including eels, freshwater crayfish, yabbies, tortoises, and freshwater mussels in the rivers, creeks, and wetlands in the region (O'Rourke 1997). Watercraft were manufactured from large slabs of bark cut from river red gum trees. Fish were caught using fishing lines and nets made from reed fibre. Nets were used to catch waterbirds, whose eggs were also collected. Some of the other animals that Aboriginal people of the Northwest Slopes hunted include kangaroos, wallabies, koalas, possums, emus, echidnas, lizards, snakes, and frogs (Fison et al. 1880; O'Rourke 1997). Plant foods included grass seeds, wild orange, emu apple, melons, tubers, yams, and roots (Gott 1983; O'Rourke 1997).

A variety of tools were needed for the extraction and manipulation of these resources. Many of these tools were made of stone. Scrapers, blades, axes, choppers, burins, adzes, and more stone tool types were used by Aboriginal people in hunting, food preparation, wood working, carving and much more. However, many tools and other objects were made from wood, bone and shell which do not survive into the archaeological record as well as stone (Clarke 2004: 111).

5.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Numerous archaeological investigations have been undertaken in the Tamworth region and the results of these investigations provide an archaeological context for the current assessment. The most relevant are summarised below.

Tamworth Aboriginal Archaeological Study (2000)

In 1999, the Tamworth Regional Council undertook an archaeological study of Aboriginal sites within their LGA (Wilson & McAdam 2000). The purpose of the study was to identify sites of Aboriginal and archaeological significance within the Tamworth area. The study was undertaken in three stages. The first stage aimed to produce a preliminary predictive model for Aboriginal archaeological site locations. Stage 2 tested the predictive model during 20 days of site survey across the study area. Stage 3 focused on revising the predictive model based on results from stage 2 and allocate Aboriginal and archaeological significance to the newly recorded sites.

The survey focused on three sectors: northern, southeastern and southwestern. The study found that the number of sites located was directly related to the size of the area surveyed and not to the degree of exploitation of that area by Aboriginal people in pre-contact times.

Prior to the assessment, 28 Aboriginal archaeological sites were registered on the AHIMS database for this area. As a result of the 20 days of fieldwork during stage 2, 38 previously unrecorded sites were recorded. Site types included isolated finds (n=8), artefact scatters (n=27) and scarred trees (n=3). Wilson and McAdam (2000) note that many of the recorded sites could be grouped together into site complexes and were given high archaeological significance.

Two “Places” with high significance to the Aboriginal community were also documented by the study. The two “Places” include the site of an artefact scatter in the Coledale area and the North Tamworth Aboriginal Reserve (known as the “Camp”) which was located on Forest Road.

As a result of the study, Wilson and McAdams (2000) provided the following predictions:

- Artefact scatters can be expected both north and south of the Peel River
- Artefact scatters are likely to vary in the raw material types they contain and the percentages of the raw material types they contain, depending on whether they are located to the north or the south of the Peel River
- The Peel River appears to have been a shared but rarely crossed resource zone

- The largest artefact scatters are most likely to be found on the creek terraces and lower slopes on red brown soils and above flood level. Artefact scatters will also be found on level areas associated with saddles, ridgetops and crests, especially in areas that provide good views across wide areas. Occasionally artefact scatters will be located in areas of steep gradient but these will normally be found to be eroding and washing downslope from level areas above
- The size of the artefact scatters will be dependent on the availability of water. The largest sites will be in area close to large waterholes on the major watercourses, the next largest sites will be near a spring or swamp. The smallest sites will generally be located on the intermittent watercourses
- Artefact scatters are likely to be in areas close to ecotones
- The most common artefact types in scatters will be flakes, retouched flakes, flaked pieces and cores. Axes, anvils, hammerstones and grindstones will be extremely rare and when found, will generally be in the larger sites close to a watercourse that supplied permanent water (i.e., waterholes, springs, swamps)
- Artefacts in areas that have been subject to cultivation and treadage by hard hoofed animals will be more likely to be broken than those not subject to cultivation and only subject to treadage by soft-footed animals.
- The most likely tree species in the Tamworth City area to have scars will be white box, yellow box and river red gum
- Scarred trees can be in any topographic zone but are most likely within a short distance of a water course. This may be a major watercourse or a minor feeder tributary
- Scarred trees located on the floodplain of the major watercourses will often have had bark removed to manufacture a canoe
- Scarred trees away from the major watercourses and on the minor tributary systems are more likely to have had bark removed to manufacture coolamons or shields
- Scarred trees are likely to be near other sites especially artefact scatters.

Tamworth-Gunnedah Transmission Line 875 Dismantling (OzArk 2010)

OzArk (2010) was commissioned by TransGrid to complete a heritage assessment in advance of the dismantling of an electricity transmission line between Tamworth and Gunnedah, located to the east of Gunnedah and running east to Tamworth. A range of previously recorded site types were registered with the AHIMS, with artefacts (either open campsites or isolated finds), scarred trees and grinding grooves being the most common site types. Two previously unrecorded Aboriginal sites were identified during the survey, with one comprising a small open campsite and the other being a scarred tree. The open campsite contained a single mudstone flake and was recorded as an open campsite as it was considered likely that other artefacts may be present, due to its location in the landscape, near a 2nd order tributary of Swains Creek and near a slight elevation. The scarred tree was identified as a 'coolamon' scar on a white box. Several previously

recorded scarred trees were reassessed as not being of cultural origin and AHIMS was notified of the reassessment to allow them to update their records.

Strathfield Intensive Livestock Facility (Niche 2013)

In 2013, Niche Environment and Heritage (Niche) completed an Aboriginal archaeological assessment for the proposed Strathfield Intensive Livestock Facility located 8 km north of Manilla near the Namoi River. Niche predicted that isolated finds and artefact scatters were the most likely site type that would be encountered. These sites were predicted to be in association with well-drained, flat to gently inclined land; land elevated above the floodplain; creek banks, valley flats, basal and lower slopes, and alluvial silts. A total of 20 sites containing 39 Aboriginal objects were identified during the survey. Sites were recorded as low-density background scatters of less than one artefact per square metre. Artefacts were located on flats and hill slopes (basal, lower, and simple slopes); on level to gently inclined land, generally within 400 m of third order or higher streams or within 100 m of 1st and 2nd order drainage channels. Artefact densities remained low but increased in density and frequency in proximity to streams and gullies which were third order or higher. Recorded materials included quartz, tuff, and agate.

South Tamworth Rural Lands Master Plan, Goonoo Goonoo Road Site (Everick 2014)

Everick Heritage Solutions (Everick 2014) undertook a due diligence assessment for the Tamworth Regional Council's South Tamworth Rural Lands Master Plan Development of the Goonoo Goonoo Road site. Five Aboriginal sites were recorded during the inspection including isolated finds and artefact scatters interpreted as being representations of background scatters in disturbed landscapes and therefore, not in situ. Three retouched artefacts were recorded at three different sites. All were identified as being retouched flakes and recorded materials included basalt, greywacke, and chert.

Tamworth Solar Farm (AREA 2019)

In 2019, AREA conducted a cultural heritage assessment of approximately 200 ha of land 7 km south of Sommerton, around 35 km northwest of the Survey Area. The landscape within the area assessed consisted of a cleared, gentle, west–east slope within a spur landform. Twenty-two Aboriginal sites were recorded during the archaeological survey (AREA 2019:47). These sites consist of eight open camp sites, eleven isolated finds, and three culturally modified trees. The isolated finds were scattered throughout the assessed area and consisted of 10 unmodified flakes (i.e. not tools) and one hammer stone. Five isolated finds were recorded in the southern-most portion of the area, directly associated with a drainage feature, and all but two of the remaining sites were clustered on a raised landform in the south-western corner of the assessment area. The modified trees were all recorded on white box trees and two of the three sites were recorded on raised landforms. The open sites were all low-density scatters consisting of unmodified flakes and cores. Like the isolated finds, this site type was predominantly recorded in association with

a drainage feature or an elevated landform, with a couple of exceptions which were identified in transport corridors for the project. Raw materials across the assessed areas include silcrete, quartzite, hornfels, chert, fine-grained siliceous material, tuff (mudstone), and quartz, although predominantly the artefacts were manufactured from quartzite. It was determined that there was little to no potential for other site types or subsurface archaeological deposits within the assessed area as significant disturbance had allowed for the disruption and erosion of topsoils.

Nundle Windfarm (Kelleher Nightingale Consulting 2020)

In 2020, Kelleher Nightingale Consulting Pty Ltd (KNC) conducted an Aboriginal heritage assessment for a wind farm located at Nundle, approximately 70 km southeast of Tamworth and around 26 km southwest of the Survey Area. The assessment was situated in mountain ranges and associated valleys. The archaeological investigation recorded seven Aboriginal sites, three artefact scatters and four isolated finds, and one potential archaeological deposit (PAD). The first artefact scatter, Hills of Gold AFT 1, is an open site situated on the alluvial bank of a tributary creek line which fed into Wardens Brook. The site is situated on an elevated, gently sloping to flat ridge landform which steeply dropped in the west to meet the Peel River. The second artefact scatter, Hills of Gold AFT 2, is an open site on a moderately sloping creekbank in a gully landform near an unnamed tributary creek which flows directly into the Peel River. Meanwhile, Hills of Gold AFT 4, consists of two flakes identified on the crest of a steep spur landform associated with Morgans Gully. This suggests that in landforms like those within the Survey Area, artefact scatter sites have been primarily recorded in gently sloping landforms, slightly elevated but directly associated with tributary creeks or drainage features.

The isolated finds identified during this investigation were primarily recorded within areas of high disturbance including road corridors and areas cleared for agricultural activities. Furthermore, most of the isolated find sites are identified in areas of exposure across a variety of elevated landforms including on a lower hillslope above a raised creek bank, a knoll crest, a low rise associated with a tributary creek, and on the ridge of a saddle landform. This suggests that site density and integrity generally decreased on elevated ridge, saddle, or spur landforms not directly associated with a tributary creek or drainage feature.

Furthermore, it is noted that there were no recordings on steeply sloping landforms, despite most site locations being near such landforms. This could be due to survey constraints, erosional processes as steep slopes are a degrading landform, or because such landforms tend to be transitory spaces rather than areas of occupation.

Dungowan Dam and Pipeline Project (EMM 2022)

EMM undertook an Aboriginal heritage assessment for the Dungowan Dam and pipeline Project in 2022, located approximately 15 km east of the Survey Area. The Project consisted of the removal of Dungowan Dam, establishment of a new dam and 32 km of pipeline between

Dungowan and Dungowan Dam, totalling in an impact area of approximately 315 ha. Field survey and test excavations were completed by EMM and RAPs over a total of more than 200 days.

The assessment identified 37 previously undocumented Aboriginal sites. Sites include: 14 artefact scatters, including six associated with areas of subsurface potential; 11 isolated artefacts, including three associated areas of subsurface potential; five stone arrangements, with three of these identified as possible burial areas by Aboriginal participants and one associated with a potential culturally modified tree; four potential culturally modified trees; two sites of intangible cultural value identified by Aboriginal participants; and, one potential grinding groove site identified by Aboriginal participants. Most of the artefact sites (artefact scatters and isolated finds) were integrated into a broader background scatter considered present across the Project footprint.

Most of the artefact scatters and isolated finds were largely constrained to the alluvial terraces and lower slopes while the non-artefactual sites (culturally modified tree and burial sites) were located on broad alluvial terraces associated with waterways. The two stone arrangements were restricted to spurs and the potential grinding groove site was located on volcanic rock within the streambed.

One hundred and five (105), 1 m² test units were excavated across terraces and slope surrounding Dungowan Creek. Eighty-two of the test pits contained artefacts in all excavated depths but primarily between 10 cm and 60 cm below surface. Twelve test units were found to contain >30 artefacts/m² and were considered to reflect specific activity zones or past foci of activity in contrast to the broader background scatter. One test unit contained extremely high densities of artefacts (282/m²) which was associated with a former residence of one of the key knowledge-holders nearby, suggesting a continuation of Aboriginal occupation in this area well before and through the post-contact period.

Analysis of both the sediments and the assemblage reveals that the major terraces along Dungowan Creek began forming about 10 ka. EMM found that the use of the valley by Aboriginal people appeared to focus on two main periods of activity: brief but repeat visitation between ~3.5-5 ka, and more extended residence/occupation of the valley in the last few hundred years.

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 Survey 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 October 2023	Tamworth Regional LGA	No places listed on either the National or Commonwealth heritage lists are located within the Survey Area.
National Native Title Claims Search	27 October 2023	NSW	Gomeroi People claim NC2011/006 includes the entire Tamworth Regional LGA encompassing the Survey Area. The Proponent will need to seek legal advice as to whether any crown land within the road reserves is applicable to 'future acts' under the <i>Native Title Act 1993</i> .
AHIMS	27 October 2023	7.5 x 7.5 km centred on the Survey Area	83 sites returned in the designated search area. No sites are located within the Survey Area.
Local Environmental Plan (LEP)	27 October 2023	Tamworth LEP of 2010	None of the Aboriginal places noted occur near the Survey Area.

A search of the Heritage NSW administered AHIMS database on 27 October 2023 returned 83 records for Aboriginal heritage sites within a 7.5 km radius centred on the Survey Area (GDA Zone 56, Eastings: 297850 – 312725, Northings: 654428 – 655922; **Appendix 2**). Despite the search returning 83 results, only 80 are being accounted for due to the AHIMS data which indicates that one site (29-2-0001) has been determined as invalid, and two (29-2-0110, 29-2-0279) are duplicate recordings.

None of the recorded sites are located within or near the Survey Area. **Figure 5-1** shows the location of the AHIMS sites that have been recorded near the Survey Area.

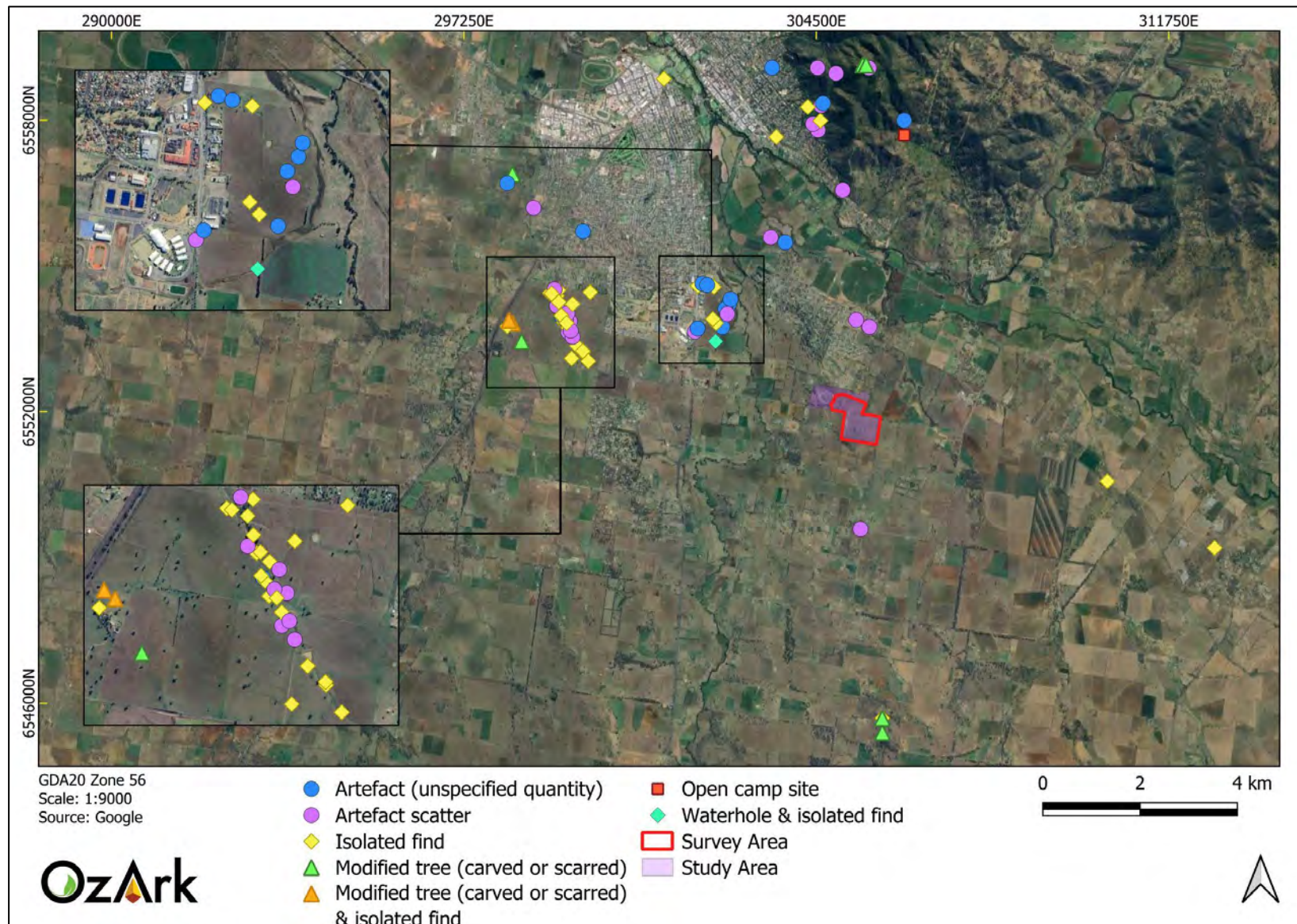
Table 5-2 lists the site types returned in the search area. The most frequently recorded site types are stone artefact sites of varying densities (artefacts of unspecified quantity, artefact scatters, and isolated finds) which account for 87.6% of site types. These are also the site types closest to the Survey Area, as well as a waterhole and isolated find. At distances greater than 5 km, sites featuring culturally modified trees (carved or scarred) are also present with 10% frequency, as well as an open camp site recording which only has a single recording in the vicinity of the Survey Area (see **Figure 5-1**).

The distribution of AHIMS sites shows that of the 80 sites within the search radius, 58 (72.5%) are located within 200 m of a waterway, either permanent or seasonal. In NSW there is a strong correlation between Aboriginal occupation sites and distance to water, and the AHIMS data suggests that site location is also associated with water availability in this district.

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

Site Type	Number	% Frequency
Artefact (unspecified quantity)	15	18.8
Artefact scatter	22	27.5
Isolated find	33	41.3
Modified tree (carved or scarred)	6	7.5
Modified tree (carved or scarred) and isolated find	2	2.5
Open camp site	1	1.3
Water hole & isolated find	1	1.3
Total	80	100

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



5.3.2 Previous studies in or near the Survey Area

Calala Battery Energy Storage System (Biosis 2023)

Biosis (2023) undertook an Aboriginal cultural heritage assessment for the Calala BESS at 57 Burgess Lane, Calala (approximately 1 km north of the current Survey Area). Two surveys of the 36-ha assessment area were conducted in association with RAPs during August and December 2022, and an additional survey was conducted in June 2023. No previously unrecorded Aboriginal cultural heritage sites were identified during the surveys, and no areas of archaeological sensitivity were identified. Biosis concluded that the nil results corresponded to the high levels of disturbance (Biosis 2023).

Tamworth BESS (OzArk 2024)

In 2021, a field survey was undertaken by OzArk to inform an ACHAR for the Tamworth BESS. The assessment assessed 18.7 ha of land immediately to the west of the current Survey Area. No Aboriginal sites were identified during the survey.

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. Very little of the organic material culture remains of ancestral Aboriginal communities survives to the present except in areas where preservation conditions are high. 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 Survey Area

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

Table 5-3: Site types recorded in the region of the Survey Area.

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

5.4.2 Landform modelling of archaeological potential

The large number of archaeological studies undertaken within the vicinity of the Survey Area provides information to obtain a sound 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.

In the case of the Survey Area, it is distant from major, permanent watercourses as well as relatively distant from non-perennial watercourses (outside the 200 m buffer). This would indicate that the frequency of site recordings will be less in the Survey Area when compared to hospitable landforms closer to permanent water.

Crucial for the preservation of archaeological deposits is the history of past land use in an area. Historically, the Survey Area has been subjected to widespread clearing and subsequent long-term farming and agricultural practices which may have significantly disturbed the ground surface and any archaeological deposits in the topmost levels of the soil profile.

5.4.3 Conclusion

Based on knowledge of the environmental contexts of the Survey 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 Survey Area to contain Aboriginal objects (Table 5-4), and what types of sites may be present within the Survey Area (Table 5-5).

