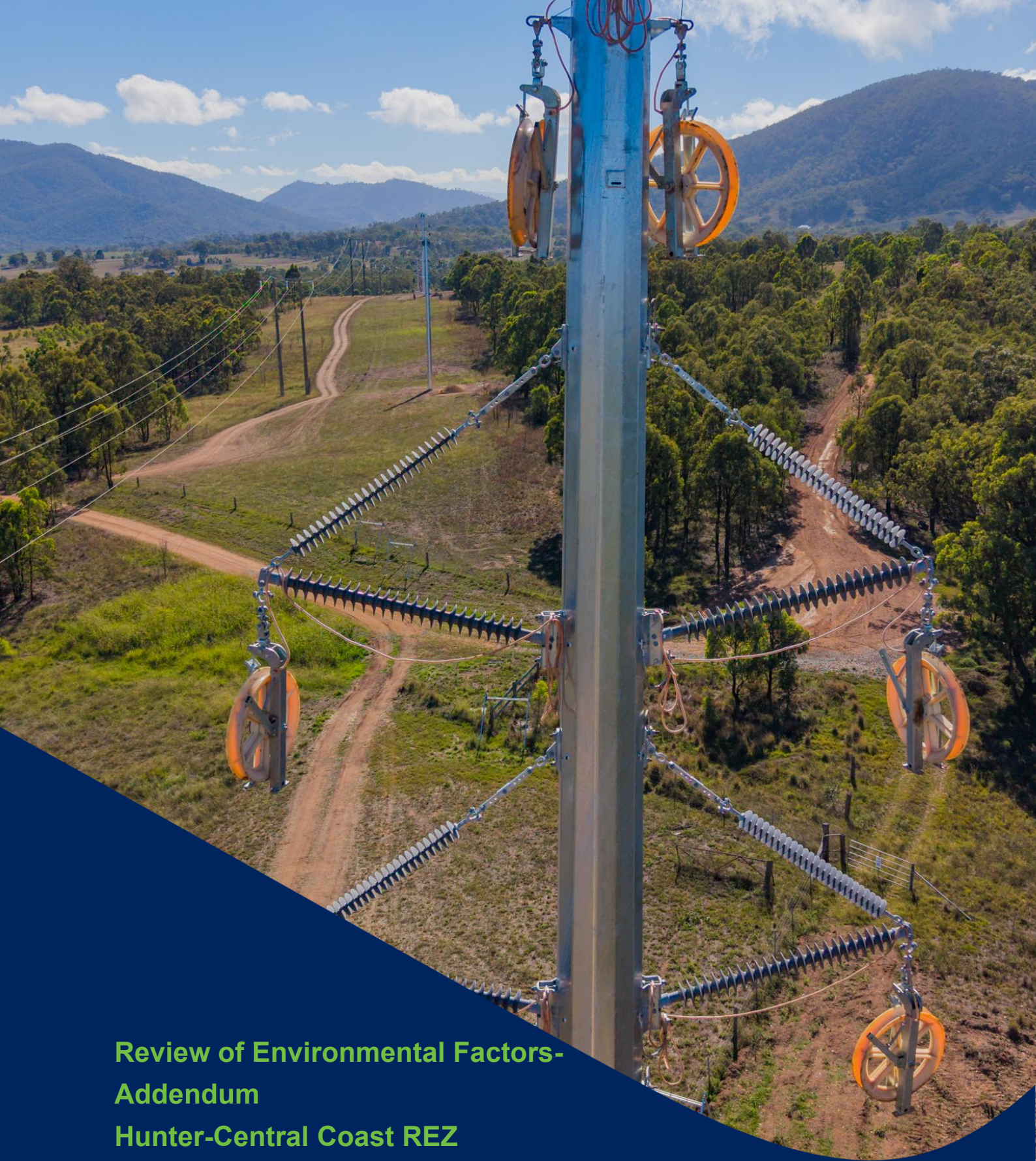




Review of Environmental Factors- Addendum

Hunter-Central Coast REZ Network Infrastructure

Appendix E- Aboriginal Heritage

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HUNTER-CENTRAL COAST RENEWABLE ENERGY ZONE (HCC REZ)

ADDENDUM – SURVEY REPORT

Report to Ausgrid

LGAs: Cessnock, Singleton and Muswellbrook

September 2026





Apex Archaeology acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation and in whose land this assessment took place, and to the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples.