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

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Gently inclined slopes	Slopes are a degrading landform, especially in the Survey Area where vegetation removal and agricultural use has accelerated soil loss. The slope gradient in the Survey Area however is relatively minimal, meaning that erosion is less likely to be significant. Generally, these landforms are less favoured for occupation when distant from water, and Aboriginal objects recorded in such landforms are likely to be in a secondary context due to past disturbances.
2	Hill crest	Archaeological studies in the region indicate that crest and spur landforms with proximity to water were favoured occupation locations. The Survey Area is at least 800 m from the nearest ephemeral drainage line and over a kilometre from the nearest permanent water source. This distance to water somewhat diminishes the archaeological sensitivity of this landform in the Survey Area. Furthermore, A-Horizon soils in these landforms tend to be thin. Should Aboriginal objects be recorded in these landforms, they are likely to be surface manifestations and likely displaced from their primary depositional context. They may also contain quarries if suitable raw materials outcrop across this landform.

Table 5-5: Likelihood of certain site types being present in the Survey Area.

Site type	Likelihood of being present in the Survey 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 Survey Area.
Open artefact scatters	Despite stone artefact sites being the most common site type previously recorded in the surrounding area, the Survey Area is dominated by gently inclined slopes distant to permanent or semi-permanent water, indicating this site type is not predicted to be common. Furthermore, the moderate level of disturbance in the Survey Area will mean that sites will be dispersed and displaced. It is likely that any sites associated with such landforms are likely to have a low artefact density and a low complexity of tool types as the sites are either one-off events or only infrequently used.
Culturally modified trees	Due to the near-total clearance of trees from within the Survey Area, this site type is predicted to be very rare. It is also noted that this site type is very rare at a regional level.
Quarry sites	This site type could be recorded within the Survey Area should suitable rock outcroppings be available. Outcropping rock is only expected to be present on the hill crest.
Burials	Although it is possible that this site type could be found within the Survey Area, it is considered a rare site type especially given the disturbance that has occurred within the Survey Area and a lack of sandy deposits.
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 Survey Area. These research questions include:

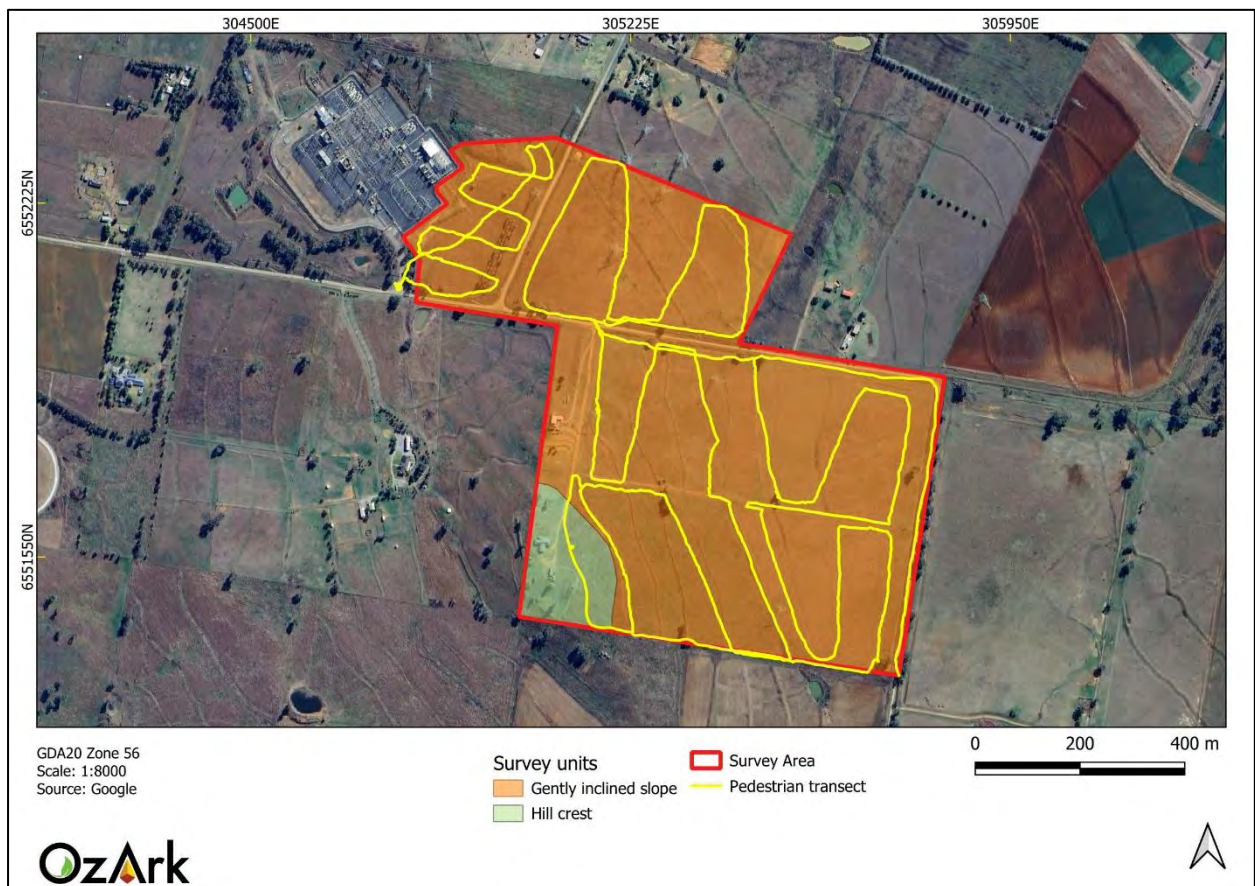
- What resources were available to the Aboriginal people using the land within the Survey Area (food, stone and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Are there outcropping rock materials present suitable for stone tool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

6 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

6.1 SAMPLING STRATEGY AND FIELD METHODS

The archaeological methods utilised in the Aboriginal archaeological assessment followed the Code of Practice. Standard archaeological field survey and recording methods were employed (Burke & Smith 2004). The survey consisted of one archaeologist (holding the GPS that captured the tracks shown in **(Figure 6-1)**, with assistance of a RAP representative investigating the area in transects spaced approximately 20 to 30 m apart.

Figure 6-1: Survey coverage across the Survey Area.



6.2 EFFECTIVE SURVEY COVERAGE

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

GSV is defined as:

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

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

GSE is defined as:

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

Table 6-1 calculates the effective survey coverage within the Study Area. In general, **Table 6-1** presents an approximation of the amount of ground surface able to be seen at any location within specific landform units. For example, across the gently inclined slopes of the Survey Area, approximately 10% of the ground surface was exposed, generally confined to the tops of berms, the edges of channels and access tracks, and underneath the transmission towers. The ground surface within these areas was concealed by leaf litter, imported gravel and vegetation (**Plates 1**). Visibility across the majority of the Survey Area was hampered by thick pasture, native grasses and weeds.

Table 6-1: Effective survey coverage within the Survey 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	Gently inclined slopes	585,606	60	10	35,136	6%
2	Hill crests	37,053	50	5	926	2.5%

Table 6-2 demonstrates that although survey efficacy of both survey units is low, at 6 per cent and 2.5 per cent, it is also likely that the small scale of the Survey Area and the lack of nearby permanent water were also factors in the lack of sites recorded.

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

Landform	Landform area (sq m)	Area Effectively Surveyed (sq m) (= Effective Coverage Area)	% of Landform Effectively Surveyed (= Area Effectively Surveyed / Landform x 100)	Number of Sites	Number of Artefacts or Features
1	585,606	35,136	6	0	0
1	37,053	926	2.5	0	0

6.3 ABORIGINAL SITES RECORDED

No Aboriginal sites were recorded within the Survey Area during the survey. Further, no landforms within the Survey Area were assessed to have potential for subsurface archaeological deposits.

The lack of landforms with potential subsurface archaeological deposits is attributed to levels of disturbance and a lack of elevated landforms adjacent to permanent and semi-permanent water.

6.4 DISCUSSION

The lack of Aboriginal sites recorded during the current survey was overall predicted. It was considered that there was low to moderate potential for artefact-based sites such as artefact scatters or isolated finds to be present, however, none were identified.

It may be that the levels of ground cover precluded the detection of these site types, but it is also considered that the distance to permanent and semi-permanent water may mean that camp sites may not have been present in the Survey Area in the past.

The absence of modified trees was expected due to the almost completely cleared nature of the Survey Area. Only a small number of mature trees are present (**Figure 4-2**), located along the Burgmanns Lane corridor and in the middle of the paddock south of Burgmanns Lane. These trees were carefully inspected and bear no Aboriginal cultural scars. In areas of extreme soil degradation, exposure of granite and shale outcrops were visible, although no quarry sites were located. Although burials or ceremonial sites cannot be completely ruled out, there were no indications that these are present in the Survey Area.

6.4.1 Responses to the research questions

In **Section 5.5** several research questions were advanced to guide the survey of the Survey Area. Following the survey, it has been concluded that the area may be more likely to have been a location passed through by Aboriginal people, rather than a focus of occupation. There are no culturally modified trees, no evidence of quarrying and the soils are not conducive to the presence of burials.

Regarding the regional context, the lack of nearby permanent or semi-permanent water caused the area to have no specific factors conducive to Aboriginal occupation that has left a detectable archaeological signature.

7 SIGNIFICANCE ASSESSMENT

7.1 INTRODUCTION TO SIGNIFICANCE ASSESSMENT

7.1.1 Identifying cultural significance

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

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

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

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

7.1.1.1 *Social or cultural value*

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

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

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

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

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

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

7.1.1.2 *Scientific (archaeological) value*

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

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

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

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

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

7.1.1.3 *Aesthetic value*

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

7.1.1.4 *Historic value*

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

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

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

7.2 ASSESSED SIGNIFICANCE OF THE RECORDED SITES

No Aboriginal sites or cultural values have been identified within the Survey Area, as such, the significance assessment completed assesses the values of the Survey Area.

Social or Cultural Value

There may be places with intangible cultural significance within the Survey Area, although no specific locations have so far been identified by the Aboriginal community (see **Section 3.3** and **3.4**)

Archaeological/Scientific Value

During the survey, no Aboriginal sites or objects were recorded and therefore there are no known places with archaeological significance within the Survey Area.

Aesthetic Value

There are no known places with identified aesthetic values identified in the Survey Area.

Historic Value

There are no known places with identified historic values identified in the Survey Area.

8 ASSESSING HARM

8.1 AVOIDING AND MINIMISING HARM

8.1.1 Conserving significant Aboriginal cultural heritage

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

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

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

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

8.1.2 Opportunities to conserve Aboriginal cultural heritage values

As no Aboriginal sites or specific cultural values were recorded during the current assessment, there are no opportunities for conservation.

8.2 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROJECT

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

8.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

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

8.3.1 Intergenerational equity

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

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

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

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

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

8.3.2 The precautionary principle

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

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

- The 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.

8.3.3 Principle of Integration

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

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

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

8.3.4 Applicability to the Project

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

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

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

ESD principle	Response
Avoiding and minimising harm	Section 8.1 sets out mechanisms by which to avoid and minimise harm. As no Aboriginal sites are present, these mechanisms will not be employed.
The integration principle	The Project presents a strong case for the broader environmental benefits arising from environmentally responsible development. The environmental consequences of the 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 Area.
The intergenerational equity principle	It is assessed that the Project will not harm significant Aboriginal cultural heritage values and that there will be a manageable diminution of intergenerational equity.

9 MANAGEMENT OF ABORIGINAL CULTURAL HERITAGE SITES

9.1 GENERAL MANAGEMENT PRINCIPLES

Appropriate management of cultural heritage items is primarily determined based on their assessed significance as well as the likely impacts of the Project. **Section 7.2** describes the likely impacts of the Project. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- Avoid impact by altering the project to avoid impact to a recorded Aboriginal 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.

As no Aboriginal cultural heritage values have been identified within the Survey Area, alteration to the proposed Project design is unnecessary in terms of Aboriginal cultural heritage.

- If impact is unavoidable then approval to disturb sites/cultural values under the authority of an ACHMP must be sought from DPHI. Normally the management recommendations contained in the ACHAR become policies of the ACHMP.

As no Aboriginal cultural heritage values have been identified within the Survey Area, an ACHMP is not warranted. Instead, the management of any unanticipated finds can be managed by an unanticipated finds protocol and a skeletal remains protocol.

9.2 MANAGEMENT AND MITIGATION OF RECORDED ABORIGINAL SITES

There is no specific management to be applied to the Project in an ACHMP as no Aboriginal sites or values have been identified.

In the unlikely event that Aboriginal objects are noted during construction or operation of the Project, the *Unanticipated Finds Protocol* in **Appendix 3: Unanticipated Finds Protocol** will be an appropriate management protocol. If human remains were to be encountered, then the procedure in **Appendix 4: Unanticipated Skeletal Remains Protocol** is an example of a human skeletal remains protocol that would be followed.

10 RECOMMENDATIONS

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

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

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

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

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

1. Following development consent of the Project, the proposed work may proceed with caution. In the unlikely event that unexpected Aboriginal heritage items are encountered during works, the *Unanticipated Finds Protocol* in **Appendix 3** must be implemented. **Appendix 4** provides the appropriate procedure to be undertaken in the unlikely event that human remains are encountered.
2. This ACHAR concludes that the Project may proceed without further archaeological investigation under the following conditions:
 - a. All land and ground disturbance activities must be confined to within the Survey Area, as this will eliminate the risk of harm to potential Aboriginal objects in adjacent landforms. Should the parameters of the Project extend beyond the assessed Survey Area, then further archaeological assessment may be required.
 - b. All staff and contractors involved in the proposed work should undergo a cultural heritage induction to ensure they can recognise Aboriginal artefacts (see **Appendix 5**), and are aware of the legislative protection requirements for all Aboriginal sites and objects under the NPW Act and are familiar with the *Unanticipated Finds Protocol* and the skeletal remains protocol.

REFERENCES

- AREA 2019 AREA Environment Consultants & Communication. 2019. *Tamworth Solar Farm: Cultural Heritage Assessment*. Report to: Oriens Energy Pty Ltd.
- Banks 2001 Banks, Robert G. 2001, *Soil Landscapes of the Tamworth 1:100 000 Sheet*, Department of Land and Water Conservation, Sydney
- Binns & McBryde 1972 Binns, R. and I. McBryde. 1972. 'A petrological analysis of ground-edge artefacts from northern New South Wales'. Australian Institute of Aboriginal Studies. Canberra
- Biosis 2023 Biosis Pty Ltd. 2023. *Calala Battery Energy Storage System, Calala (SSD-52786213): Archaeological Report*. Prepared for Equis Energy.
- Burke & Smith 2004 Burke, H. and Smith, C. 2004. *The Archaeologist's Field Handbook*, Blackwell, Oxford.
- Burra Charter 2013 International Council on Monuments and Sites 2013. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*.
- Clarke 2004 Clarke, P.A. 2004. *The historical origins of late 20th century Aboriginal English in southern Australia*. Manuscript. Adelaide. South Australian Museum Archives.
- DECCW 2010 Department of Environment, Climate Change and Water, Sydney (now Heritage NSW). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.
- DECCW 2010b Department of Environment, Climate Change and Water, Sydney (now Heritage NSW). *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.
- EMM 2022 EMM Consulting 2022. *Dungowan Dam and pipeline project: Aboriginal Cultural Heritage Assessment*. Report to: Water Infrastructure NSW.
- Everick 2014 Everick Heritage Consultants. 2014. *Due Diligence Cultural Heritage Assessment: South Tamworth Rural Lands Master Plan, Goonoo, Goonoo Road Site, Tamworth, NSW*. Report to Tamworth Regional Council.
- Everick 2021 Everick Heritage Consultants. 2021. *Goonoo Goonoo Road Duplication, Tamworth NSW*. Report for Transport NSW.
- Fison et al. 1880 Fison, L; Howitt, A; and Morgan, L. 1880. *Kamilaroi and Kurnai: groupmarriage and relationship by elopement, drawn chiefly from the*

- usage of the Australian aborigine: also the Kurnai tribe, their customs in peace and war.* Aboriginal Studies Press for the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra.
- Gardner 1978 Gardner, W (1978 [1842–54]) "Productions and resources of the Northern and Western Districts of New South Wales". In I. McBryde (Ed), *Records of Times Past: Ethnohistorical essays on the culture and ecology of the New England Tribes*, pp 239–246. Australian Institute of Aboriginal Studies, Canberra.
- Gaynor 1996 Gaynor 1996, The importance of quartz in stone artefact assemblages: a technological analysis of five Aboriginal sites in the Coonabarabran/Warrumbungle region. Unpublished Masters thesis, Department of Archaeology and Palaeoanthropology, University of New England, Armidale.
- Gott 1983 Gott, B. 1983. Murnong – *Microseris scapigera*. *Australian Aboriginal Studies*, Issue 2.
- KNC 2020 Kelleher Nightingale Consulting Pty Ltd. 2020. *Hills of Gold Wind Farm SSD-9679: Aboriginal Cultural Heritage Assessment*. Report to: ARUP on behalf of Wind Energy Partners Pty Ltd.
- Leonard and Jones 1989 Leonard, R. D. and Jones, G. T. (eds) *Quantifying diversity in archaeology*. Cambridge University Press, Cambridge.
- McAdam and Wilson 2000 McAdam, L; and Wilson, J. 2000. *The Tamworth Aboriginal Archaeological Site Study*. Report to Tamworth City Council.
- McBryde 1977 McBryde, I. 1977. Determinants of assemblage variation in New England prehistory. In R.V.S. Wright (ed), *Stone Tools as Cultural Markers*, pp. 223-225. Prehistory and Material Culture Series, No. 12. AIATSIS, Canberra and Humanities Press, Atlantic Highlands, NJ.
- McBryde and Binns 1970 I. McBryde and R.A. Binns. 1970. *Preliminary report on a petrological study of ground-edge artefacts from north-eastern New South Wales, Australia*. Proceedings of the Prehistoric Society 1969/1970: 229–235.
- Niche 2013 Niche Environment and Heritage. 2013. *Proposed Intensive Livestock Industry Facility Aboriginal and Non-Aboriginal Heritage Due Diligence Assessment, near Manilla, NSW*. Report to Rostry Pty Ltd / PSA Consulting.
- Millis 1980 Millis, R. 1980. 'The Wallabadah Manuscript: Recollections of the Early Days' by William Telfer Jnr. *The Early History of Northern New South Wales*. New South Wales University Press.

Mitchell 2011	Mitchell, P. 2011. <i>Mitchell landscapes (version 3)</i> . Office of Environment and Heritage (OEH).
OEH 2011	Office of Environment and Heritage 2011. <i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i> .
O'Rourke 1997	O'Rourke, M. 1997. <i>Kamilaroi lands: North-central New South Wales in the early 19th century</i> . Self-published
OzArk 2010	OzArk Environment & Heritage. 2010. <i>Aboriginal and non-Indigenous Heritage Assessment: Tamworth-Gunnedah Transmission Line 875 Dismantling</i> . Report to TransGrid.
OzArk 2023	OzArk Environment & Heritage. 2023. <i>Aboriginal Cultural Heritage Assessment Report, Bendemeer Solar Farm</i> . Report for Athena Energy Australia.
OzArk 2024	OzArk Environment & Heritage. 2024. <i>Historic Heritage Assessment Report. Kingswood BESS</i> . Report to Arcadis on behalf of Iberdrola Australia Ltd.
Thompson 1981	Thompson, P. 1981. <i>EIS for the proposed Vickery Coal Mine Project</i> . Kembla Coal and Cole Pty Ltd.
Tindale 1974	Tindale N. <i>Aboriginal Tribes of Australia</i> . ANU Press, Canberra.
Tindale 2000	Tindale NB. 2000. Wiradjuri. In <i>Tindale's Catalogue of Australian Aboriginal Tribes</i> . South Australian Museum on South Australian Museum Website, South Australia.
White 1999	White E. <i>From artefacts to the actions of people in prehistory: a behavioural study of the W2 stone artefact assemblage, Hunter Valley, NSW</i> . Master of Philosophy Thesis, University of Sydney.

PLATES



Plate 1: Vegetation in the western portion of the Survey Area, looking north.



Plate 2: Area of outcropping shale where soils have been depleted by erosion on the hill crest.



Plate 3: View north across the western boundary of the Survey Area from the hill crest.



Plate 4: View south across the western boundary of the Survey Area looking towards the hill crest.



Plate 5: View south across the northern portion of the Survey Area showing the substation in the background.

APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

Appendix 1 Figure 1: Aboriginal community consultation log

Date	Organisation	Comment	Method
9 October 2023	Northern Leader	Advertisement placed in Northern Leader, closing date 23.10.23	Email
9 October 2023	Heritage NSW	Catherine Burrowes (CB) sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	Tamworth LALC	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	Office of The Registrar, ALRA	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	National Native Title Tribunal	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	NTSCORP	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	Tamworth Regional Council	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
9 October 2023	North West Local Land Services	CB sent stage 1 agency letter requesting potential stakeholders. Closing date 23.10.23	Email
10 October 2023	Tamworth LALC	CB received email registering for the project	Email
12 October 2023	Tamworth LALC	CB replied with thanks	Email
16 October 2023	Gomeroi Applicant	CB received email registering for the project	Email
16 October 2023	Gomeroi Applicant	CB replied with thanks	Email
1 November 2023	Alison Sampson	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	AT Gomilaroi Cultural Consultancy	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Barraby Cultural Services	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Corroboree Aboriginal Corporation	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	D F T V Enterprises	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Didge Ngunawal Clan	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Edgerton kwiembal AC	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Galamaay Cultural Consultants (GCC)	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Gilay Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Glen Morris	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Guyinbaraay people Clan group	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Gomery Cultural Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Konanggo Aboriginal Cultural Heritage Services	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Michelle Saunders	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Muswellbrook Cultural Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email

Date	Organisation	Comment	Method
1 November 2023	Ngambaa Cultural Connections	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Nunawanna Aboriginal Corporation	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Nyakka Aboriginal Corporation	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Rick Slater	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Thomas Dahlstrom	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Thoorga Nura	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Vicky Hannah Gomeri Duncan	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Warragil Cultural Services	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	WATTAKA Pty Ltd	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Wurrumay Pty Ltd	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Yurrandaali	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Bariyan Cultural Connections	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	RAW Cultural Healing	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Girragirra Murun Aboriginal Corporation	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Wingarra Wilay Aboriginal Corporation	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Gali Heritage Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Long Gully Cultural Services	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Bill Trewlynn	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Brian Draper	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Cacatua General Service (Cacatua Culture Consultants)	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Coonabarabran LALC	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Kevin Sampson	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Natasha Rodgers	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Tania Mathews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	BJC Cultural Management	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Brent Mathews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Christine Archbold	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Clifford Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email

Date	Organisation	Comment	Method
1 November 2023	Darrell Mathews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Hazel Collins	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Jeff Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	John Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Joshua Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Justin Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Len Waters	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	LLoyd Matthews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Lorraine Towney	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Luke Cameron Cultural Management	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Mavonia Welsh	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	ME Griffiths Cultural Management	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Mooki Plains Management	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Mooki River Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Paul Moodie	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Rodney Mathews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Ron Smith	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Rona Slater	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Roslyn Smith	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Scott Smith	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	T&G Culture Consultants	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Talcon Pty Ltd	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Tania Mathews	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Tracy Woltley	CB emailed stage 1 community letter Closing date 15.11.23	Email
1 November 2023	Wiradjuri Interim Working Party	CB emailed stage 1 community letter Closing date 15.11.23	Email
2 November 2023	Gomery Cultural Consultants	CB received email registering for the project	Email
2 November 2023	Gomery Cultural Consultants	CB replied with thanks for registration	Email
2 November 2023	AT Gomilaroi Cultural Consultancy	CB received email registering for the project	Email
2 November 2023	AT Gomilaroi Cultural Consultancy	CB replied with thanks for registration	Email

Date	Organisation	Comment	Method
2 November 2023	Didge Ngunawal Clan	CB received email registering for the project	Email
2 November 2023	Didge Ngunawal Clan	CB replied with thanks for registration	Email
2 November 2023	Long Gully Cultural Services	CB received email registering for the project	Email
2 November 2023	Long Gully Cultural Services	CB replied with thanks for registration	Email
2 November 2023	D F T V Enterprises	CB received email registering for the project	Email
3 November 2023	D F T V Enterprises	CB replied with thanks for registration	Email
4 November 2023	Konanggo Aboriginal Cultural Heritage Services	CB received email registering for the project	Email
6 November 2023	Konanggo Aboriginal Cultural Heritage Services	CB replied with thanks for registration	Email
8 November 2023	Thomas Dahlstrom	CB received email registering for the project	Email
8 November 2023	Thomas Dahlstrom	CB replied with thanks for registration	Email
8 November 2023	Cacatua General Service (Cacatua Culture Consultants)	CB received email registering for the project	Email
8 November 2023	Cacatua General Service (Cacatua Culture Consultants)	CB replied with thanks for registration	Email
8 November 2023	AGA Services	CB received email registering for the project	Email
8 November 2023	AGA Services	CB replied with thanks for registration	Email
8 November 2023	Bawurra	CB received email registering for the project	Email
8 November 2023	Bawurra	CB replied with thanks for registration	Email
16 November 2023	Talcon Pty Ltd	RTS in mail	Email
16 November 2023	Tamworth LALC	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Gomeroi Applicant	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Gomery Cultural Consultants	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	AT Gomilaroi Cultural	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	D F T V Enterprises	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Didge Ngunawal Clan	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Long Gully Cultural Services	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Konanggo Aboriginal Cultural Heritage Services	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Thomas Dahlstrom	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Cacatua General Service (Cacatua Culture Consultants)	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	AGA Services	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Bawurra	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Gomery Cultural Consultants	CB received response from Methodology - I wasn't on project, but I do know there is lot of sites round Tamworth calala, and goonoo goonoo station, I have connection to these areas and up around moore ck and hills of nundle.	Email
16 November 2023	Gomery Cultural Consultants	CB replied with thanks for email	Email
16 November 2023	Bill Trewlynn	CB spoke to Bill and has now received late registration for the project	Email

Date	Organisation	Comment	Method
16 November 2023	Bill Trewlynn	CB emailed Stage 2/3 assessment methodology Closing date 14.12.23	Email
16 November 2023	Long Gully Cultural Services	CB received email - I'm happy with the methodology	Email
16 November 2023	Long Gully Cultural Services	CB replied - thank you for your email.	Email
24 November 2023	Lorraine Towney	RTS in mail	Email
29 November 2023	Barraby Cultural Services	CB received email with late registration for the project	Email
29 November 2023	Barraby Cultural Services	CB sent Stage 2/3 assessment methodology Closing date 14.12.23	Email
5 December 2023	Tamworth LALC	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Gomeroi Applicant	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Gomery Cultural Consultants	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	AT Gomilaroi Cultural	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	D F T V Enterprises	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Didge Ngunawal Clan	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Long Gully Cultural Services	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Konanggo Aboriginal Cultural Heritage Services	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Thomas Dahlstrom	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Cacatua General Service (Cacatua Culture Consultants)	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	AGA Services	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Bawurra	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Bill Trewlynn	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	Barraby Cultural Services	CB emailed AFGM invitation - closing date 14.12.23	Email
5 December 2023	David Horton	CB received email correspondence of attending	Email
6 December 2023	Tamworth LALC	CB received email advising not available for AFGM	Email
6 December 2023	Aaron Talbott	CB received email correspondence of attending	Email
6 December 2023	Bill Trewlynn	CB received a call from Bill advising that the proposed meeting day overlapped with a four day LALC meeting in the area.	Email
6 December 2023	Long Gully Cultural Services	CB received email from Ethan confirming attendance of one of his uncles.	Email
7 December 2023	Tamworth LALC	CB emailed asking whether the proposed AFGM overlapped with a LALC meeting	Email
7 December 2023	Tamworth LALC	CB received an email advising the AFGM does not overlap with a LALC meeting	Email
8 December 2023	Galamaay Cultural Consultants (GCC)	CB received late registration -	Email
8 December 2023	Galamaay Cultural Consultants (GCC)	CB provided Stage 2/3 assessment methodology advising closing date 14.12.23	Email
10 December 2023	Long Gully Cultural Services	CB received email asking whether the AFGM was paid	Email
10 December 2023	Long Gully Cultural Services.	CB advised AFGM attendance is not paid as detailed in the invite	Email
14 December 2023	Galamaay Cultural Consultants (GCC)	CB emailed AFGM invite	Email
14 December 2023	Bill Trewlynn	CB received phone call - Bill registering for AFGM	Phone
10 April 2024	Tamworth LALC	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email

Date	Organisation	Comment	Method
10 April 2024	Gomeroi Applicant	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Gomery Cultural Consultants	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	AT Gomilaroi Cultural	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	D F T V Enterprises	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Didge Ngunawal Clan	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Long Gully Cultural Services	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Konanggo Aboriginal Cultural Heritage Services	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Thomas Dahlstrom	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Cacatua General Service (Cacatua Culture Consultants)	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	AGA Services	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Bawurra	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Bill Trewlynn	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Barraby Cultural Services	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email
10 April 2024	Galamaay Cultural Consultants (GCC)	CB emailed stage 4 draft ACHAR. Closing date 10.5.24	Email

Appendix 1 Figure 2: Stage 1 Advertisement placed in the Northern Daily Leader.

northerndailyleader.com.au

Monday, October 9, 2023 NORTHERN DAILY LEADER 13

Connect with Classifieds

Phone: 02 6768 1200
Email: classifieds@northerndailyleader.com.au

Public Notices

**Expression of Interest
Cultural Heritage Management**

OzArk Environment & Heritage has been engaged on behalf of Iberdrola Australia Development Pty Limited (the proponent) to complete an Aboriginal cultural heritage assessment for the Kingswood Battery Energy Storage System (BESS) (the Proposal), at Kingswood in the Tamworth Regional local government area. The project site covers approximately 40 hectares of land, and the project will connect into the grid of the existing Tamworth substation located to the northwest via a proposed new transmission line.

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 project site, please register your interest to be consulted. Registrations can be made by post: OzArk PO Box 2069 Dubbo NSW 2830; email: catherine@ozarkehm.com.au or by phoning OzArk on 02 6882 0118. All submissions should be received no later than 23rd October 2023.

Trade Services

SMITH'S Excavator & Bobcat 0419 411 434

Adult Services

A SEXY EMMA
Attractive, size 8, fun, experience best service. In/bout. 0411 489 338

SHOP ONLINE FOR LESS

Search thousands of discount codes and save!

PLACE YOUR BUSINESS QR CODE IN YOUR AD TODAY!

CLASSIFIED

CONNECT WITH CLASSIFIEDS

Place a classified ad: 02 6768 1200, classifieds@northerndailyleader.com.au
Save time, submit online 24/7: addirect.com.au
Advertising self-service enquiries: acmadonline@nortcommunitymedia.com.au
Print and online packages available throughout Australia.

See what the others don't

Our superior map-based search gives you the complete view of the property market. With heritage, zoning and property overlays, you get the complete view of millions of properties across Australia, even if they're not for sale yet.

When it comes to property, with view.com.au you see all.

view.com.au | See all

Connect with Classifieds through Emojis

Appendix 1 Figure 3: Stage 1 letter sent to agencies (sample)



OzArk Environment & Heritage

Dubbo | Queanbeyan T: 02 6882 0118
Wollongong | Newcastle enquiry@ozarkehm.com.au
Kadomba www.ozarkehm.com.au

ABN 59 104 582 354

145 Wingewarra St
PO Box 2069
DUBBO NSW 2830

9 October 2023

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

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT
KINGSWOOD BATTERY ENERGY STORAGE SYSTEM (BESS)**

Dear Sir/Madam,

OzArk Environment & Heritage (OzArk) has been engaged by Arcadis on behalf of Iberdrola Australia Development Pty Limited (the proponent) to undertake Aboriginal community consultation as per the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

The proponent is seeking development consent for the construction, operation, and maintenance of a large-scale Battery Energy Storage System (BESS) of around 500 megawatt (MW) that would provide 1000 megawatt hours (MWh) of battery storage capacity (the proposal).

The proposal is located at 744 Burgmanns Lane, Kingswood 2340 (Lot 43 DP1064582) (the Project Site), within the Tamworth Regional Local Government Area (LGA) and in the suburb of Kingswood. Please refer to Figure 1 below.

The proposal site includes approximately 40 hectares of land, located around six kilometres southeast of Tamworth and two kilometres south of Calala town centre and borders the suburb of Calala. The Project Site is also around 400 metres southeast of the existing Tamworth TransGrid substation (Tamworth substation). The proposal will connect into the grid of the existing Tamworth substation located to the northwest of the project site via a proposed new transmission line.

We are 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 Tamworth Regional LGA.

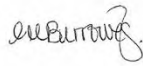
This consultation group will assist OzArk in preparing the Aboriginal Cultural Heritage Assessment Report (ACHAR) and to assist Heritage NSW and the Department of Planning and Environment in their consideration and determination of the project.

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.

OzArk Environment & Heritage

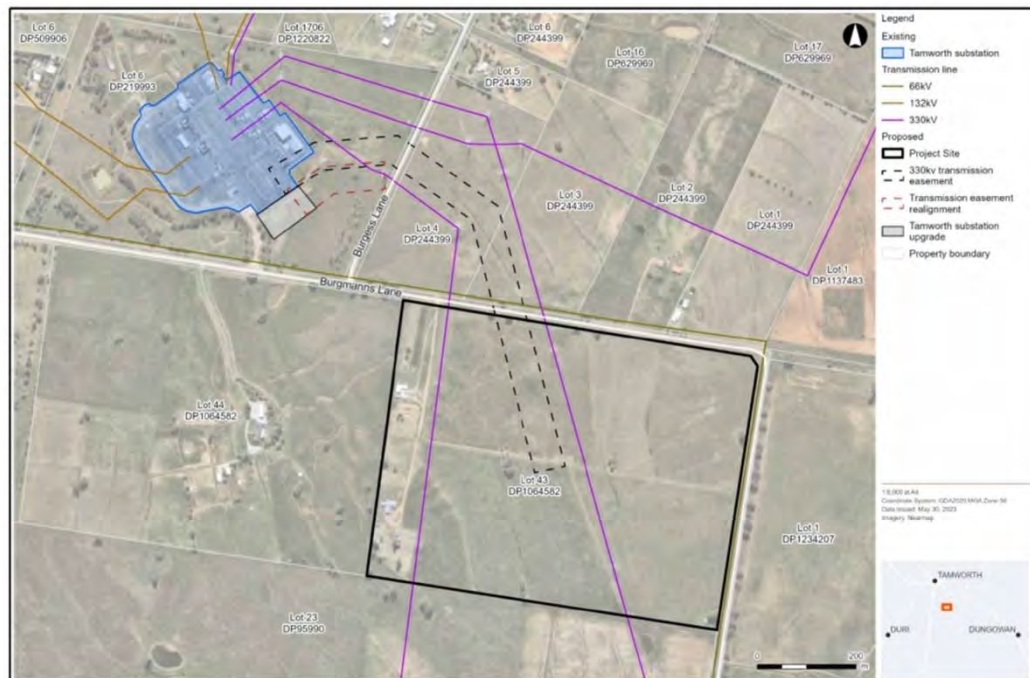
We would appreciate it if you could provide any feedback, by responding to this email catherine@ozarkehm.com.au, regarding the Aboriginal stakeholder groups by 23 October 2023 or sooner if possible.

Kind regards,



Catherine Burrowes
Office Manager/ Community Liaison

Figure 1: Proposed project location.



Appendix 1 Figure 4: Response from Office of the Registrar



Appendix 1 Figure 5: Response from Heritage NSW





Our reference: Doc23/906565

Catherine Burrowes
Office Manager/ Community Liaison
Oz Ark
145 Wingewarra Street
Dubbo NSW 2830

17/10/2023

Dear Catherine,

WRITTEN NOTIFICATION OF PROPOSAL AS REQUIRED UNDER DECCW ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

Subject: KINGSWOOD BATTERY ENERGY STORAGE SYSTEM (BESS).

Thank you for your correspondence dated 9 October 2023 to Heritage NSW (Department of Planning and Environment) regarding the above project.

Attached is a list of known Aboriginal Stakeholders for the proposed development at the **Tamworth** Local Government Area that Heritage NSW considers likely to have an interest in the activity.

Please note this list is not necessarily an exhaustive list of all interested Aboriginal Stakeholders.

Receipt of this list does not remove the requirement of a proponent/ consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (April 2010).

Under Section 4.1.6. of the Consultation Requirements, you must also provide a copy of the names of each Aboriginal person who registered an interest to the relevant Heritage NSW office and Local Aboriginal Land Council (LALC) within 28 days from the closing date for registering an interest.

Please note that the contact details in the list provided by Heritage NSW may be out of date as it relies on Aboriginal stakeholders advising Heritage NSW when their details need changing. If individuals/companies undertaking consultation are aware that any groups contact details are out of date, or letters are returned unopened, please contact either the relevant stakeholder group (if you know their more current details) and/or Heritage NSW. AHIP applicants should make a note of any group they are unable to contact as part of their consultation record.

Level 6, 10 Valentine Ave Parramatta NSW 2150 ■ Locked Bag 5020 Parramatta NSW 2124
P: 02 9873 8500 ■ E: heritagemailbox@environment.nsw.gov.au

If you have any questions about this advice, please email:
heritagemailbox@environment.nsw.gov.au or contact (02) 9873 8500.

Yours sincerely



Barry Gunther, Aboriginal Senior Assessment Officer
Environment and Heritage – Heritage NSW
Department of Planning and Environment
Aboriginal Heritage Regulation Branch – South Heritage NSW

Attachment A:

Registered Aboriginal Interests DPE Aboriginal Stakeholders List for the **Tamworth** Local Government Area.

LIST OF ABORIGINAL STAKEHOLDERS FOR THE DEPARTMENT OF PLANNING AND ENVIRONMENT (DPE) SOUTHERN REGION HELD BY DPE FOR THE PURPOSES OF THE OEH ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

The purpose of this letter is to assist you as the proposed applicant in undertaking Aboriginal community consultation in accordance with the relevant legislation and guidelines.

These lists are provided to proponents in accordance with section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the "Consultation Requirements") which commenced on 12 April 2010.

The consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement however, this is separate from consultation. The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities for Aboriginal people.

A copy of the Consultation Requirements can be found on the OEH website at:

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>.

Under the Consultation Requirements, a proponent is required to provide Aboriginal people who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places as relevant to the proposed project area, with an opportunity to be involved in consultation. Section 3.3.1 of the Consultation Requirements states that Aboriginal people who can provide this information are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project.

The Consultation Requirements also state that:

Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- continue to maintain a deep respect for their ancestral belief system, traditional lore and custom
- recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country
- have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.

Please note: the placement of an organisation's name on any OEH Aboriginal stakeholder list for the Consultation Requirements does not override a proponent's requirement to also advertise in the local newspaper and to seek from other sources the names of any other Aboriginal people who may hold cultural knowledge as required under clause 60 of the National Parks and Wildlife Regulation 2019.

How to use this list

1. Contact the organisations/individuals who have indicated an interest in the relevant LGA/s and invite them to register an interest in your project

Do not reproduce the attached list in publicly available reports and other documents. Your report should only contain the names of the organisations and individuals who you have invited to register an interest in your project and those who have registered as stakeholders for your project.

Please note, in accordance with Clause 60 (10) of the National Parks and Wildlife Regulation 2019, where an agreement of the kind listed below specifies or identifies a modified or alternative consultation process for the purposes of Part 6 of the National Parks and Wildlife Act 1974, the applicant is to undertake consultation in accordance with the modified or alternative process. The applicable agreements are

- a) a registered Indigenous Land Use Agreement under the Native Title Act 1993 of the Commonwealth entered into between an Aboriginal community and the State,
- b) a lease entered into under Part 4A of the Act,
- c) an agreement entered into by the Secretary and a board of management reserved under Part 4A of the Act that has the consent of Aboriginal owner board members for the land concerned,
- d) an agreement entered into between an Aboriginal community and the Department of Planning, Industry and the Environment.

Where you believe your application is wholly or partially located within an area subject to any of the above agreements, please provide further correspondence (including mapping, if required) detailing the applicable agreement and its relationship to the application area to heritagemailbox@environment.nsw.gov.au. Heritage NSW will respond with further advice.

Where the above does not apply, please proceed with consultation in accordance with the Clause 60 (1-9) of the National Parks and Wildlife Regulation 2019. This list is provided to proponents in accordance with Clause 60 (2) of the National Parks and Wildlife Regulation 2019.

The stakeholders identified on this list may have an interest in the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places.

This list is not exhaustive and in line with Clause 60 (2) of the National Parks and Wildlife Regulation 2019 you must also contact other reasonable sources to compile a list of Aboriginal people who may have an interest.

Please refer to Clause 60 of the National Parks and Wildlife Regulation 2019 and the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 for further information on the requirements of the consultation process

Note:

- This list must not be reproduced in any publicly available reports or documents. Any report should only contain the names of the organisations and individuals who you have invited to register an interest in your project and those who have registered as stakeholders for your project.
- If contact details of stakeholders are found to be incorrect or outdated, please contact heritagemailbox@environment.nsw.gov.au.