Aboriginal people are advised that this report contains reference to deceased people. Further, this report includes high level discussions of sites which may be culturally sensitive, including gender-based restricted sites.

DOCUMENT CONTROL

The following register documents the development and issue of the document entitled 'Hunter-Central Coast Renewable Energy Zone (HCC REZ): Addendum Survey Report', prepared by Apex Archaeology in accordance with its quality management system.

Revision	Prepared by	Reviewed by	Comment	Issue Date
1 – Draft	Leigh Bate	Jenni Bate	Client review	12 April 2026
2 – Draft	Leigh Bate	Richard Dunnicliff	Report updates	8 May 2026
3 – Draft	Leigh Bate	Richard Dunnicliff	Additional amendments	29 June 2026
4 – Draft	Leigh Bate	Ausgrid	RAP Review	4 August 2026
5 – Final	Jenni Bate	RAPs	Issue of final	10 Sept 2026



EXECUTIVE SUMMARY

Ausgrid has engaged Apex Archaeology to assist in preparing an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed HCC REZ Network Infrastructure project to modernise the electricity system within the Hunter Valley, NSW. The project will be undertaken in two stages and includes areas within Cessnock and Singleton Local Government Areas (LGAs).

Apex Archaeology have completed detailed archaeological assessment, survey and test excavations for this project to date over the last three years. The results of this assessment are presented in Apex Archaeology 2025 *Hunter-Central Coast Renewable Energy Zone (HCC REZ) Aboriginal Cultural Heritage Assessment Report*. During additional detailed project development Ausgrid has identified the need for a number of route modifications that will require further archaeological assessment.

This addendum survey report has been prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011) (the Guide); the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, April 2010) (the ACHCRs), and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (September 2010) (the Code of Practice). It details the results of the archaeological assessment completed in accordance with the Code of Practice and additional/ongoing consultation undertaken with the Aboriginal community in accordance with the ACHCRs.

The current works outlined in this report relate to additional access tracks and transmission line alignments to support and complete the previously assessed electrical upgrade works, in areas adjacent to but outside of the original study area. All the original works areas have been assessed and are discussed in the previously completed ACHA for the project. The additional areas described in this document have not yet been assessed, and as such, this document details the assessment of these additional areas.

A total of 25 Aboriginal people and organisations registered an interest in being consulted for the project. The following list comprises the registered Aboriginal parties (RAPs) for the project:

- A1 Indigenous Services
- Amanada Hickey Cultural Services
- Aleira French Trading
- AGA Services
- Cacatua
- Corroboree Aboriginal Corporation
- DFTV Enterprises
- Didge Ngunawal Clan
- Gomeroy Consultants
- Gunjeewong
- Hunter Valley Aboriginal Corporation
- Kevin Duncan
- Konnango Aboriginal Cultural Heritage Services
- Long Gully Cultural Services



- Gomeroi People (Native Title Claim Group)
- Robert Syron
- Thomas Dahlstrom
- Ungooroo Aboriginal Corporation
- Wallangan
- Upper Hunter Wonnarua Council
- Wanaruah Nation Aboriginal Corporation
- Wanaruah Local Aboriginal Land Council
- Widescope
- Yarrawalk
- Yinarr Cultural Services

Consultation with the RAPs has been conducted in accordance with the ACHCRs.

A comprehensive survey of the additional study areas was undertaken as part of the assessment, with one new site identified within the additional study areas. No new areas of archaeological sensitivity were identified and the new site can be avoided by the proposed works. One previously recorded AHIMS site (#37-3-1201) is also located within the additional study area at Hebden and cannot be avoided. As such this site will need to be included in a variation to AHIP #5498 to allow surface collection of this site to occur.

Based on the results of the survey, as well as an understanding of previous archaeological work within the area, a range of management and mitigation measures were developed. Additionally, the Aboriginal Cultural Heritage Management Plan (ACHMP) prepared for the original assessment to guide the management of Aboriginal cultural heritage sites within the study area before, during, and after completion of the proposed works for the HCC REZ project should be updated to include the additional study area assessed.

The following recommendations have been made specifically for the additional survey areas considered in this report.

RECOMMENDATION 1: APPLICATION FOR VARIATION TO AHIP NECESSARY

Application for a variation to the existing Aboriginal Heritage Impact Permit (AHIP) #5498 to permit impact to AHIMS site #37-3-1201 as the HCC REZ alignment has altered and it was identified that this site will now be impacted. AHIMS site #37-3-1201 cannot be avoided, and the variation should include permission to undertake surface collection of any artefacts on the ground surface within the proposed impact area, with the items reburied on site.