Last updated September 2023

Aboriginal Stakeholders – Tamworth Local Government Area.

Alison Sampson	Alison Sampson		-
AT Gomilaroi Cultural Consultancy	Aaron Talbott Natalene Mercy		-
Barraby Cultural Services	Lee Field (Manager)		-
BJC Cultural Management	Ben Cameron		-
Brent Mathews	Brent Mathews		-
Brian Draper	Brian Draper		-
Cacatua General Service (Cacatua Culture Consultants)	Donna		-
Christine Archbold	Christine Archbold		-
Clifford Matthews	Clifford Matthews		-
Coonabarabran LALC	Chairperson		-
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson		-

D F T V Enterprises	Derrick Vale		-
Darrell Mathews	Darrell Mathews		-
Didge Ngunawal Clan	Lillie Carroll ; Paul Boyd		-
Edgerton kwiemba! AC	Liza Talbot		-
Galamaay Cultural Consultants (GCC)	Robert Slater		-
Gilay Consultants	Carol Slater		-
Glen Morris	-		-
Guyinbaraay people Clan group	Greg Griffiths		-

Gomery Cultural Consultants	David Horton		-
Hazel Collins	Hazel Collins		-
Jeff Matthews	Jeff Matthews		-
John Matthews	John Matthews		-
Joshua Matthews	Joshua Matthews		-
Justin Matthews	Justin Matthews		-
Kevin Sampson	Kevin Sampson		-
Konanggo Aboriginal Cultural Heritage Services	Robert Young		-
Len Waters	Len Waters		-
Lloyd Matthews	Lloyd Matthews		-
Lorraine Towney	Lorraine Towney		-
Luke Cameron Cultural Management	Luke Cameron		-
Mavonia Welsh	Mavonia Welsh		-
ME Griffiths Cultural Management	Marie- Ellen Griffiths		-
Michelle Saunders	Michelle Saunders		-

Mooki Plains Management	-		-
Mooki River Consultants	Wayne Mathews		-
Muswellbrook Cultural Consultants	Andrew Horton		-
Nammoypathways Aboriginal Corporation	Vicki Devine		-
Natasha Rodgers	Natasha Rodgers		-
Ngambaa Cultural Connections	Karina Slater		-
Nunawanna Aboriginal Corporation	Colin Ahoy		Send to both email address
Nyakka Aboriginal Corporation	Rhonda Kitchener		-
Paul Moodie	Paul Moodie		-
Rick Slater	Richard Slater		-

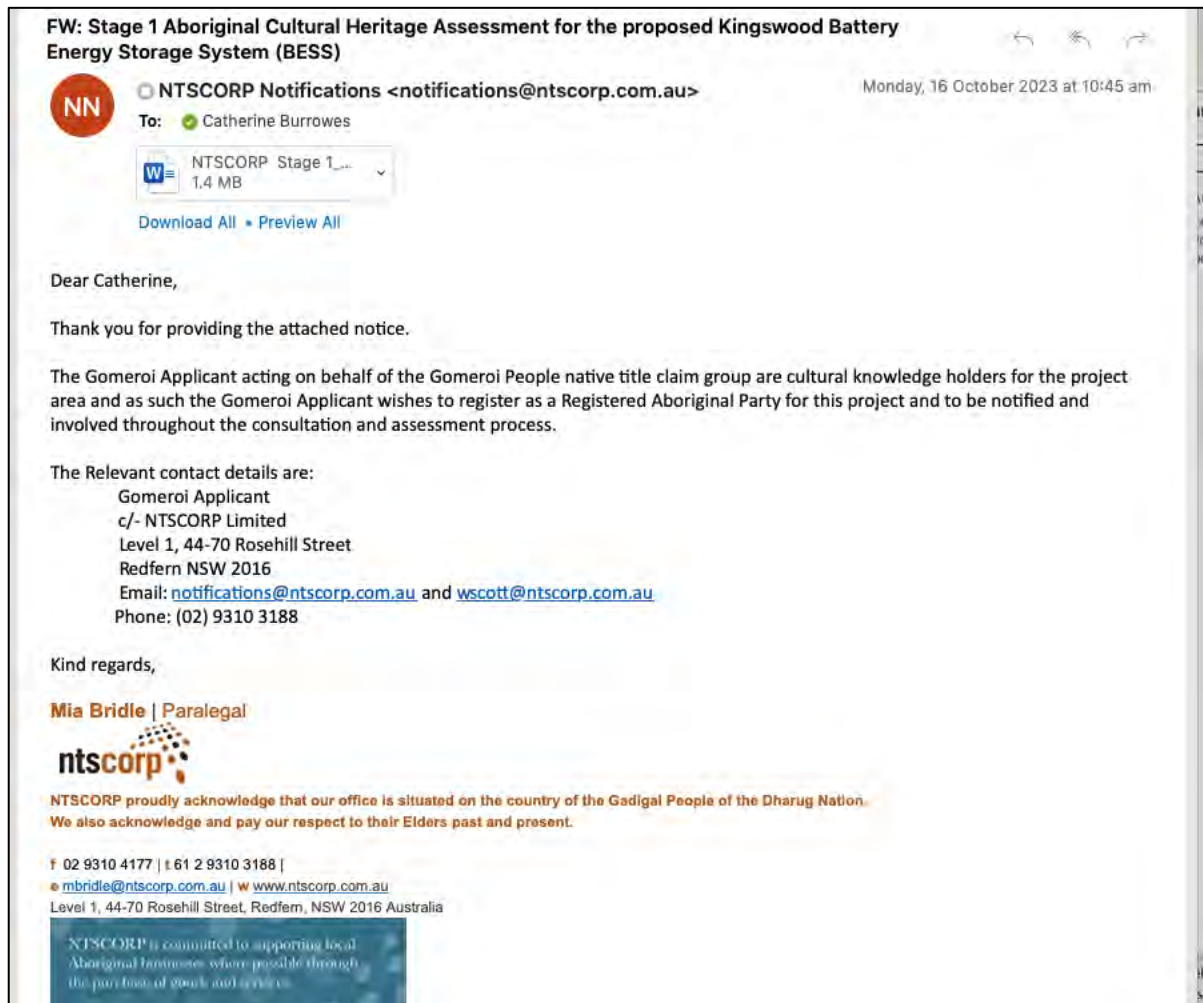
Rodney Mathews	Rodney Mathews		-
Ron Smith	Ron Smith		-
Rona Slater	Rona Slater		-
Roslyn Smith	Roslyn Smith		-
Scott Smith	Scott Smith		-
T&G Culture Consultants	Tony Griffiths		-
Talcon Pty Ltd	Ricky Talbott		-
Tamworth LALC	Chairperson		-
Tania Mathews	Tania Mathews		-

Thomas Dahlstrom Offers ACH value by using 3D Laser and Drone technology	Thomas Dahlstrom		-
Thoorga Nura	John Carriage (Chief Executive Officer)		-
Tracy Woltley	Tracy Woltley		-
Vicky Hannah Gomerio Duncan			-
Warragil Cultural Services	Aaron Slater (Manager)		-
WATTAKA Pty Ltd	Des Hickey		-

Wiradjuri Interim Working Party	
Wurrumay Pty Ltd	Kerrie Slater; Vicky Slater
Yurrandaali	Bo Field (Manager)
Bariyan Cultural Connections	Kayelene Terry
RAW Cultural Healing	Raymond Weatherall
Girragirra Murun Aboriginal Corporation	Diana Astin
Wingarra Wilay Aboriginal Corporation	Raymond Moon
Gali Heritage Consultants	Helen Slater

Long Gully Cultural Services	Ethan Trewlynn	
Bill Trewlynn	Bill Trewlynn	

Appendix 1 Figure 6: Response from NTSCORP



Appendix 1 Figure 7: Example of letter sent to Aboriginal community groups

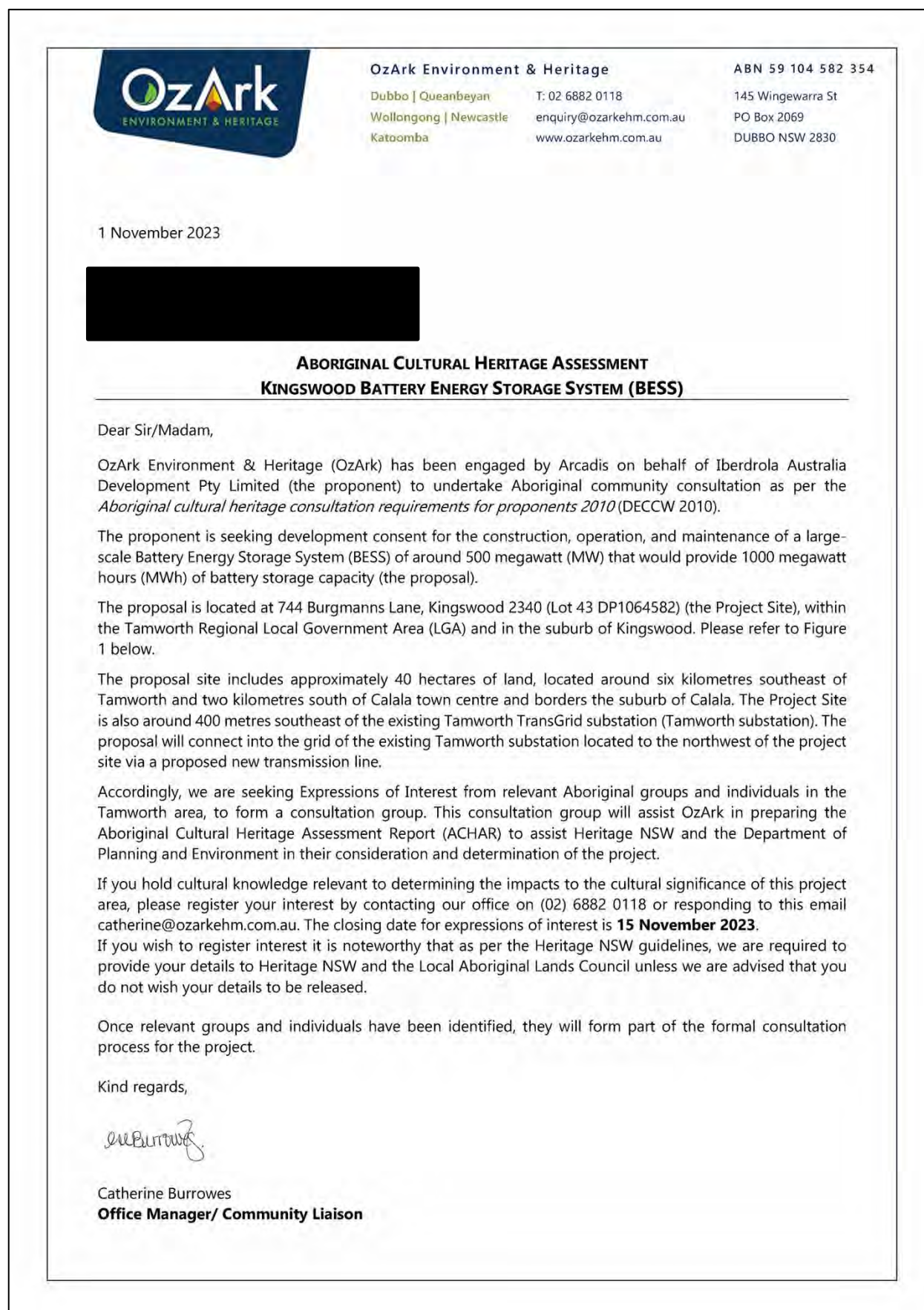
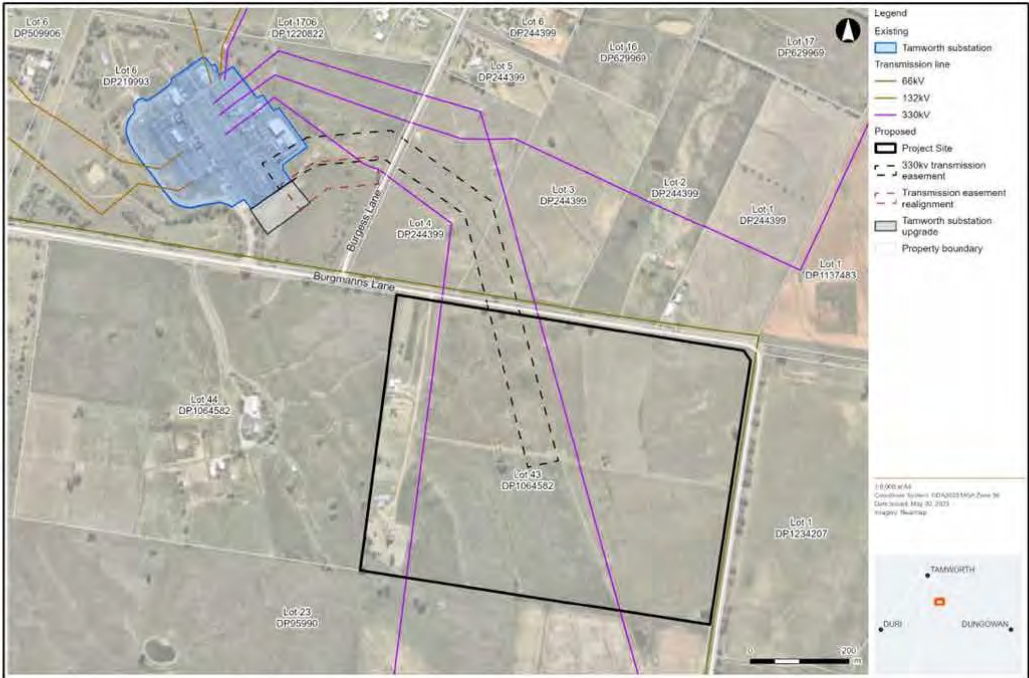
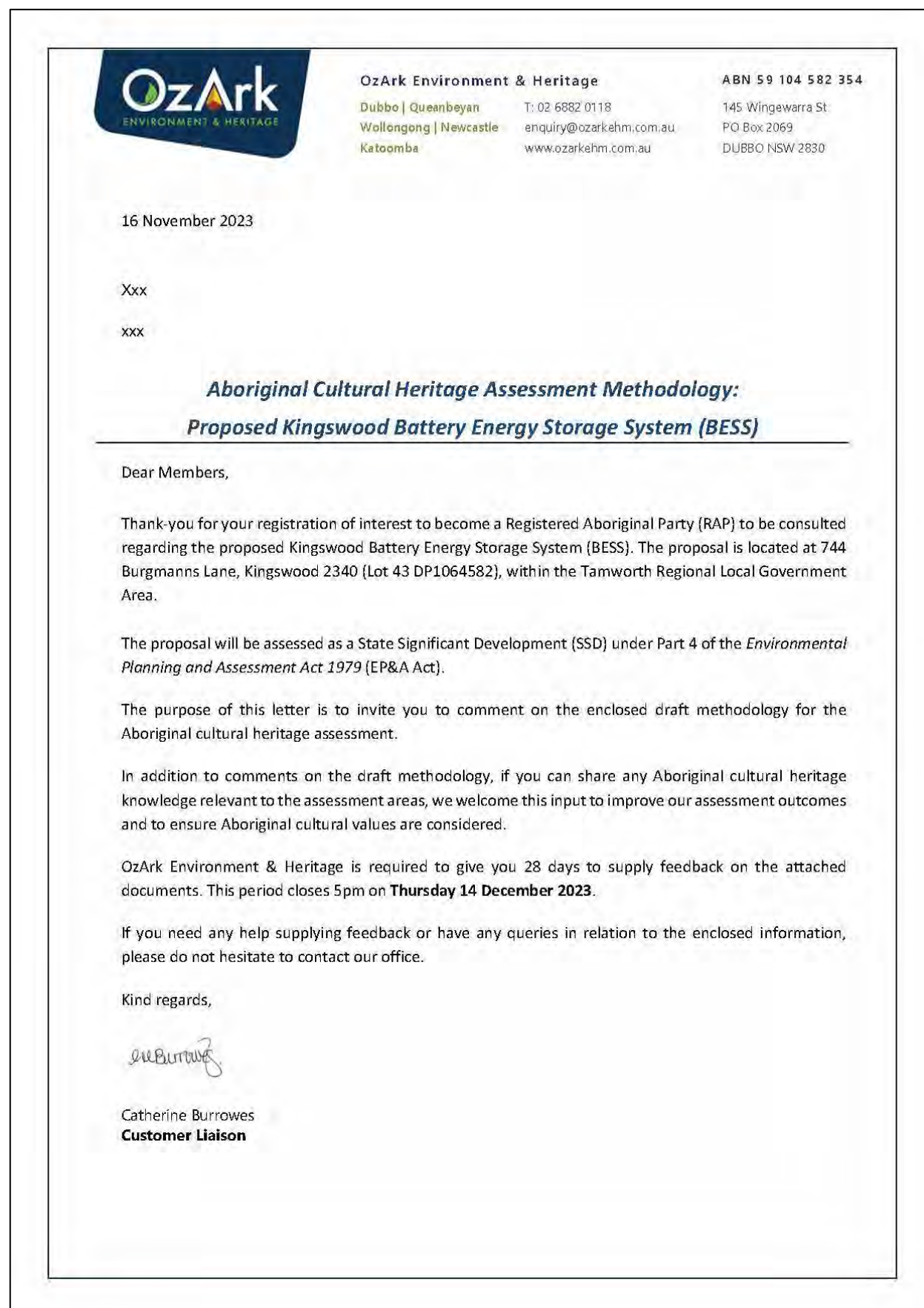


Figure 1: Proposed project location.



Appendix 1 Figure 8: Stage 2/3 cover letter and assessment methodology





ABORIGINAL HERITAGE ASSESSMENT METHODOLOGY

KINGSWOOD BATTERY ENERGY STORAGE SYSTEM

TAMWORTH LOCAL GOVERNMENT AREA, NSW

DECEMBER 2023

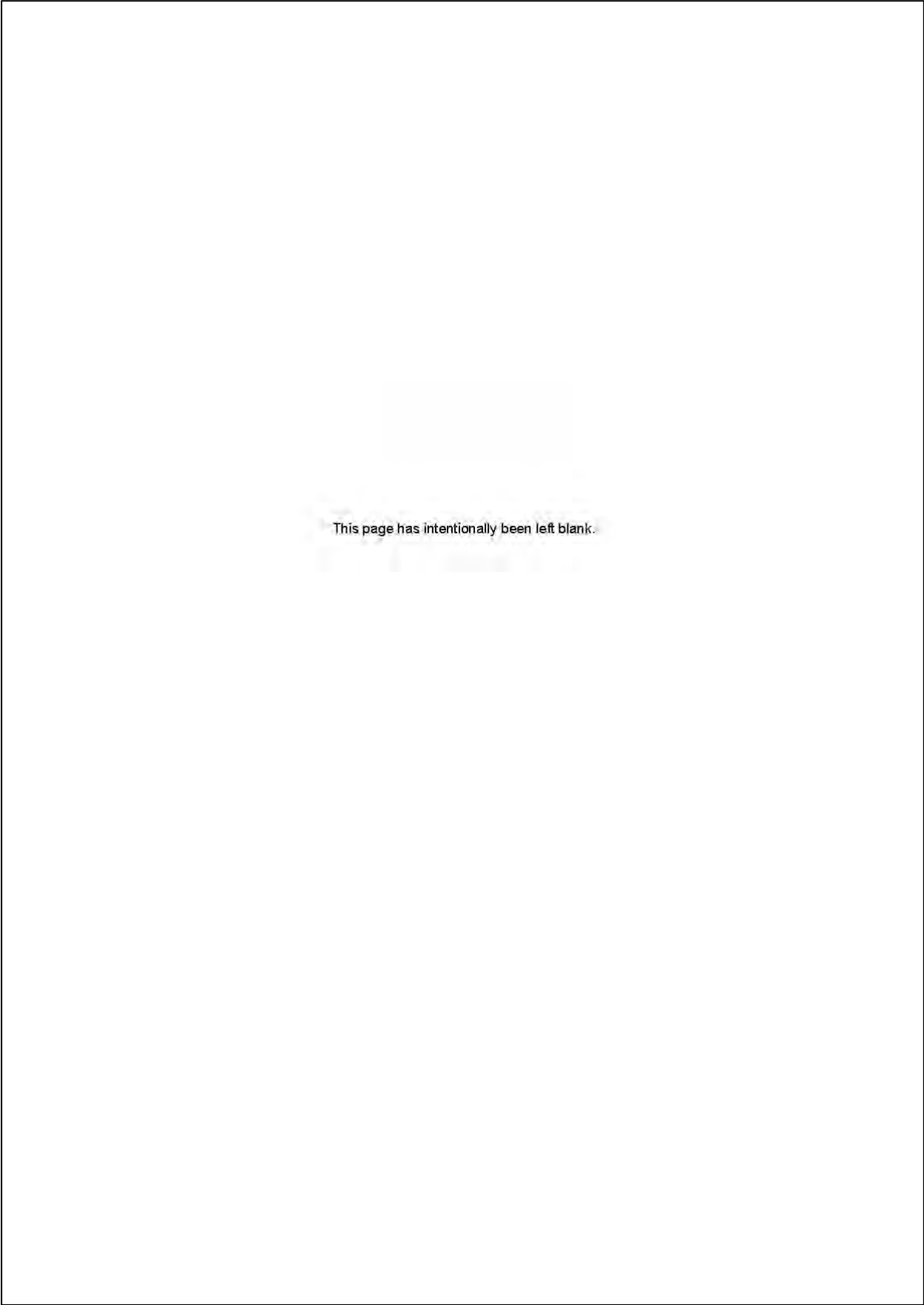
Report prepared by
OzArk Environment & Heritage
for Iberdrola Australia Limited



OzArk Environment & Heritage

145 Wingewarra St
(PO Box 2069)
Dubbo NSW 2830

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



DOCUMENT CONTROLS

Proponent	Iberdrola Australia Ltd
Client	Arcadis Australia Pacific
Document Description	<i>Aboriginal Heritage Assessment Methodology: Kingswood Battery Energy Storage System</i>
File Location	OzArk Job No.
S:\OzArk EHM Data\Clients\Arcadis\Kingswood BESS near Tamworth_June 2023	3965
Document Status: V3.0 FINAL	Date: 16 December 2023
Draft V1: OzArk internal edits	V1.0 SG author 17/10/23 V1.1 SR review 31/10/23 V1.2 SG edit 1/11/23
Draft V2: OzArk and client edits	V2.0 OzArk to client 1/11/23
Final V3: Final document	V3.0 OzArk finalises 16/12/23
Prepared for	Prepared by
Stephan Mitchell Principal Environmental Consultant Arcadis Australia Pacific Stephan.mitchell@arcadis.com	Sophia Grubnic Archaeologist OzArk Environment & Heritage 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 sophia@ozarkeh.com.au
COPYRIGHT © OzArk Environment & Heritage 2023 and © Iberdrola Australia Ltd All intellectual property and copyright reserved. Apart from any fair dealing for private study, research, criticism, or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system, or adapted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without written permission. Enquiries should be addressed to OzArk Environment & Heritage.	