If the surface artefacts cannot be relocated, the AHIP should permit unmitigated impact to the site location.



RECOMMENDATION 2: AVOIDANCE OF KNOWN SITES

One newly identified site (MushroomC-AS-01) was located within the additional survey areas. This site can be avoided by the proposed works, via use of alternative access routes, and ensuring pole placement avoids the known site location.

If avoidance is no longer possible, application for a variation to the existing AHIP for the HCC REZ would be necessary.

RECOMMENDATION 3: IMPLEMENTATION OF ACHMP

An Aboriginal Cultural Heritage Management Plan (ACHMP) has been prepared to guide the management of Aboriginal sites before, during and after upgrade works have been undertaken. This includes guidance around salvage excavations, management of recovered artefacts, and management of unexpected finds during on-going maintenance works. This should be updated to include the additional survey undertaken and the recommendations made should be implemented during construction works.

RECOMMENDATION 4: STOP WORK PROVISION

Should unanticipated Aboriginal archaeological material be encountered during site works, all work must cease in the vicinity of the find and an archaeologist contacted to make an assessment of the find and to advise on the course of action to be taken. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.

In the unlikely event that suspected human remains are identified during construction works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police and the Coroner's Office must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW and the RAPs for the project would be required.

This recommendation should be included in any Construction Environmental Management Plan (CEMP) developed for the site.

RECOMMENDATION 5: DEVELOPMENT BOUNDARIES

The proposed development works must be contained within the assessed boundaries for this project. If there is any alteration to the boundaries of the proposed development to include areas not assessed as part of this archaeological investigation, further investigation of those areas may be necessary to assist in appropriately managing Aboriginal objects and places which may be present.



RECOMMENDATION 6: REPORTING

One digital copy of this report should be forwarded to Heritage NSW to support the required AHIP variation application for the project, along with required supporting documentation.

One digital copy of this report should be forwarded to Heritage NSW for inclusion on the Aboriginal Heritage Information Management System (AHIMS).

One copy of this report should be forwarded to each of the registered Aboriginal stakeholders for the project.



GLOSSARY OF TERMS

Aboriginal Object	An object relating to the Aboriginal habitation of NSW (as defined in the NPW Act), which may comprise a deposit, object or material evidence, including Aboriginal human remains.
ACHA	Aboriginal Cultural Heritage Assessment
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHCRs	<i>Aboriginal cultural heritage consultation requirements for proponents 2010</i>
AHIMS	Aboriginal Heritage Information Management System maintained by Heritage NSW, detailing known and registered Aboriginal archaeological sites within NSW
AHIP	Aboriginal Heritage Impact Permit
Alignment/corridor	The area within which the proposed upgrades to the HCC REZ will be undertaken
ASIRF	Aboriginal Site Impact Recording Form
Code of Practice	The DECCW September 2010 <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>
Consultation	Aboriginal community consultation in accordance with the DECCW April 2010 <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> .
DA	Development Application
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DECCW	The Department of Environment, Climate Change and Water (now Heritage NSW)
Disturbed Land	If land has been subject to previous human activity which has changed the land's surface and are clear and observable, then that land is considered to be disturbed
GIS	Geographical Information Systems
GSV	Ground Surface Visibility
the Guide	<i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW</i>
Harm	To destroy, deface or damage an Aboriginal object; to move an object from land on which it is situated, or to cause or permit an object to be harmed
HCC REZ	Hunter-Central Coast Renewable Energy Zone
Heritage NSW	Heritage NSW within the Department of Climate Change, Energy, the Environment and Water; responsible for overseeing heritage matters within NSW
ka	Kiloannus, a unit of time equating to 1,000 years
LALC	Local Aboriginal Land Council
LGA	Local Government Area
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Service
OEH	The Office of Environment and Heritage (now Heritage NSW)
PAD	Potential Archaeological Deposit
RAPs	Registered Aboriginal Parties
STL	Sub-transmission line/powerline
STS	Sub-transmission substation



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1.0 INTRODUCTION

Ausgrid has engaged Apex Archaeology to assist in preparing an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed HCC REZ Network Infrastructure project to modernise the electricity system within the Hunter Valley, NSW (Figure 1). The project will be undertaken in two stages and includes areas within Cessnock, Singleton and Muswellbrook Local Government Areas (LGAs).

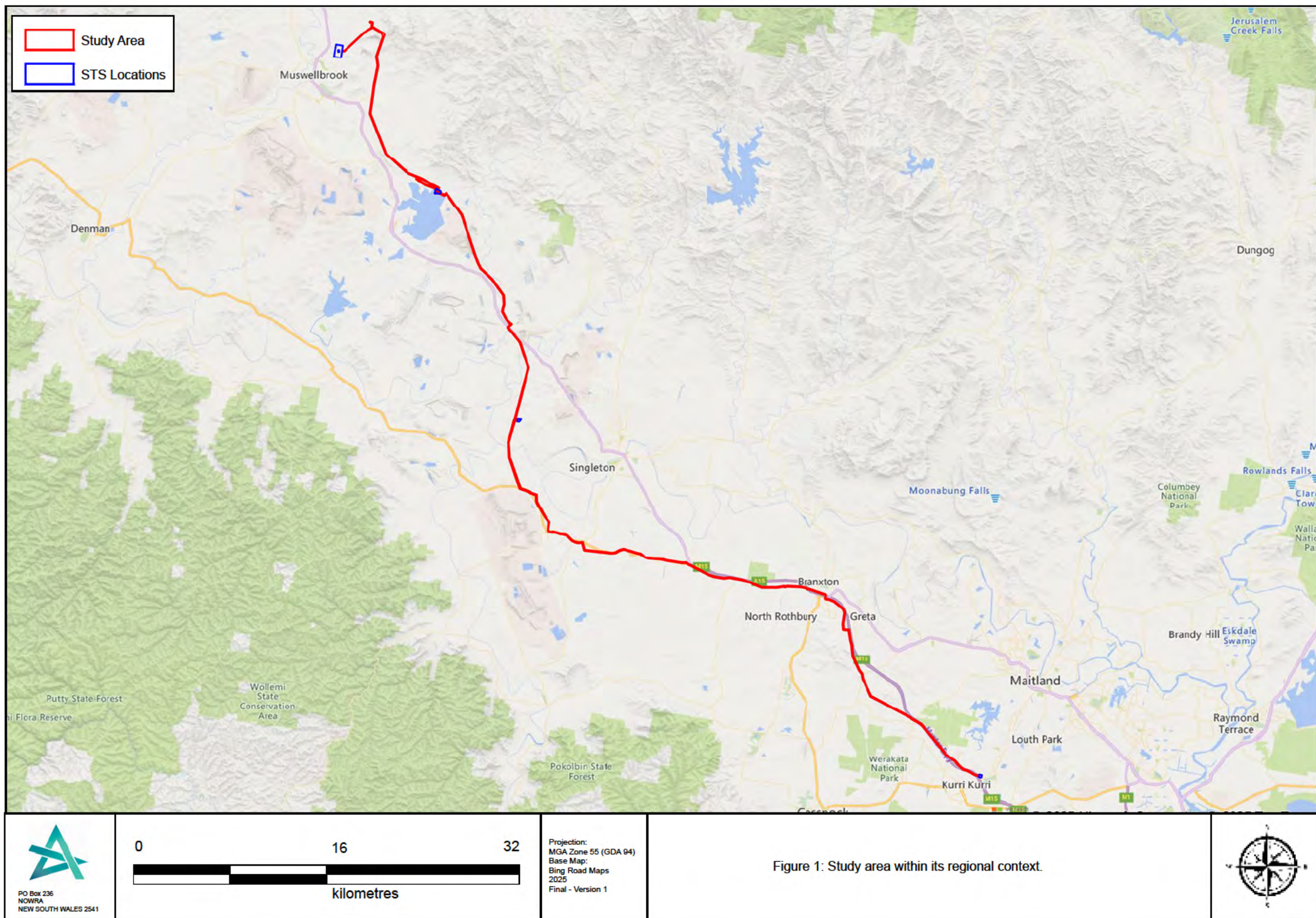
Apex Archaeology have completed detailed archaeological assessment, survey and test excavations for this project to date over the last three years. The results of this assessment are presented in Apex Archaeology 2025 *Hunter-Central Coast Renewable Energy Zone (HCC REZ) Aboriginal Cultural Heritage Assessment Report*. During additional detailed project development Ausgrid has identified the need for a number of route modifications that will require further archaeological assessment.