Acknowledgement

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

CONTENTS

1	INTRODUCTION	5
1.1	Preamble	5
1.2	Project overview	5
1.3	Study Area	6
1.4	Survey Area	7
1.5	Consultation on this methodology	8
1.6	Landscape characteristics of the Survey Area	9
2	CULTURAL VALUES.....	13
2.1	Introduction to cultural values	13
2.1.1	Connection to Country	13
2.1.2	Managing Country	14
2.1.3	Recognising lore	14
2.2	Identifying cultural values	15
2.2.1	Use of information collected	15
2.2.2	Public / confidential information	15
2.2.3	Copyright	15
3	ARCHAEOLOGICAL CONTEXT	16
3.1	Aboriginal people of the Survey Area	16
3.2	Regional archaeological context	17
3.3	Local archaeological context	20
3.4	Archaeological context: Conclusion	21
4	PREDICTIVE MODEL	22
4.1	Predictive model for the Survey Area	22
4.1.1	Site types in the region of the Survey Area	22
4.1.2	Landform modelling of archaeological potential	23
4.1.3	Conclusion	23
4.2	Research questions	24
5	SURVEY METHODOLOGY	26
5.1	Assessment approach	26
5.2	Survey aims	26
5.3	Survey methodology	26
5.4	Test excavation	27
	REFERENCES	28

FIGURES

Figure 1-1: Conceptual layout of the Project.	6
Figure 1-2: Location of the Study Area.	7
Figure 1-3: Aerial of the Survey Area.	8
Figure 1-4: Topography and hydrology of the Survey Area.	11
Figure 1-5: Survey units across the Survey Area.	12
Figure 3-1. AHIMS sites in relation to the Survey Area.	21

TABLES

Table 3-1: AHIMS site types and frequencies	20
Table 4-1: Site types recorded in the region of the Survey Area	22
Table 4-2: Likelihood of landforms within the Survey Area to contain Aboriginal objects.	24
Table 4-3: Likelihood of certain site types being present in the Survey Area.	24

1 INTRODUCTION

1.1 PREAMBLE

OzArk Environment & Heritage (OzArk) has been engaged by Arcadis on behalf of Iberdrola Australia Ltd (the Proponent) to prepare an assessment methodology for the proposed Kingswood Battery Energy Storage System (BESS) (the Project).

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.

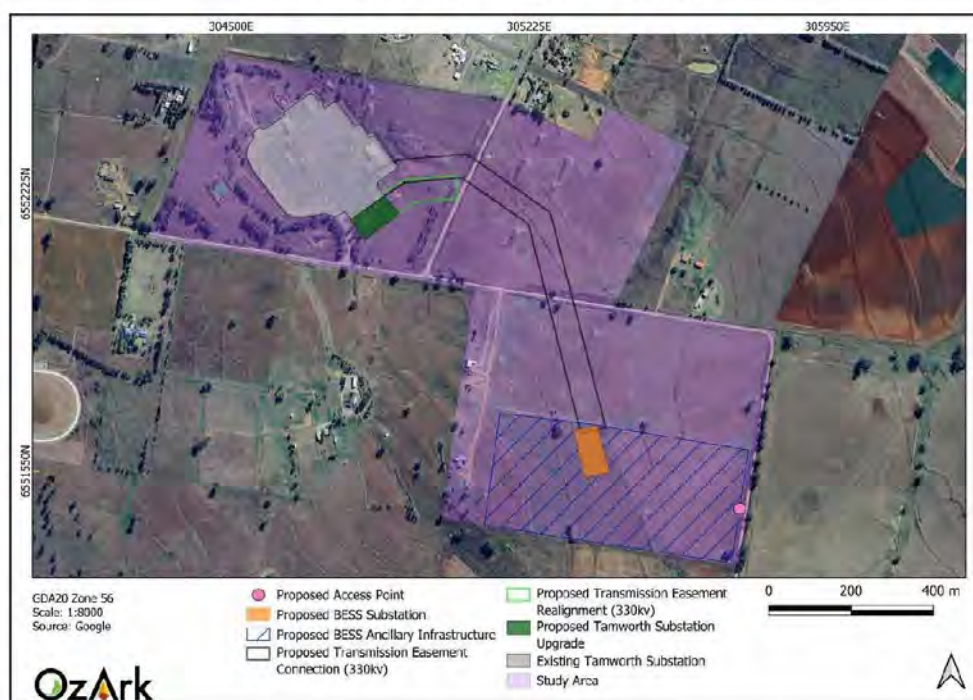
The investigation set out in this methodology aims to identify Aboriginal cultural values, both tangible and intangible, associated with the proposed location of the Project. The results of this investigation will be presented in an *Aboriginal Cultural Heritage Assessment Report* (ACHAR).

1.2 PROJECT OVERVIEW

The Proponent is seeking development consent for the construction, operation and maintenance of a large-scale BESS, of around 500 megawatts (MW) that would provide up to 1000 megawatts per hour (MWh) of battery storage capacity.

This Project would include (Figure 1-1):

- A BESS including battery enclosures, inverters, transformers and a control building
- A high voltage transmission line connection (above ground and/or below ground) between the BESS and the nearby Tamworth substation
- Realignment of the existing 330 kilovolt (kV) transmission line to avoid conflict with the proposed transmission line connecting the BESS to the Tamworth substation.
- Tamworth substation upgrade works to facilitate connection with the BESS including switchgear and bus bar
- Site access to the BESS from Ascot-Calala Road
- Internal site access road and parking
- A permanent office and staff amenities
- Utilities including telecommunications, water and wastewater for amenity buildings
- Stormwater management infrastructure, lighting, fencing and security
- Landscaping and screening vegetation.

Figure 1-1: Conceptual layout of the Project.

1.3 STUDY AREA

The Study Area for the Project is located at 744 Burgmanns Lane, Kingswood NSW 2340, approximately 1.8 kilometres (km) west of the township of Calala and 7 km southeast of Tamworth, in the Tamworth Local Government Area (Figure 1-2).

The Study Area encompasses approximately 95-hectares (ha) of land across Lot 3 and 4 DP244399, Lot 6 DP219993 and Lot 43 DP1064582 and includes portions of Burgmanns Lane, Burgess Lane and Ascot-Calala Road.

Figure 1-2: Location of the Study Area.

1.4 SURVEY AREA

The Survey Area refers to the area where Project components are proposed. All archaeological survey will be confined to the Survey Area and not the broader Study Area. The Survey Area allows a suitable buffer to allow some small movement of Project components if required.

The Survey Area encompasses approximately 62 ha of land within the Study Area (Error! Reference source not found.).

Figure 1-3: Aerial of the Survey Area.

1.5 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 9 October 2023 an advertisement was placed in the *Northern Leader* 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 Tamworth 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 Tamworth Regional Council; and the North West Local Land Services.

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

- Tamworth LALC
- Gomeroi Applicant
- Gomery Cultural Consultants
- AT Gomilaroi Cultural

- Didge Ngunawal Clan
- Long Gully Cultural Services
- Konanggo Aboriginal Cultural Heritage Services
- Thomas Dahlstrom
- Cacatua General Service (Cacatua Culture Consultants)
- AGA Services
- Bawurra

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

1.6 LANDSCAPE CHARACTERISTICS OF THE SURVEY AREA

The Survey Area is in the Nandewar bioregion in northern NSW and across the Queensland border. The Nandewar bioregion is mainly warm and dry, although average annual temperatures and rainfall vary considerably across the bioregion in relation to elevation.

Within this bioregion, the Survey Area is located within the Tamworth Keepit Slopes and Plains landscape unit (Mitchell 2011). This landscape unit comprises of an extensive area of undulating of rolling slopes and plains with low hills and low ranges. The area has a general elevation 500 to 800 metres (m), and a local relief 250 m, with some peaks reaching 1100 m.

Rock types associated with the Tamworth Keepit Slopes and Plains landscape unit include Silurian-Devonian chert, slate, phyllite, tuff, schist and Carboniferous conglomerate, sandstone, mudstone, andesite, and small areas of limestone (Mitchell 2011). Landforms which typically comprise outcropping rock are limited to the hill crest on the southwest of the Survey Area. If materials suitable for stone tool manufacture are present on this landform (i.e. chert, tuff or mudstone), then quarries may be present.

The Survey Area extends across two soil landscapes described by Banks (2001): Fullwoods Hill and Duri. Most of the Survey Area is in the Fullwoods Hill landscape area described as having soils which can be highly variable over distances of "tens of metres" or homogenous, depending on how variable the underlying geology is (Banks 2001: 86). The Fullwoods Hill landscape generally has crests dominated by non-calcic brown soils which are both moderately deep and moderately well-drained (Banks 2001: 86). Side slopes are generally dominated by shallow, moderately well-drained red-brown earths, with some having very deep poorly drained yellow and brown solodic soils on some lower slopes (Banks 2001: 86). Soils associated with the Duri landscape are described as moderately deep and moderately well-drained non-calcic brown soils and red-brown earths with minor occurrences of shallow, very well-drained Lithosols around rock outcrops (Banks 2001: 32).

The closest semi-permanent watercourse to the Survey Area is Goonoo Goonoo Creek, located approximately 1.5 km to the west. Peel River, a permanent watercourse, is located approximately 3 km northeast of the Survey Area (Figure 1-4). These two watercourses converge approximately 6.2 km northwest of the Survey Area. Calala Creek is located approximately 850 m east of the Survey Area at its nearest point and a minor unnamed watercourse is located approximately 220 m northeast.

Throughout NSW there is a strong correlation between Aboriginal occupation sites and distance to water. The general proximity of the Survey Area to waterways, even minor ephemeral waterways, increases the likelihood of sites being present within the Survey Area, however, as distance to water increases the likelihood of sites being present decreases.

The Survey Area has been cleared of most upper and mid stratum native vegetation with only isolated paddock trees remaining. The eastern corridor of Ascot-Calala Road also appears to contain remnant mature vegetation. Areas of vegetation to the east of the existing substation appear to be more recent plantings. Historical vegetation clearance significantly reduces the potential for culturally mature trees to be present.

The Survey Area has also been subject to disturbances associated with development of the existing substation and associated facilities, dwellings, contour banking, road construction and agricultural practices (grazing and cropping). 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.

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

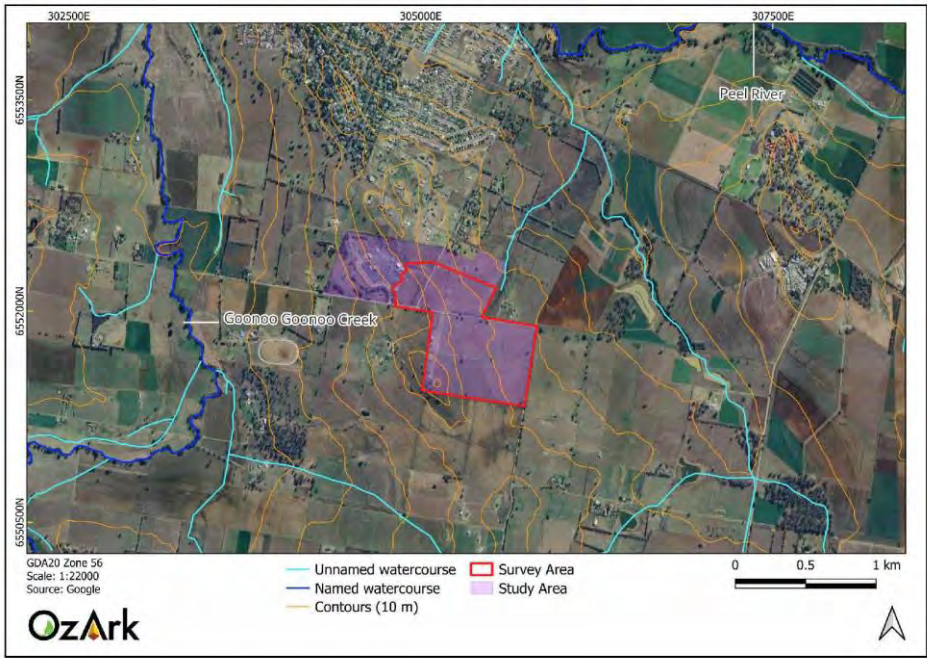
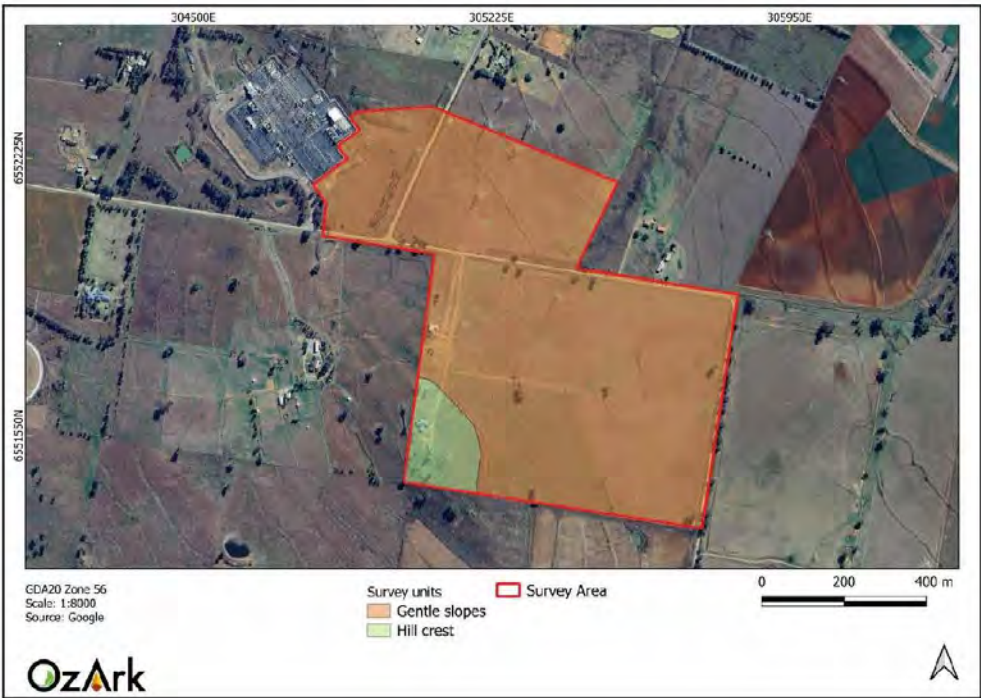


Figure 1-5: Survey units across the Survey Area.



2 CULTURAL VALUES

2.1 INTRODUCTION TO CULTURAL VALUES

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

Australianstogether.org.au

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

Fundamentally, culture is living and is not static:

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

2.1.1 Connection to Country

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

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

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

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

Professor Mick Dodson AM, August 2007

2.1.2 Managing Country

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

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

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

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

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

2.1.3 Recognising lore

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

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

In much of eastern Australia, Aboriginal communities live their lives like most Australians. 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 Project is located so that those values can be recognised and incorporated into the ACHAR's management recommendations.

Any cultural values relating to the Survey 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 Survey 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 Survey 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 Project and the report will be publicly available.

2.2.2 Public / confidential information

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

2.2.3 Copyright

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

3 ARCHAEOLOGICAL CONTEXT

3.1 ABORIGINAL PEOPLE OF THE SURVEY AREA

According to Tindale (1974), Tamworth and the surrounding areas, encompassing the current Survey Area, falls within the limits of the lands occupied by the Gamilaraay (Kamilaroi) language group. This language group comprised people who spoke the sub-dialects Yuwaalaraay, Yuwaaliyaay (Euahlayi), Gamilaraay, Gawambaraay, Wirayaraay (Wiriwiri) and Walaraay (O'Rourke 1997).

The name 'Tamworth' is not derived from Indigenous language, however, prior to colonial settlement, the Kamilaroi people knew the area as 'Calala', thought to mean 'place of battle'. Colonial settlers identified several groups in the Tamworth region including the Goonoo Goonoo, Gunnedah, Manellae, and the Moonbi.

In 1844, William Telfer provided accounts of a corroboree at Tamworth with over 250 Aboriginal people in attendance. Oral history from members of the local Aboriginal community in Tamworth refers to 'clever men' using the site at Moore Creek for ceremony. In their site study of Tamworth, Wilson and McAdam (2000) predict that archaeological investigations at Moore Creek may locate ritual and ceremonial sites, including art and engraving sites.

Borah Crossing, in the vicinity of Keepit Dam, was another important ceremonial area in the local region. Thompson (1981) states:

Early this century Aboriginal people camped at Borah Crossing 25 kilometres southeast of Vickery. The site of this Aboriginal Reserve (AR35745, Parish Keepit, Gazetted 23/05/1903) of eight hectares was flooded by Keepit Dam in 1960. Another eight hectare Aboriginal Reserve (AR 32747) existed at Baan Baa 30 kilometres northwest of Vickery, between 1901 and 1918.

William Telfer was one of the original employees of the Australian Agricultural Company (A.A. Company) and brought the first consignment of sheep to the Peel River holdings in 1836, pioneering the overland route from the A.A. Company land at Port Stephens. His son, William Telfer Jr, was born in Tamworth in July 1841. The reminiscences of William Telfer Jr, known as the Wallabadah manuscript, provide one of the few contemporary accounts of the early years of European settlement in the Tamworth region (Millis 1980). Although he was relatively uneducated, and at times prone to exaggeration, Telfer's accounts provide an insight into relations between Aboriginal people and frontier colonial settlers and a unique picture of the lifeways of the Gamilaroi people (Gardner 1978). For example Telfer vividly describes a corroboree near Tamworth that he witnessed in his childhood:

...there was a tribe of Aboriginals on Tamworth in those days about 1844 two hundred and fifty males and females there was a great corroboree or dance all

male Aboriginals were painted with white chalk or pipeclay the long lines of fires and the dark night amongst the white gum and apple trees with the figures of the blacks had a most striking appearance glyding from tree to tree flourishing their boomerangs. Some of them looked like demons whooping and shouting in their own language some with figures of Emus cut out of bark carrying in their hands also figures of Kangaroos made the same way astonished us Children. Some of the gentlemen said there were fully three hundred aboriginals in the performance...