This addendum survey report has been prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011) (the Guide); the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, April 2010) (the ACHCRs), and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (September 2010) (the Code of Practice). It details the results of the archaeological assessment completed in accordance with the Code of Practice and additional/ongoing consultation undertaken with the Aboriginal community in accordance with the ACHCRs.

1.1 STUDY AREA

The HCC REZ study area is within the central lowlands of the Hunter Valley and follows a meandering corridor that extends from Kurri Kurri, approximately 30 km northeast of the city of Newcastle on the coast, to Muswellbrook in the northwest. It is approximately 20-45m wide and covers a distance of approximately 81 km (Figure 1).

In late 2025 it was identified that a number of alignment changes were necessary to be assessed. As such, this addendum survey report covers the additional eleven areas along the HCC REZ alignment from Kurri Kurri to Hebden. The section from Hebden to Muswellbrook has not been considered as a part of this current assessment. These additional eleven areas comprise the current study areas for this report and are shown on Figure 2.







1.2 PROJECT BRIEF

Ausgrid's proposed Hunter-Central Coast Renewable Energy Zone (HCC REZ) project declared by the NSW Minister for Energy in 2022 will deliver new renewable energy infrastructure to fulfill the increasing demand for affordable and sustainable electricity. This will include the construction of energy generators (e.g. solar and wind), storage facilities, and high-voltage transmission lines. The REZ aims to produce cheap, clean and reliable electricity that can be efficiently stored and transmitted across the National Electricity Market (Ausgrid 2022).

The HCC REZ upgrades refer to the sub-transmission infrastructure, while the Hunter Transmission Project (HTP) is a new transmission line (lattice towers) project, to connect the Central West Orana and New England REZs with the existing 500kV transmission network at Eraring. The HTP is not part of the current assessment.

The determining authority in this instance is Ausgrid, who will determine a Review of Environmental Factors (REF) for the project under Part 5 of the Environmental Planning and Assessment Act.

1.3 OBJECTIVES OF THE ABORIGINAL CULTURAL HERITAGE ASSESSMENT

The archaeological investigation was undertaken to meet the requirements of the Code of Practice and ACHCRs.

The purpose of the archaeological investigation is to understand and establish the potential harm the proposed development may have on Aboriginal cultural heritage within the study area, both tangible and intangible.

Aboriginal community consultation as part of the original HCC REZ project was undertaken with the aim of:

- Identifying the Aboriginal community members who can speak for Country within which the study area is located;
- Involving the Aboriginal community in making decisions about the management of their cultural heritage;
- Identifying, assessing and recording Aboriginal heritage values within the study area;
- Preparing an assessment of the cultural heritage values in consultation with the Aboriginal community;
- Identifying the potential impact of the proposed development on the assessed cultural heritage values; and
- Developing conservation and mitigation strategies for these values, with the aim of minimising impacts to cultural heritage wherever possible.

Consultation has been continued with the original RAPs for the project to ensure they are kept up to date with the proposed works, and to seek their views on potential impacts to cultural heritage values within the additional survey areas.



In addition, this report provides an updated significance assessment of the identified Aboriginal heritage values, as defined by the registered Aboriginal stakeholders (RAPs) for the project. Aboriginal people are the primary determinants of the significance of their cultural heritage and therefore Apex Archaeology cannot make a determination on the cultural significance without the input of the RAPs.

Any development works which disturb the ground surface have the potential to impact Aboriginal archaeological deposits and therefore an assessment of whether the study area contains such deposits is required prior to the commencement of construction works. An assessment of whether the proposed development would impact these deposits (if present) is also necessary, and identification of to what extent the deposits would be impacted is also required. The degree of impact which may be allowable is determined, in part, with consideration of the level of cultural significance attributed to the cultural values of the study area, both tangible and intangible.

This assessment considers existing and newly identified sites within the study area and determination of whether these could be avoided by any further works within the study area, as well as detailing consultation with the Aboriginal community in order to determine the cultural significance of the area.

1.4 PROJECT PROPONENT

The proponent for the project is Ausgrid and Ausgrid's Environmental Project Manager is Richard Dunnicliff.

1.5 INVESTIGATORS AND CONTRIBUTORS

This archaeological assessment was commissioned by Ausgrid. Apex Archaeology thanks Ausgrid's Environmental Project Manager, Richard Dunnicliff, for his assistance with the project. Thanks are also extended to the registered Aboriginal groups for their participation and assistance with the project, with particular thanks and appreciation to Ashley Sampson and Sue Cutmore from Cacatua Culture Consultants for their assistance with the fieldwork.

This report has been prepared by Leigh Bate, Director and Archaeologist with Apex Archaeology. The report was reviewed by Jenni Bate, Director and Archaeologist with Apex Archaeology. Both Jenni and Leigh have over eighteen years of archaeological consulting experience within NSW. Project team roles and qualifications are shown in Table 1.

Table 1: Project team roles and qualifications

Name	Role	Qualifications
Jenni Bate	Project Manager; Report Author; Review	B.Archaeology; Grad. Dip. CHM
Leigh Bate	Field work, Report Author; GIS	B.Archaeology; Grad. Dip. Arch; Dip. GIS
Marian Bailey	Field work	B. Arts, Archaeology; M.AHM, PhD
Cat Fenech	Field work	BA (CA/VA; Arch); MA (Arch)



Name	Role	Qualifications
Ashley Sampson	Aboriginal representative (Cacatua Culture Consultants)	
Sue Cutmore	Aboriginal representative (Cacatua Culture Consultants)	

1.6 LIMITATIONS

This report relies in part on previously recorded archaeological and environmental information for the wider region. This includes information from the Aboriginal Heritage Information Management System (AHIMS), which is acknowledged to be occasionally inaccurate, due to inaccuracies in recording methods. No independent verification of the results of external reports has been made as part of this report.

It should be noted that AHIMS results are a record only of the sites that have been previously registered with AHIMS and are not a definitive list of all Aboriginal sites within an area, as there is potential for sites to exist within areas that have not previously been subject to archaeological assessment.

Field investigations for this report included survey only. The results are considered to be indicative of the nature and extent of Aboriginal archaeological remains within the study area, but it should be noted that further Aboriginal objects and sites which have not been identified as part of this assessment may be present within the wider study area.

It is recognised that Aboriginal people are the primary determinants of the significance of their cultural heritage, and as such, Apex Archaeology have relied on the Aboriginal community to provide cultural knowledge regarding the site, where they are willing and able to share such knowledge. However, there may be occasions where RAPs are unwilling or unable to share cultural knowledge regarding the site and thus our assessment of significance relies on scientific assessment only.

This report assesses Aboriginal cultural heritage matters only. No assessment of historical heritage has been made as part of this addendum survey report.

It is acknowledged that the Hunter Valley is a dynamic landscape with significant development opportunities proposed, many of which require Aboriginal cultural heritage assessments. As such, there is potential that additional investigations have been undertaken since this project commenced, which may not have been considered in this report. Additionally, these investigations may result in new sites being identified that were not originally located as part of this assessment. This may be due to changes in visibility, disturbance levels, or taphonomic processes causing movement of objects into the HCC REZ study area. Consideration of reports which are not yet available is beyond the scope of this assessment.



1.7 REPORT STRUCTURE

This report addresses the requirements of the Guide, the Code of Practice and the ACHCRs. The Guide provides guidance as to what must be contained in an ACHA report. The following tables outline the requirements of both the Guide and the Code of Practice, and how they have been addressed in this report. The report has also been prepared in accordance with Requirement 11 of the Code of Practice.

Section 1 of this report outlines the study area, project brief, details of the proponent, and investigators and contributors to this report.

Section 2 outlines the statutory context and applicable legislation to Aboriginal heritage assessment and management.

Section 3 details the ongoing consultation undertaken with the Aboriginal community in accordance with the requirements of the ACHCRs and the NPW Regulation 2019.

Section 4 refers to the previous ACHA whereby all the following information is detailed: existing knowledge, including landscape context, previous archaeological work, and a predictive model of Aboriginal occupation, in accordance with Requirements 2, 3 and 4 of the Code of Practice. This information is not duplicated in this report as it has been detailed extensively in the Apex Archaeology 2025 ACHAR for HCC REZ.

Section 5 provides details of the fieldwork undertaken for the project, in accordance with Requirements 5, 7, 8, 9 and 10 of the Code of Practice.

Section 6 makes an assessment of significance for the project, in accordance with Section 3.4 of the Guide and Section 4.3 of the ACHCRs.

Section 7 details the impact assessment of the proposed works on Aboriginal cultural heritage, in accordance with Section 2.5 of the Guide.

Section 8 provides management and mitigation measures to avoid or minimise harm in accordance with Sections 2.6 and 2.7 of the Guide.