Social interchange occurred between the Kamilaroi and other language and tribal groups such as the Gweagal (Scone district), the Wonnarua (Hunter Valley), Darkinjung (Central Coast) and the Anaiwan (New England Tablelands). Such interchanges included conflicts and alliances, marriage, songs, stories, dances, and ceremonial practices. Resources from stone axe quarries at Daruka, were exchanged throughout these social networks (McBryde and Binns 1970).

O'Rourke (1997) estimates that there were at least 60 Kamilaroi clans, with perhaps 160 adult men, women, adolescents, and children in each, suggesting a total regional population in central-northern NSW of around 10,000 people. Each clan probably resided most of the year at a small number of established, favourable locations within their tribal area.

The Kamilaroi caught fish including eels, freshwater crayfish, yabbies, tortoises, and freshwater mussels in the rivers, creeks, and wetlands in the region (O'Rourke 1997). Watercraft were manufactured from large slabs of bark cut from river red gum trees. Fish were caught using fishing lines and nets made from reed fibre. Nets were used to catch waterbirds, whose eggs were also collected. Some of the other animals that Aboriginal people of the North West Slopes hunted include kangaroos, wallabies, koalas, possums, emus, echidnas, lizards, snakes, and frogs (Fison et al. 1880; O'Rourke 1997). Plant foods included grass seeds, wild orange, emu apple, melons, tubers, yams and roots (Gott 1983; O'Rourke 1997).

3.2 REGIONAL ARCHAEOLOGICAL CONTEXT

Tamworth Regional Council prepared the Tamworth City Aboriginal / archaeological study (McAdam and Wilson 2000). Prior to this assessment, 28 Aboriginal archaeological sites were registered on the Aboriginal Heritage Information Management System (AHIMS) for this area, and after 20 days of fieldwork for this study, the site total had reached 66 (McAdam and Wilson 2000). The study identified many sites across the region, most of which are artefact scatters of varying densities containing raw materials including chert, cherty argillite, hornfels, quartz, andesitic greywacke, tuff, and chalcedony. Scarred trees were also noted and Kamilaroi walking tracks were identified (McAdam and Wilson 2000).

OzArk (2010) was commissioned by TransGrid to complete a heritage assessment in advance of the dismantling of an electricity transmission line between Tamworth and Gunnedah, located to the east of Gunnedah and running east to Tamworth. A range of previously recorded site types

were registered with the AHIMS, with artefacts (either open campsites or isolated finds), scarred trees and grinding grooves being the most common site types. Two previously unrecorded Aboriginal sites were identified during the survey, with one comprising a small open campsite and the other being a scarred tree. The open campsite contained a single mudstone flake and was recorded as an open campsite as it was considered likely that other artefacts may be present, due to its location in the landscape, near a 2nd order tributary of Swains Creek and near a slight elevation. The scarred tree was identified as a 'coolamon' scar on a white box. Several previously recorded scarred trees were reassessed as not being of cultural origin and AHIMS was notified of the reassessment to allow them to update their records.

In 2013, Niche Environment and Heritage (Niche) completed an Aboriginal archaeological assessment for the proposed Strathfield Intensive Livestock Facility located 8 km north of Manilla near the Namoi River. Niche predicted that isolated finds and artefact scatters were the most likely site type that would be encountered. These sites were predicted to be in association with well-drained, flat to gently inclined land; land elevated above the floodplain; creek banks, valley flats, basal and lower slopes, and alluvial silts. A total of 20 sites containing 39 Aboriginal objects were identified during the survey. Sites were recorded as low-density background scatters of less than one artefact per square metre. Artefacts were located on flats and hill slopes (basal, lower, and simple slopes); on level to gently inclined land, generally within 400 m of third order or higher streams or within 100 m of 1st and 2nd order drainage channels. Artefact densities remained low but increased in density and frequency in proximity to streams and gullies which were third order or higher. Recorded materials included quartz, tuff, and agate.

Everick Heritage Solutions (Everick 2014) undertook a due diligence assessment for the Tamworth Regional Council's South Tamworth Rural Lands Master Plan Development of the Goonoo Goonoo Road site. Five Aboriginal sites were recorded during the inspection including isolated finds and artefact scatters interpreted as being representations of background scatters in disturbed landscapes and therefore, not in situ. Three retouched artefacts were recorded at three different sites. All were identified as being retouched flakes and recorded materials included basalt, greywacke, and chert.

In 2019, AREA conducted a cultural heritage assessment of approximately 200 ha of land 7 km south of Somerton, around 35 km northwest of the Survey Area. The landscape within the area assessed consisted of a cleared, gentle, west-east slope within a spur landform. Twenty-two Aboriginal sites were recorded during the archaeological survey (AREA 2019:47). These sites consist of eight open camp sites, eleven isolated finds, and three culturally modified trees. The isolated finds were scattered throughout the assessed area and consisted of 10 simple flakes (i.e. not tools) and one hammer stone. Five isolated finds were recorded in the southern-most portion of the area, directly associated with a drainage feature, and all but two of the remaining sites were clustered on a raised landform in the south-western corner of the assessment area.

The modified trees were all recorded on white box trees and two of the three sites were recorded on raised landforms. The open sites consist of low-density, simple, stone flakes and cores. Like the isolated finds, this site type was predominantly recorded in association with a drainage feature or an elevated landform, with a couple of exceptions which were identified in transport corridors for the project. Raw materials across the assessed areas include silcrete, quartzite, hornfels, chert, fine-grained siliceous material, tuff (mudstone), and quartz, although predominantly the artefacts were manufactured from quartzite. It was determined that there was little to no potential for other site types or subsurface archaeological deposits within the assessed area as significant disturbance had allowed for the disruption and erosion of topsoils.

In 2020, Kelleher Nightingale Consulting Pty Ltd (KNC) conducted an Aboriginal heritage assessment for a windfarm located at Nundle, approximately 70 km southeast of Tamworth and around 26 km southwest of the Survey Area. The assessment was situated in mountain ranges and associated valleys, landforms like those within the Survey Area although at a slightly lower elevation. The archaeological investigation recorded seven Aboriginal sites, three artefact scatters and four isolated finds, and one potential archaeological deposit (PAD) area. The first artefact scatter, Hills of Gold AFT 1, is an open site situated on the alluvial bank of a tributary creek line which fed into Wardens Brook. The site is situated on an elevated, gently sloping to flat ridge landform which steeply dropped in the west to meet the Peel River. The second artefact scatter, Hills of Gold AFT 2, is an open site on a moderately sloping creekbank in a gully landform near an unnamed tributary creek which flows directly into the Peel River. Meanwhile, Hills of Gold AFT 4, consists of two flakes identified on the crest of a steep spur landform associated with Morgans Gully. This suggests that in landforms like those within the Survey Area, artefact scatter sites have been primarily recorded in gently sloping landforms, slightly elevated but directly associated with tributary creeks or drainage features.

The isolated finds identified during this investigation are primarily recorded within areas of high disturbance including road corridors and areas cleared for agricultural activities. Furthermore, most of the isolated find sites are identified in areas of exposure across a variety of elevated landforms including on a lower hillslope above a raised creek bank, a knoll crest, a low rise associated with a tributary creek, and on the ridge of a saddle landform. This suggests that site density and integrity generally decreased on elevated ridge, saddle, or spur landforms not directly associated with a tributary creek or drainage feature.

Furthermore, it is noted that there were no recordings on steeply sloping landforms, despite most site locations being near such landforms. This could be due to survey constraints, erosional processes as steep slopes are a degrading landform, or because such landforms tend to be transitory spaces rather than areas of occupation.

3.3 LOCAL ARCHAEOLOGICAL CONTEXT

A search of the AHIMS database on 27 October 2023 returned 83 results for Aboriginal sites within a 7.5 km radius of the Survey Area (GDA Zone 56 Eastings: 297850 – 312725; Northings: 6544428 – 6559228 with no buffer) (see Error! Reference source not found. for site types and frequencies). Despite 83 results, only 80 are being accounted for due to the AHIMS data which indicates that one site (29-2-0001) has been determined as invalid, and two (29-2-0110, 29-2-0279) are duplicate recordings. None of the recorded sites are located within or near the Survey Area (Figure 3-1).

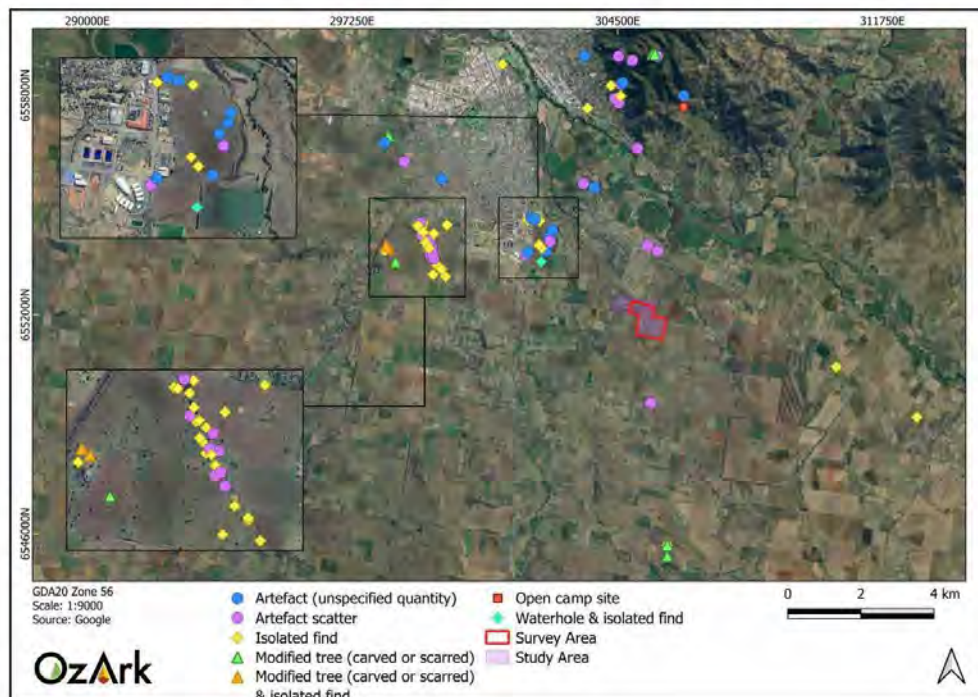
The most frequently recorded site types are stone artefact sites of varying densities (artefacts of unspecified quantity, artefact scatters, and isolated finds) which account for 87.6% of site types. These are also the site types closest to the project area, as well as a waterhole and isolated find. At distances greater than 5 km, sites featuring culturally modified trees (carved or scarred) are also present with 10% frequency, as well as an open camp site recording which only has a single recording in the vicinity of the Survey Area (see Error! Reference source not found.).

The distribution of AHIMS sites shows that of the 80 sites within the search radius, 58 (72.5%) are located within 200 m of a waterway, either permanent or seasonal. In NSW there is a strong correlation between Aboriginal occupation sites and distance to water, and the AHIMS data suggests that site location is also associated with water availability in this district.

Table 3-1: AHIMS site types and frequencies

Site Type	Number	% Frequency
Artefact (unspecified quantity)	15	18.8
Artefact scatter	22	27.5
Isolated find	33	41.3
Modified tree (carved or scarred)	6	7.5
Modified tree (carved or scarred) and isolated find	2	2.5
Open camp site	1	1.3
Water hole & isolated find	1	1.3
Total	80	100

Figure 3-1. AHIMS sites in relation to the Survey Area.



3.4 ARCHAEOLOGICAL CONTEXT: CONCLUSION

The archaeological investigations surrounding the Survey Area as summarised in **Section 3.2** and **3.3** indicate that:

- 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 scarred trees are possible but at a much lower frequency
- The most likely indicator of potential sites is the proximity of fresh water
- Common stone utilised for stone tool manufacture is mudstone, basalt, chert, quartz, greywacke, and tuff
- Sites tend to be associated with flats or gentle slopes within reasonable distance to reliable water supplies
- Sites on slopes are generally in a secondary context having been displaced by erosional processes.

4 PREDICTIVE MODEL

4.1 PREDICTIVE MODEL FOR THE SURVEY AREA

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

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

4.1.1 Site types in the region of the Survey Area

The site types listed in Table 4-1 are present in the region of the Survey Area. The likelihood of these sites being present in the Survey Area is discussed in Section 4.1.3.

Table 4-1: Site types recorded in the region of the Survey Area.

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

Site type	Site description
	Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.
Culturally modified trees	Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels, and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed because of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.
Quarry sites	Typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically, these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.
Burials	Generally found in soft sediments such as aeolian sand, alluvial silts, and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
Bora/Ceremonial sites	Places which have ceremonial or spiritual connections. Ceremonial sites may comprise of natural landscapes or have archaeological material. Bora sites are ceremonial sites which consist of a cleared area and earthen rings.

4.1.2 Landform modelling of archaeological potential

The large number of archaeological studies undertaken within the vicinity of the Survey Area provides information to obtain a sound 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.

In the case of the Survey Area, it is distant from major, permanent watercourses as well as relatively distant from ephemeral watercourses (outside the 200 m buffer). This would indicate that the frequency of site recordings will be less in the Survey Area when compared to hospitable landforms closer to permanent water.

Crucial for the preservation of archaeological deposits is the history of past land use in an area. Historically, the Survey Area has been subjected to widespread clearing and subsequent long-term farming and agricultural practices which may have significantly disturbed the ground surface and any archaeological deposits in the topmost levels of the soil profile.

4.1.3 Conclusion

Based on knowledge of the environmental contexts of the Survey 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 Survey Area to contain Aboriginal objects (Table 4-2), and what types of sites may be present within the Survey Area (Table 4-3).

Table 4-2: Likelihood of landforms within the Survey Area to contain Aboriginal objects.

Survey Unit	Landform type	Likelihood to contain Aboriginal objects
1	Hill crest	Archaeological studies in the region indicate that crest and spur landforms with proximity to water were favoured occupation locations. The Survey Area is at least 800 m from the nearest ephemeral drainage line and over a kilometre from the nearest permanent water source. This distance to water somewhat diminishes the archaeological sensitivity of this landform in the Survey Area. Furthermore, soils in these landforms tend to be thin and degrading due to tree clearance and long-term grazing. Should Aboriginal objects be recorded in these landforms, they are likely to be surface manifestations and likely displaced from their primary depositional context.
2	Gentle slopes	Slopes are a degrading landform, especially in the Survey Area where vegetation removal and agricultural use has accelerated soil loss. The slope gradient in the Survey Area is relatively low, meaning that erosion is less likely to be significant. Generally, these landforms are less favoured for occupation, particularly when distant from water, and Aboriginal objects recorded in such landforms are likely to be in a secondary context.

Table 4-3: Likelihood of certain site types being present in the Survey 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 Survey Area.
Open artefact scatters	Despite stone artefact sites being the most common site type previously recorded in the surrounding area, the Survey Area is within sloping landforms distant to permanent water, indicating this site type is not predicted to be common. Furthermore, the moderate level of disturbance in the Survey Area will probably mean that sites will be dispersed and displaced. It is likely that any sites associated with such landforms are likely to have a low artefact density and a low complexity of tool types as the sites are either one-off events or only infrequently used.
Culturally modified trees	Due to the near-total clearance of trees from within the Survey Area, this site type is predicted to be very rare. It is also noted that this site type is very rare at a regional level.
Quarry sites	This site type could be recorded within the study area should suitable rock outcroppings be available. Outcropping rock is only expected to be present within Survey Unit 1.
Burials	Although it is possible that this site type could be found within the Survey Area, it is considered a rare site type especially given the disturbance that has occurred within the Survey Area and a lack of sandy deposits.
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.

4.2 RESEARCH QUESTIONS

Several research questions can meaningfully be applied to the investigation of the Survey Area.

These research questions include:

- What resources were available to the Aboriginal people using the land within the Survey Area (food, stone and water) and what resources were transported to the area?
- What tasks were Aboriginal people undertaking at the sites?
- Are there outcropping rock materials present suitable for stone tool procurement and manufacture?
- Do the findings within the Survey 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 4.1.3?

The survey methodology set out in Section 5 will be framed to help answer these questions; should sites of sufficient significance be encountered. However, based on the results of previous

assessments and past disturbances, it not expected that the land within the Survey Area will contain sites of sufficient significance to help answer those research questions that require a robust data set.

5 SURVEY METHODOLOGY

5.1 ASSESSMENT APPROACH

The Aboriginal cultural heritage assessment of the Survey 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 Survey 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 Survey Area are known. Therefore, the aims of the survey will be to:

- Inspect all landform types in the Survey Area so that their archaeological potential can be determined
- Evaluate whether the predictive model set out in **Section 4.1** is valid
- Determine if the research questions set out in **Section 4.1.1** can be answered
- Determine if any landforms of the Survey 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.

Survey will be restricted to the Survey Area and will consist of pedestrian survey. Survey will normally consist of one archaeologist with assistance of a RAP investigating the area in transects spaced approximately 20 m apart. Transect distance will be lengthened or shortened as necessary and at the direction of the archaeologist, and in consultation with the attending RAP, while on site.

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

to 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.

As such, the field assessment will include:

- Full pedestrian survey will occur in areas with minimal disturbance and good ground surface visibility within landforms possessing Aboriginal archaeological potential, i.e., areas within 200 m of the watercourses, elevated landforms, and areas with remnant vegetation
- Targeted pedestrian survey will occur in all other areas: areas with poor ground surface visibility; landforms with low archaeological potential; and areas with significant prior disturbance
- All trees deemed to be of sufficient maturity to contain cultural modification will be inspected, as well as any areas with outcropping rock
- Some areas may not be physically surveyed if the RAPs and OzArk staff agree they are too disturbed or possess a very low likelihood of sites.

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 Survey Area. OzArk staff understand that cultural knowledge may not be provided in some instances due to cultural sensitivities (e.g., men's and/or women's places). Under these circumstances, to assess the potential impacts, OzArk staff will need to be told, only in general terms, why a particular place is important, and what the significance of the impact will be. OzArk staff will liaise with RAPs on a case-by-case basis to determine how to record the location in a culturally sensitive manner.