Section 9 details the requirements for the variation to the existing AHIP, and Section 10 outlines recommendations made for the project.



2.0 STATUTORY CONTEXT

Heritage in Australia, including both Aboriginal and non-Aboriginal heritage, is protected and managed under several different Acts. The following section presents a summary of the applicable Acts which provide protection to cultural heritage within NSW.

2.1 COMMONWEALTH LEGISLATION

2.1.1 ABORIGINAL AND TORRES STRAIT ISLANDER HERITAGE PROTECTION ACT 1984

This Act provides for the preservation and protection of injury and/or desecration of areas and objects in Australia and its waters that are of significance to Aboriginal people, in accordance with Aboriginal tradition.

Under this Act, the responsible Minister has provision to make both temporary and/or long-term declarations, in order to provide protection to areas and objects which are at threat of injury or desecration. In some instances, this Act can override State or Territory provisions, or be invoked if State or Territory provisions are not enforced. An Aboriginal or Torres Strait Islander individual or organisation must invoke the Act.

No items within the study area are listed or protected under this Act.

2.1.2 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The EPBC Act provides protection to environmental sites of national significance, including places with cultural heritage values that contribute to Australia's national identity. The Act aims to respect the role of Indigenous peoples in the conservation and ecologically sustainable use of Australia's biodiversity, and to enhance the protection and management of important natural and cultural places. Additionally, the Act is designed to promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

The National Heritage List (NHL) provides a listing of natural, historic and Indigenous places of outstanding significance to the nation, while the Commonwealth Heritage List (CHL) details the Indigenous, historic and natural places owned or controlled by the Australian Government.

The Register of the National Estate (RNE) is a former statutory register that is no longer in force; however listings can still be searched. The listings on the RNE did not automatically transfer to the NHL.

Under the EPBC Act, approvals are required if any action is proposed that will have (or is likely to have) a significant impact on the National Heritage values of a National Heritage place. Therefore, actions must be referred to the Australian Government Minister for the Environment and Heritage. A decision will be made as to whether the



proposed action will have a significant impact on any matters of national significance.

A search of the Australian Heritage Database which incorporates the NHL and the CHL did not identify any Aboriginal heritage items within the study area.

2.1.3 NATIVE TITLE ACT 1993

The *Native Title Act 1993*, as amended, provides protection and recognition for Native title. Native title is recognised where the rights and interests of over land or waters where Aboriginal and Torres Strait Islander people practiced traditional laws and customs prior to the arrival of European settlers, and where these traditional laws and customs have continued to be practiced.

The National Native Title Tribunal (NNTT) was established to mediate native title claims made under this Act. Three registers are maintained by the NNTT, as follows:

- National Native Title Register
- Register of Native Title Claims
- Register of Indigenous Land Use Agreements.

Searching the NNTT registers allows identification of potential Aboriginal stakeholders who may wish to participate in consultation.

A search of all three registers on 11 November 2023 did not identify any registered Native Title claims or Native Title determinations over the study area. The closest native title claim that has been accepted for registration is the application from the Gomeroi People (NC2011/006, NSD37/2019). The eastern boundary of the native title claim is on the western side of the Hunter River and falls outside the Muswellbrook boundary of the current study area.

An updated search in June 2025 confirmed the above findings. A subsequent updated search in April 2026 confirmed the above findings once again.

2.2 NEW SOUTH WALES LEGISLATION

2.2.1 NATIONAL PARKS AND WILDLIFE ACT 1974

The *National Parks and Wildlife Act 1974* provides protection for all Aboriginal objects and places within NSW. Aboriginal objects are defined as the material evidence of the Aboriginal occupation of NSW, while Aboriginal Places are defined as areas of cultural significance to the Aboriginal community. All Aboriginal objects are protected equally under the Act, regardless of their level of significance. Aboriginal Places are gazetted if the Minister is satisfied that the location was and/or is of special significance to Aboriginal people.

Following amendments to the NPW Act in 2010, approval to impact Aboriginal cultural heritage sites is only granted under a Section 90 Aboriginal Heritage Impact



Permit (AHIP), which is granted by Heritage NSW of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW).

2.2.2 NATIONAL PARKS AND WILDLIFE REGULATION 2019

Part 5, Division 2 of the *National Parks and Wildlife Regulation 2019* addresses Aboriginal objects and places in relation to the NPW Act 1974, and outlines how compliance with relevant codes of practice can be met.