5.4 TEST EXCAVATION

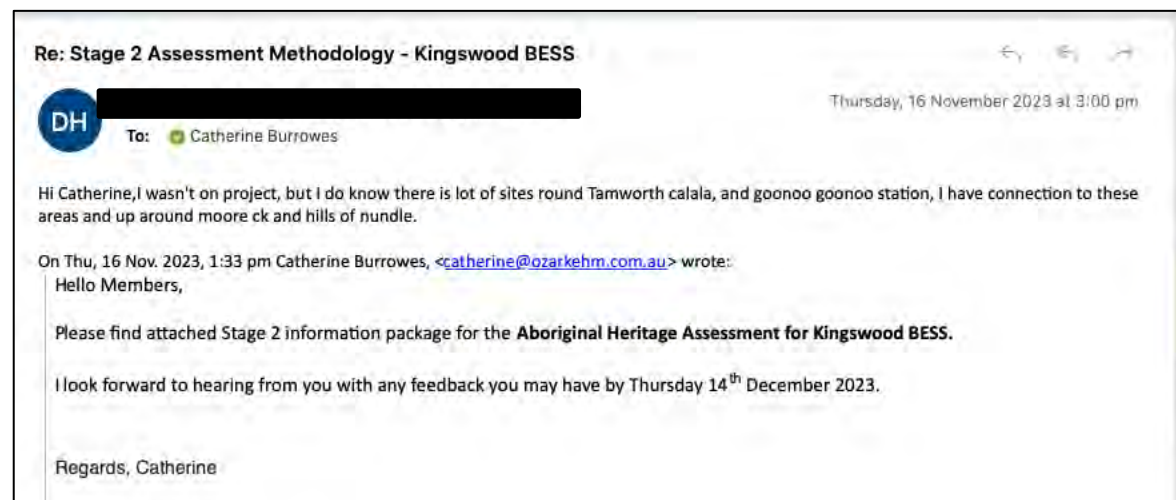
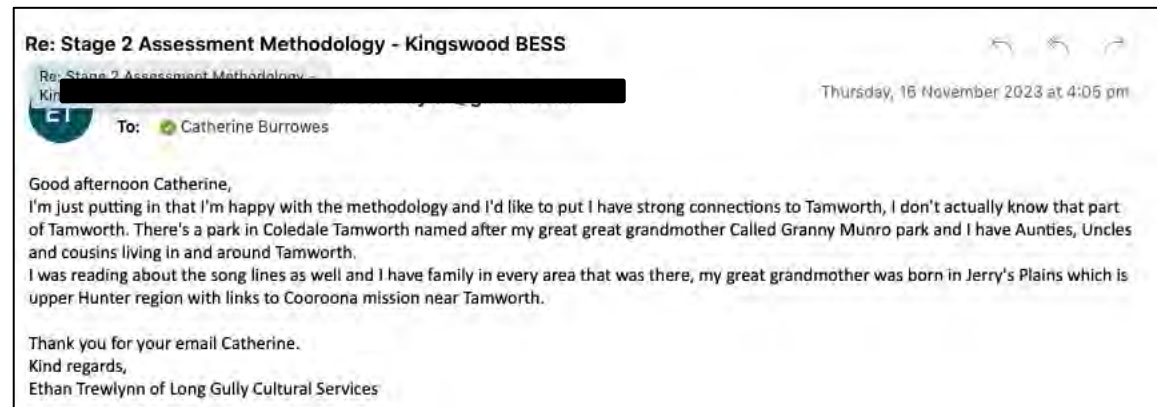
It is possible that the survey may identify landforms where test excavation under the Code of Practice (Requirements 14–17) is required. Should such landforms be identified during the survey, the test excavation methodology will be prepared as a separate document that will be circulated to all RAPs for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

REFERENCES

- AREA 2019 AREA Environment Consultants & Communication. 2019. Tamworth Solar Farm: Cultural Heritage Assessment. Report to: Oriens Energy Pty Ltd.
- Banks 2001 Banks, Robert G. 2001. Soil Landscapes of the Tamworth 1:100 000 Sheet, Department of Land and Water Conservation, Sydney
- Burke & Smith 2004 Burke, H. and Smith, C. 2004. The Archaeologist's Field Handbook, Blackwell, Oxford.
- DECCW 2010 DECCW. 2010. Code of Practice for the Protection of Aboriginal Objects in NSW. Department of Environment, Climate Change (now Heritage NSW).
- DECCW 2010b DECCW. 2010. Aboriginal cultural heritage consultation requirements for proponents. Department of Environment, Climate Change and Water (now Heritage NSW).
- Everick 2014 Everick Heritage Consultants. 2014. Due Diligence Cultural Heritage Assessment: South Tamworth Rural Lands Master Plan, Goonoo, Goonoo Road Site, Tamworth, NSW. Report to Tamworth Regional Council.
- Fison et al. 1880 Fison, L; Howitt, A; and Morgan, L. 1880. Kamilaroi and Kurnai: group marriage and relationship by elopement, drawn chiefly from the usage of the Australian aborigine: also the Kurnai tribe, their customs in peace and war. Aboriginal Studies Press for the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra.
- Gardner 1978 Gardner, W (1978 [1842–54]) "Productions and resources of the Northern and Western Districts of New South Wales". In I. McBryde (Ed), Records of Times Past: Ethnohistorical essays on the culture and ecology of the New England Tribes, pp 239–246. Australian Institute of Aboriginal Studies, Canberra.
- Hamm 2005 Hamm, G. 2005. Boggabri Coal Project: Aboriginal Cultural Heritage Assessment Report. A report to Idemitsu Boggabri Coal Pty Limited.
- KNC 2020 Kelleher Nightingale Consulting Pty Ltd. 2020. Hills of Gold Wind Farm SSD-9679: Aboriginal Cultural Heritage Assessment. Report to: ARUP on behalf of Wind Energy Partners Pty Ltd.
- McAdam and Wilson 2000 McAdam, L; and Wilson, J. 2000. The Tamworth Aboriginal Archaeological Site Study. Report to Tamworth City Council.

- McBryde and Binns 1970 I. McBryde and R.A. Binns. 1970. Preliminary report on a petrological study of ground-edge artefacts from north-eastern New South Wales, Australia. *Proceedings of the Prehistoric Society* 1969/1970: 229–235.
- Millis 1980 Millis, R. 1980. *The Wallabadah Manuscript: Recollections of the Early Days by William Telfer Jnr. The Early History of Northern New South Wales*. New South Wales University Press.
- Mitchell 2011 Mitchell, P. Mitchell landscapes (version 3). Office of Environment and Heritage (OEH).
- Niche 2013 Niche Environment and Heritage. 2013. Proposed Intensive Livestock Industry Facility Aboriginal and Non-Aboriginal Heritage Due Diligence Assessment, near Manilla, NSW. Report to Rostry Pty Ltd / PSA Consulting.
- OEH 2011 Office of Environment and Heritage. 2011. *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- O'Rourke 1997 O'Rourke, M. 1997. *Kamilaroi lands: North-central New South Wales in the early 19th century*. Self-published.
- OzArk 2010 OzArk Environment & Heritage. 2010. *Aboriginal and non-Indigenous Heritage Assessment: Tamworth-Gunnedah Transmission Line 875 Dismantling*. Report to TransGrid.
- Thompson 1981 Thompson, P. 1981. *EIS for the proposed Vickery Coal Mine Project*. Kembla Coal and Cole Pty Ltd.
- Tindale 1974 Tindale N. *Aboriginal Tribes of Australia*. ANU Press, Canberra.
- Tindale 2000 Tindale NB. 2000. Wiradjuri. In *Tindale's Catalogue of Australian Aboriginal Tribes*. South Australian Museum on South Australian Museum Website, South Australia.

Appendix 1 Figure 9: Responses from RAPs



Appendix 1 Figure 10: Aboriginal Focus Group Meeting invitation

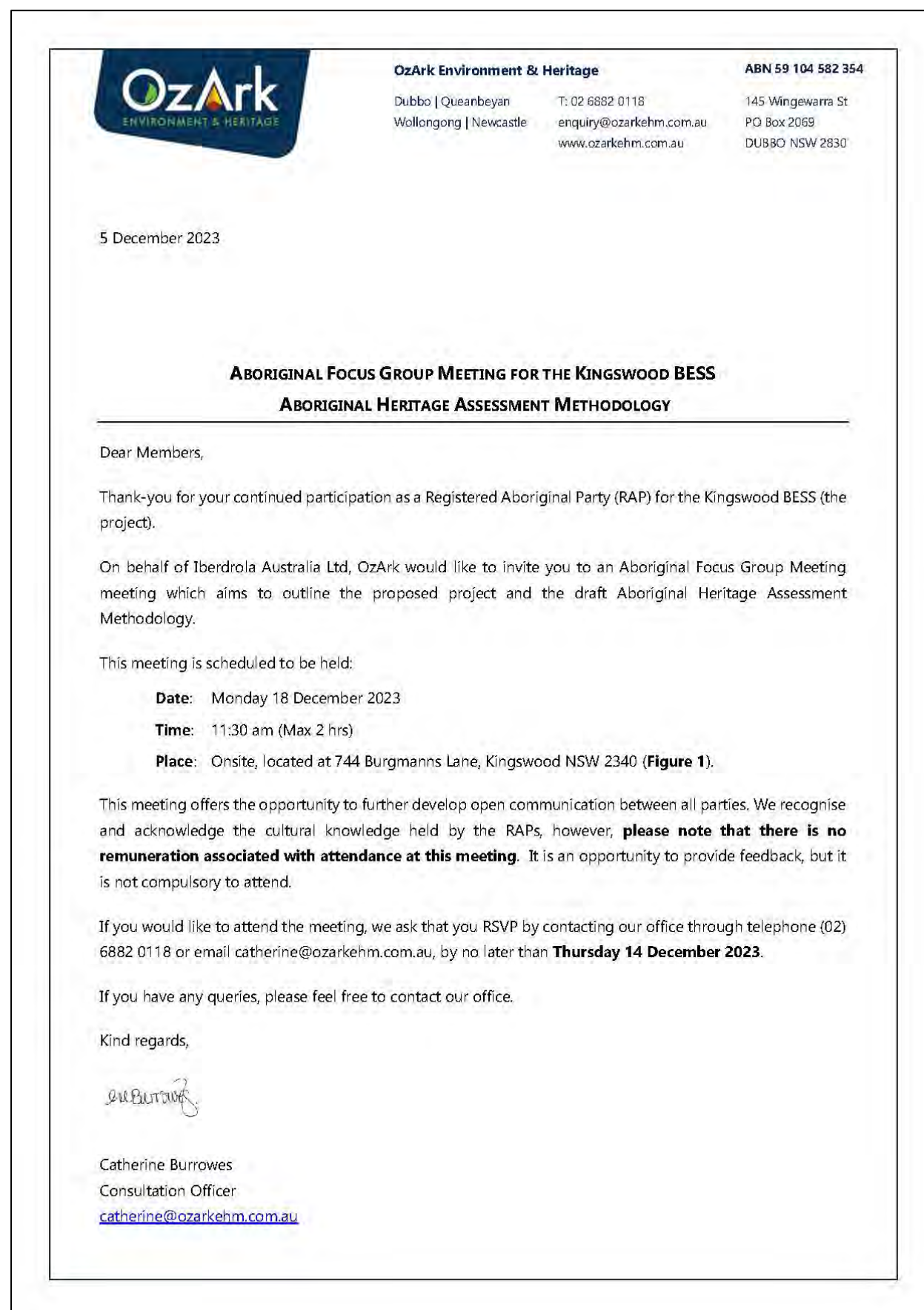
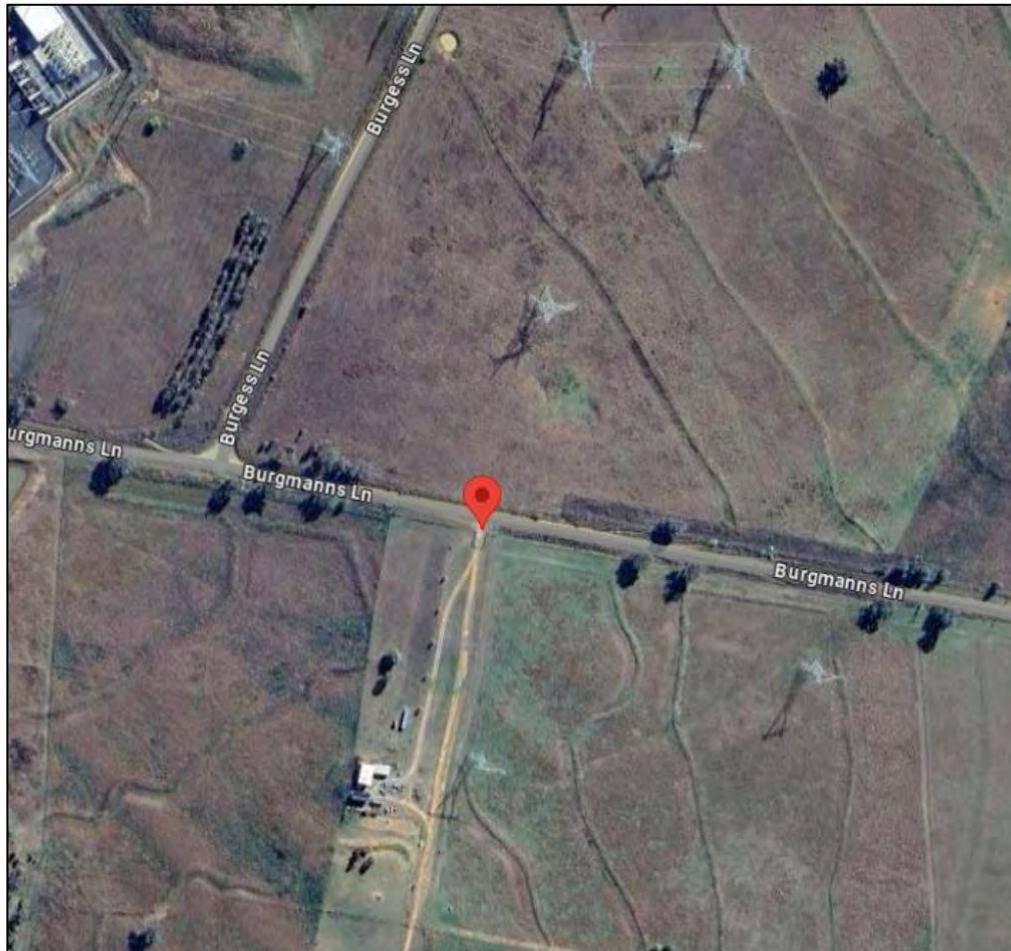
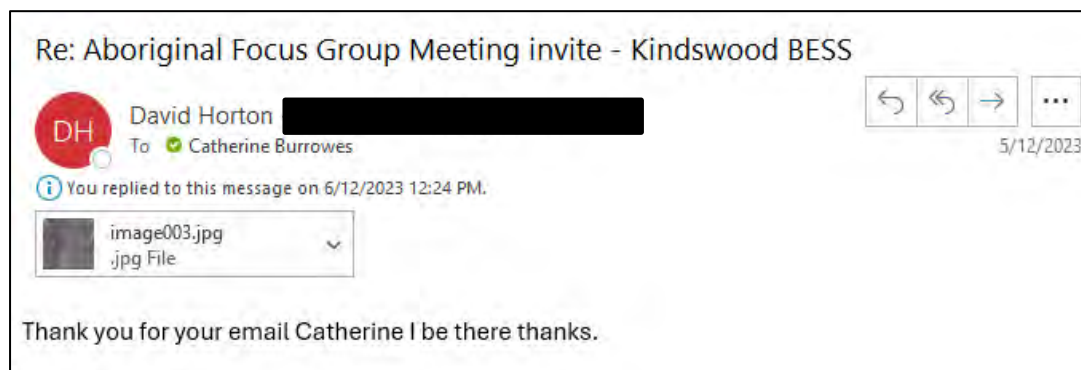


Figure 1: Meeting location – Kingswood BESS.

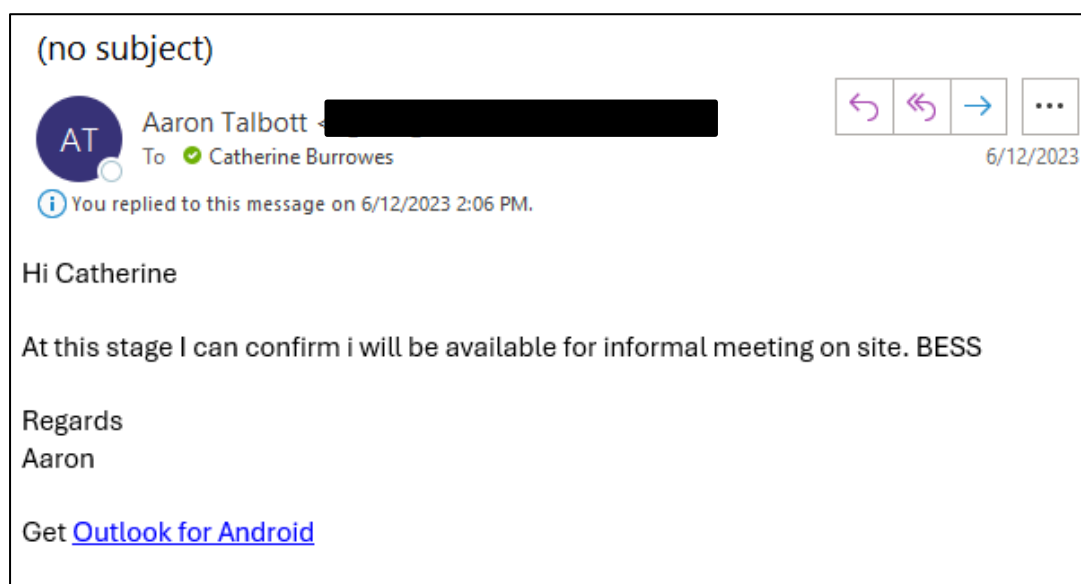


Appendix 1 Figure 11: Responses to the Aboriginal Focus Group Meeting invitation

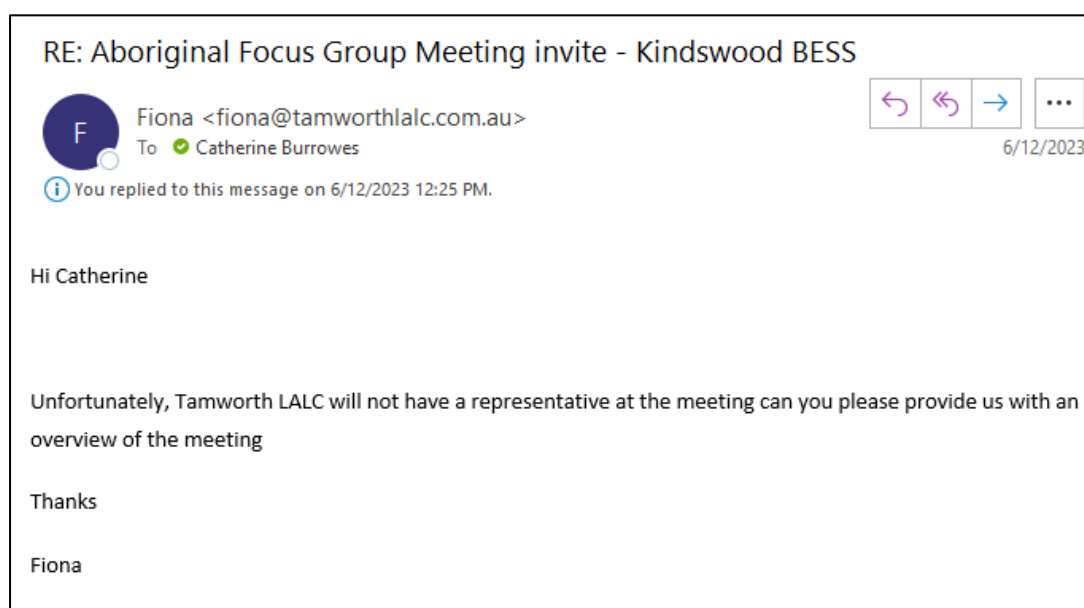
Response from Gomery Cultural Consultants



Response from AT Gomilaroi Cultural



Response from Tamworth LALC



Responses from Long Gully Cultural Services

Re: Aboriginal Focus Group Meeting invite - Kindswood BESS

 Ethan Trewlynn <ethan3trewlynn@gmail.com>
To:  Catherine Burrowes

6/12/2023

 You replied to this message on 6/12/2023 12:29 PM.

 image003.jpg
jpg File

Good morning Catherine,
Ethan Trewlynn of Long Gully Cultural Services.
I'd like to say I'll be having my uncle Pepe (Kenneth Trewlynn) or my Uncle Bill

Re: Aboriginal Focus Group Meeting invite - Kindswood BESS

 Ethan Trewlynn <[REDACTED]>
To:  Catherine Burrowes

10/12/2023

 You replied to this message on 12/12/2023 11:45 AM.

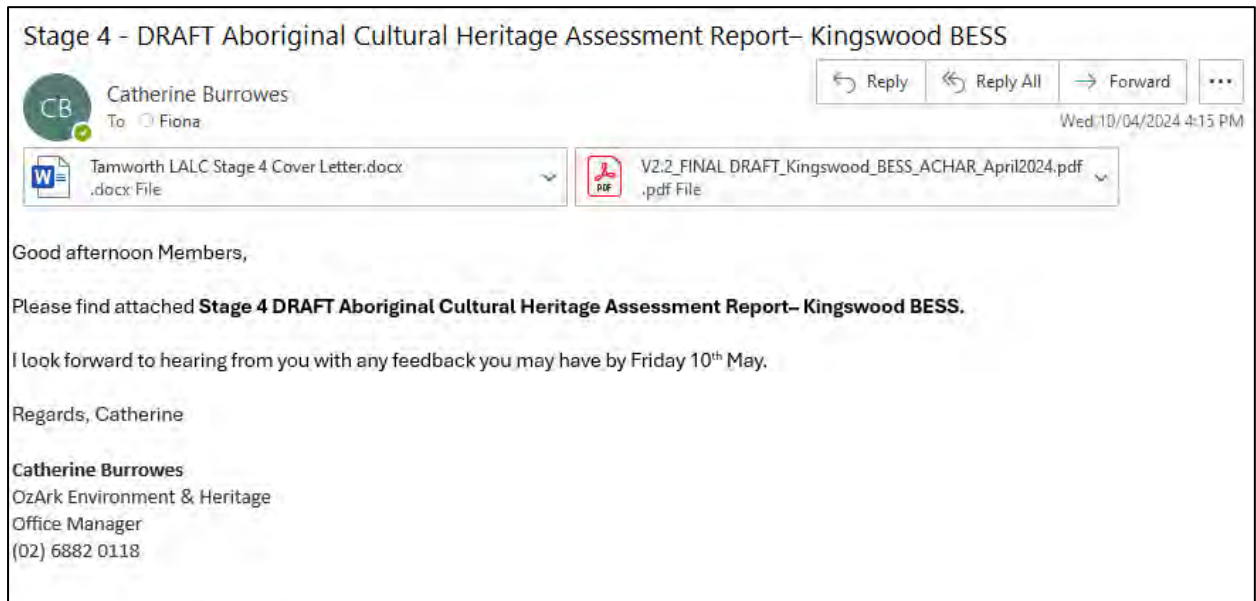
Hi Catherine,
Ethan Trewlynn of Long Gully Cultural Services.

I'm just wondering about the meeting if it's going to be a paid meeting or not, just to know if to send my uncle or I just attend myself if it ain't a paid meeting.
I'll most likely attend myself if it ain't a paid meeting plus I'll get to meet you and everyone else that's apart of the project.

And thank you for the email the other day sorry for the late reply.

Kind regards
Ethan Trewlynn of Long Gully Cultural Services.

Appendix 1 Figure 12: Stage 4 cover letter (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

10 April 2024

Tamworth LALC
fiona@tamworthlalc.com.au

DRAFT ABORIGINAL CULTURAL HERITAGE ASSESSMENT FOR KINGSWOOD BESS

Dear Members,

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

Iberdrola Australia Development Pty Limited 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 10 May 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,

A handwritten signature in black ink, appearing to read 'C. Burrowes', is written over a faint, larger signature.

Catherine Burrowes
Office Manager/ Community Liaison

APPENDIX 2: EXTENSIVE AHIMS SEARCH RESULT

AHIMS Web Services (AWS) Extensive search - Site list report Your Ref/PO Number : 3756 Narragamba Solar Client Service ID : 833615										
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
25-2-0006	Redbank IP/1	GDA	56	305320	6553886	Open site	Valid	Artefact : 5		102239
	Contact	Recorders	Archaeological Surveys & Salvage							
29-2-0161	Whitehouse Lane 1	AGD	56	305302	6549390	Open site	Valid	Artefact : 2		
	Contact	Recorders	Janice Wilson							
29-2-0308	Oxley Park Scarred Tree 2	AGD	56	305348	6558946	Open site	Valid	Modified Tree (Carved or Scarred) : 2		
	Contact	Recorders	Barry Cain							
29-2-0026	Fox Gully (Nemingha) Mt Falcon duplicate of 29-2-0279	AGD	56	306200	6557500	Open site	Valid	Artefact : -	Open Camp Site	2124,102239
	Contact	Recorders	Anne Lloyd							
29-2-0150	Garrieties Gully 3	AGD	56	304489	6558108	Open site	Valid	Artefact : -		102239
	Contact	Recorders	Janice Wilson							
29-2-0427	GG-AFT06	GDA	56	302057	6553711	Open site	Valid	Artefact : -		
	Contact	Recorders	Everick Heritage Pty Ltd, Mr. Matt Finlayson							
29-2-0423	GG-AFT03	GDA	56	302706	6554216	Open site	Valid	Artefact : -		
	Contact	Recorders	Everick Heritage Pty Ltd, Mr. Matt Finlayson							
29-2-0431	Arcadia IF05	GDA	56	299848	6554458	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo, Mrs. Anna Darby							
29-2-0360	Victoria Park 3	GDA	56	303590	6559077	Open site	Valid	Artefact : -		
	Contact	Recorders	PJ Gaynor (consultant), Mr. Patrick Gaynor							
29-2-0347	Victoria Park 2	GDA	56	303676	6557653	Open site	Valid	Artefact : 1		4635
	Contact	Recorders	Tamworth LALC, Mr. Donnie (Chris) Fernior							
29-2-0312	DR03	GDA	56	299700	6553225	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0443	Arcadia AS02	GDA	56	299396	6553633	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo, Mrs. Anna Darby							
29-2-0315	DR06	GDA	56	299223	6554130	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0329	GG01	GDA	56	302063	6554587	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0328	GG03	GDA	56	302390	6554565	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0327	GG04	GDA	56	302426	6553446	Open site	Valid	Artefact : 1, Water Hole : 1		
	Contact	Recorders	Everick Heritage Pty Ltd, Mr. Tim Robins, Mr. Matt Finlayson							
29-3-0140	DEW-IF7	GDA	56	312694	6549194	Open site	Valid	Artefact : -		
	Contact	Recorders	AHIMS APP Users, Miss. Rohani Dutch							
Report generated by AHIMS Web Service on 27/10/2023 for Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings : 297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 83 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 1 of 6

 AHIMS Web Services (AWS) Extensive search - Site list report Your Ref/PO Number : 3756 Narragamba Solar Client Service ID : 833615										
SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
29-2-0126	Kamilaroi Walking Track 1	AGD	56	304418	6558883	Open site	Valid	Artefact : 7		102239
	Contact	Recorders	Janice Wilson, Leila McAdam, Ivan Johnson							
29-2-0094	DTG/ST1 - Timbuiduri Creek	AGD	56	298140	6556700	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr. Mark Rawson							
29-2-0448	Arcadia IF 08	GDA	56	299018	6554439	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo, Ms. Kim Newman							
29-2-0445	Arcadia AS10	GDA	56	299267	6553960	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo, Ms. Kim Newman							
29-2-0320	DR11-1	GDA	56	299312	6554072	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0243	EQUINE IP/1	AGD	56	301896	6553455	Open site	Valid	Artefact : 3		102239
	Contact	Recorders	Archaeological Surveys & Salvage, Tamworth LALC							
29-2-0001	Tamworth, West Tamworth	AGD	56	298600	6555800	Open site	Not a Site	Artefact : -	Not an Aboriginal Site	1474
	Contact	Recorders	Harry Creamer, Davies Heritage Consultants Pty Ltd							
29-2-0442	Arcadia AS03	GDA	56	299430	6553857	Open site	Valid	Artefact : -		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo, Mrs. Anna Darby							
29-2-0322	DR13-1	GDA	56	298252	6553818	Open site	Valid	Artefact : 1, Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0422	GG-AFT02	GDA	56	302567	6553741	Open site	Valid	Artefact : -		
	Contact	Recorders	Everick Heritage Pty Ltd, Mr. Matt Finlayson							
25-2-0007	Meadowbank IP/1	AGD	56	305486	6553554	Open site	Valid	Artefact : 5		102239
	Contact	Recorders	Archaeological Surveys & Salvage							
29-2-0279	Fox Gully 1 (Nemingha) duplicate of 29-2-0026	AGD	56	306200	6557500	Open site	Valid	Artefact : -		
	Contact	Recorders	Anne Lloyd							
29-2-0153	MacPherson Hill 3	AGD	56	304426	6557602	Open site	Valid	Artefact : 33		102239
	Contact	Recorders	Janice Wilson							
29-2-0151	MacPherson Hill 1	AGD	56	304324	6557729	Open site	Valid	Artefact : 8		102239
	Contact	Recorders	Janice Wilson							
29-2-0324	DR15-1	GDA	56	298435	6553446	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr. Tim Robins							
29-2-0440	Arcadia IF02	GDA	56	299282	6553938	Open site	Valid	Artefact : -		
Report generated by AHIMS Web Service on 27/10/2023 for Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings : 297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 83 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 2 of 6



NSW
GOVERNMENT

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 3756 Narragamba Solar

Client Service ID : 833615

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0449	Arcadia IF 10	GDA	56	299309	6553836	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
29-2-0178	Barnes Gully IP/1	AGD	56	301256	6558659	Open site	Valid	Artefact : 1		99292
	Contact	Recorders	Archaeological Surveys & Salvage					Permits		
29-2-0160	Timbumburi Creek Coledale	AGD	56	298575	6556000	Open site	Valid	Artefact : 34		
	Contact	Recorders	Janice Wilson					Permits		
29-2-0421	GG-AFT01	GDA	56	302629	6554117	Open site	Valid	Artefact :-		
	Contact	Recorders	Everick Heritage Pty Ltd,Everick Heritage Pty Ltd,Mr.Matt Finlayson,Mr.Matt Finlay					Permits		
29-2-0412	Barnes Gully 1	GDA	56	302158	6554634	Open site	Valid	Artefact :-		
	Contact	Recorders	Everick Heritage Pty Ltd,Mr.Matthew Finlayson					Permits		
29-2-0128	Kamilaroi Walking Track 4	AGD	56	305475	6558880	Open site	Valid	Artefact : 22		102239
	Contact	Recorders	Janice Wilson,Leila McAdam,Ivan Johnson					Permits		
29-2-0288	Garrieties Gully Historic Site	GDA	56	304637	6558345	Open site	Valid	Artefact :-		102239
	Contact	Recorders	Janice Wilson,Leila McAdam					Permits		
29-2-0323	DR14-1	GDA	56	298142	6553755	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0310	DR01	GDA	56	299573	6553355	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0434	Arcadia IF04	GDA	56	299464	6553094	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0317	DR08	GDA	56	299161	6554386	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0432	Arcadia IF06	GDA	56	299198	6554500	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0319	DR10-1	GDA	56	299249	6554138	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0152	MacPherson Hill 2	AGD	56	304476	6557795	Open site	Valid	Artefact : 1		102239
	Contact	Recorders	Janice Wilson					Permits		
29-2-0428	GG AFT05	GDA	56	302253	6554605	Open site	Valid	Artefact :-		
	Contact	Recorders	Everick Heritage Pty Ltd,Mr.Matt Finlayson					Permits		
29-2-0441	Arcadia AS07	GDA	56	299113	6554515	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0447	Arcadia IF 09	GDA	56	299309	6553836	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
29-2-0313	DR04	GDA	56	299696	6553246	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 27/10/2023 for Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings : 297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 83

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 6



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 3756 Narragamba Solar

Client Service ID : 833615

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
29-2-0311	Contact	Recorders	Mr.Richard Robins					Permits		
		GDA	56	299807	6553038	Open site	Valid	Artefact : 1		
29-2-0436	Contact	Recorders	Mr.Tim Robins					Permits		
	Arcadia AS05	GDA	56	299344	6553882	Open site	Valid	Artefact : -		
29-2-0437	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
	Arcadia AS06	GDA	56	299484	6553537	Open site	Valid	Artefact : -		
29-2-0446	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
	Arcadia AS09	GDA	56	299162	6554179	Open site	Valid	Artefact : -		
29-2-0318	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Ms.Kim Newman					Permits		
	DR09	GDA	56	299201	6554255	Open site	Valid	Artefact : 1		
29-2-0125	Contact	Recorders	Mr.Tim Robins					Permits		
	Kamilaroi Walking Track 2	AGD	56	304797	6558769	Open site	Valid	Artefact : 4		102239
29-2-0149	Contact	Recorders	Janice Wilson,Leila McAdam,Ivan Johnson					Permits		
	Garrieties Gully 2	AGD	56	304489	6558108	Open site	Valid	Artefact : 4		102239
29-2-0148	Contact	Recorders	Janice Wilson					Permits		
	Garrieties Gully 1	AGD	56	304217	6558077	Open site	Valid	Artefact : 1		
29-2-0316	Contact	Recorders	Janice Wilson					Permits		
	DR07	GDA	56	299053	6554428	Open Site	Valid	Artefact : 1		
29-2-0277	Contact	Recorders	Mr.Tim Robins					Permits		
	DTG/ST 1-Timbumburi Ck	GDA	56	298140	6556700	Open site	Valid	Artefact : -		
29-2-0326	Contact	Recorders	Stephanie Garling					Permits		
	GG06	GDA	56	302437	6553821	Open site	Valid	Artefact : 1		
29-2-0304	Contact	Recorders	Mr.Tim Robins					Permits		
	Cabala Creek IP/2	AGD	56	303454	6555394	Open site	Valid	Artefact : 2		102239
29-2-0142	Contact	Recorders	Mr.Patrick Gaynor					Permits	3351,3360	
	Armidale Road 1	AGD	56	304936	6556365	Open site	Valid	Artefact : 2		97360,102239
29-2-0120	Contact	Recorders	Janice Wilson					Permits		
	Shield Tree	AGD	56	305750	6545200	Open site	Valid	Modified Tree (Carved or Scarred) : -		
29-2-0123	Contact	Recorders	Patrick Lipica					Permits		
	Hilltop IP1	AGD	56	305750	6545500	Open site	Valid	Artefact : -		
29-2-0108	Contact	Recorders	NPWS - Walcha Sub-District					Permits		
	Isolated Find	AGD	56	305750	6545500	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	NPWS - Walcha Sub-District					Permits		

Report generated by AHIMS Web Service on 27/10/2023 for Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings : 297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 83

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 6

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 3756 Narragamba Solar

Client Service ID : 833615

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
29-2-0110	Figtree Gully (Neningha) duplicate of 29-2-0278	AGD	56	306200	6557800	Open site	Deleted	Artefact :-		102239
	Contact	Recorders	Anne Lloyd					Permits		
29-2-0435	Arcadia AS04	GDA	56	299378	6554018	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0438	Arcadia IF01	GDA	56	299395	6553725	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0444	Arcadia AS01	GDA	56	299447	6553665	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0321	DR12-1	GDA	56	298176	6553878	Open site	Valid	Artefact : 1, Modified Tree (Carved or Scarred): 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0303	Cabala Creek IP/1	AGD	56	303753	6555292	Open site	Valid	Artefact :-		102239
	Contact	Recorders	Ivan Johnson,Mr.Patrick Gaynor					Permits	3351,3360	
29-2-0439	Arcadia IF03	GDA	56	299253	6553976	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage- Dubbo,Mrs.Anna Darby					Permits		
29-3-0136	DEW IF5	GDA	56	310487	6550567	Open site	Valid	Artefact :-		
	Contact	Recorders	Ms.Georgia Burnett					Permits	4899	
29-2-0307	Oxley Park Scarred Tree 1	AGD	56	305416	6558943	Open site	Valid	Modified Tree (Carved or Scarred): 3		
	Contact	Recorders	Barry Cain					Permits		
29-2-0278	Figtree Gully 1 duplicate of 29-2-0110	AGD	56	306200	6557800	Open site	Valid	Artefact :-		
	Contact	Recorders	Anne Lloyd					Permits		
29-2-0429	GG-AFT04	GDA	56	302735	6554311	Open site	Valid	Artefact :-		
	Contact	Recorders	Everick Heritage Pty Ltd,Mr.Matt Finlayson					Permits		
29-2-0424	Hillvue Public School	GDA	56	299699	6555709	Open site	Valid	Artefact :-		
	Contact	Recorders	AMAC Group P/L,Mr.Benjamin Sreat					Permits		
29-2-0314	DR05	GDA	56	299361	6553823	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		
29-2-0433	Arcadia IF07	GDA	56	299485	6554213	Open site	Valid	Artefact :-		
	Contact	Recorders	AREA Environmental & Heritage - Dubbo,Mrs.Anna Darby					Permits		
29-2-0430	GG-AS01	GDA	56	302668	6554010	Open site	Valid	Artefact :-		
	Contact	Recorders	Everick Heritage Pty Ltd,Mr.Matt Finlayson					Permits		
29-2-0325	GG05	GDA	56	302372	6553905	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Tim Robins					Permits		

Report generated by AHIMS Web Service on 27/10/2023 for Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings :297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 83

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 5 of 40



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 3756 Narragamba Solar

Client Service ID : 833615

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
** 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 Sophia Grubnic for the following area at Datum :GDA, Zone : 56, Eastings : 297850.0 - 312725.0, Northings : 6544428.0 - 6559228.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 83 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 6 of 6

APPENDIX 3: UNANTICIPATED FINDS PROTOCOL

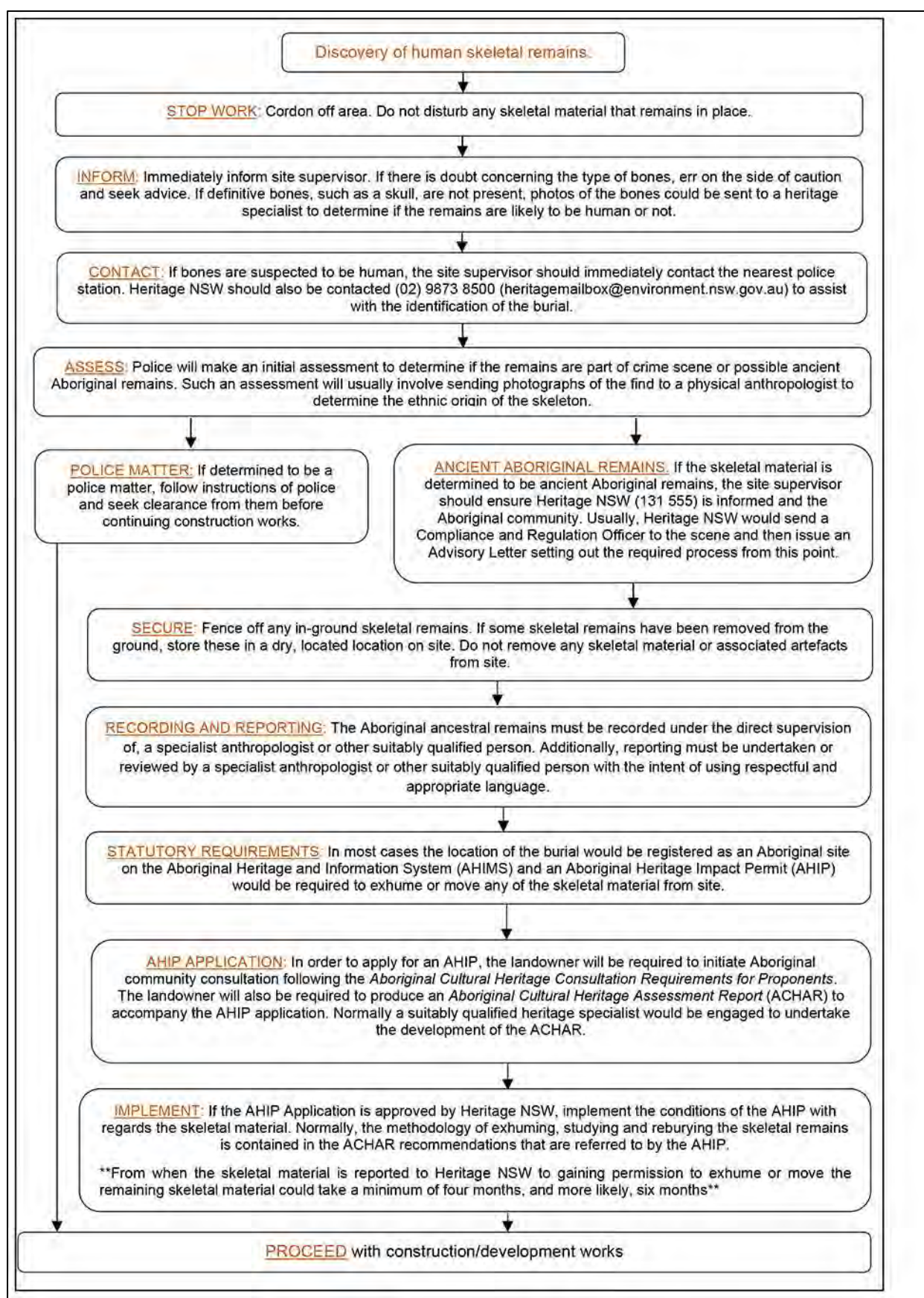
An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

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.

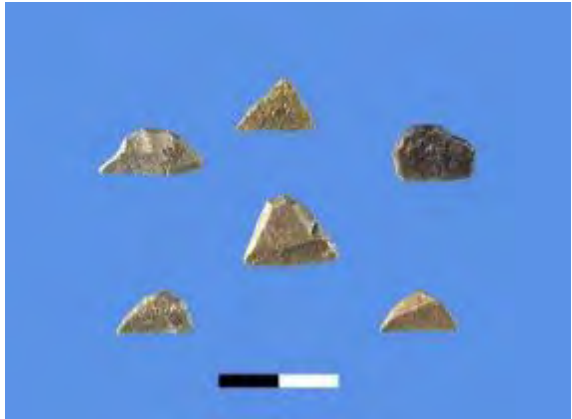
Protocol to be followed if previously unrecorded or unanticipated Aboriginal object(s) are encountered:

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 (heritagemailbox@environment.nsw.gov.au), providing any details of the Aboriginal object and its location; and
 - e. Not recommence any work at the particular location unless authorised in writing by Heritage NSW.
2. If Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and Heritage NSW contacted.
3. Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
 - a. The recording and assessment of the find(s)
 - b. The fulfilment of any legal constraints arising from the find(s), including complying with Heritage NSW directions
 - c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).
4. Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from Heritage NSW (through the procedures of an approved ACHMP).

APPENDIX 4: UNANTICIPATED SKELETAL REMAINS PROTOCOL



APPENDIX 5: 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