Clause 58(1) outlines the defence of low impact acts or omissions to the offence of harming Aboriginal objects, which includes maintenance works on existing roads and fire trails, farming and land management work, grazing of animals, activities on land that has been disturbed that is exempt or complying development, mining exploration work, removal of vegetation (aside from Aboriginal culturally modified trees), seismic surveying or groundwater monitoring bores on disturbed ground, or environmental rehabilitation work (aside from erosion control or soil conservation works such as contour banks).

Clause 58(4) outlines the definition of 'disturbed land', as land that "has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable".

Clause 59 relates to the notification of Aboriginal objects and sites and Clause 60 relates to the requirements for the consultation process to support an AHIP application. The regulation sets out the requirements broadly in line with those outlined in the ACHCRs.

2.2.3 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

Under the EP&A Act, it is necessary to consider environmental impacts, including impact to cultural heritage, as part of the land use process. Local Environmental Plans (LEPs) and Development Control Plans (DCPs) are also required to be prepared by Local Government Areas (LGAs) in order to provide guidance on the applicable level of environmental assessment. LGAs are required to maintain a list of locally significant heritage items as part of their LEP.

Under the EP&A Act, Part 3 describes the planning instruments at both local and regional levels; Part 4 relates to development assessment and consent processes, and Part 5 refers to infrastructure and environmental impact assessment.

The current project will be determined under Part 5 of the EP&A Act, and Ausgrid are the determining authority. A Review of Environmental Factors (REF) will be prepared to inform the assessment process, with this report providing guidance to the REF development.

2.2.4 SEPP TRANSPORT AND INFRASTRUCTURE 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 is relevant to the current project as it entails construction of electricity infrastructure.



Clause 2.44 of the SEPP outlines development that is permitted without consent-general, and specifically notes that development for the purpose of an electricity transmission or distribution network may be carried out by or on behalf of an electricity supply authority or public authority without consent on any land.

2.2.5 CESSNOCK LEP 2011, SINGLETON LEP 2013 AND MUSWELLBROOK LEP 2009

The Cessnock Local Environmental Plan (LEP) 2011, Singleton LEP 2013, and Muswellbrook LEP 2009 are the overarching planning instruments applicable to their respective LGAs under the same name. The study area is covered by the following provisions listed in the Clauses below. As these provisions are the same for all three LEPs they will not be repeated individually.

Clause 5.10 (1) (d) states that the objective of this clause is to conserve Aboriginal objects and Aboriginal places of heritage significance.

Clause 5.10(2) (e) identifies that no buildings may be erected on land within a heritage conservation area, or which contains an Aboriginal object, without first obtaining development consent. Further, Clause 5.10(2) (c) states that archaeological sites may not be disturbed or excavated without development consent. Clause 5.10(2) (d) states that an Aboriginal place of heritage significance may not be disturbed or excavated without development consent. Exceptions to the requirement for development consent are detailed by -

Clause 5.10(3) (a) and include work that is minor in nature or is for the maintenance of a heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area, and would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area, or (b) the development is in a cemetery or burial ground and the proposed development would not cause disturbance to human remains, relics, Aboriginal objects in the form of grave goods, or to an Aboriginal place of heritage significance.

Clause 5.10(8) (a & b) requires that the effect of any development on an Aboriginal place of heritage significance must be considered, and the Aboriginal community must be notified of any proposed developments and take into consideration any responses received within 28 days after the notice was sent. This document details the notification to the registered Aboriginal community regarding the intention to develop the study area and the consultation undertaken regarding the proposed development's potential impact on Aboriginal cultural heritage in the area.

Clause 5.10(10) (d) the proposed development would not adversely affect the heritage significance of the heritage item, including its setting, or the heritage significance of the Aboriginal place of heritage significance.



There are no known items of Aboriginal heritage significance identified within the LEPs that fall within the current study area. There are items of general heritage and archaeological significance located in the wider vicinity; however none of these contain references to Aboriginal objects. Assessment of these items is outside the scope of this assessment and therefore they are not considered further in this report.



3.0 ABORIGINAL CONSULTATION PROCESS

This section details the ongoing Aboriginal community consultation undertaken to assist in the heritage assessment of the study area. Aboriginal consultation in accordance with the ACHCRs was undertaken by Apex Archaeology for this project.

Aboriginal community consultation is a requirement in order to make assessments of Aboriginal cultural values, as Aboriginal people are the primary determinants of the significance of their cultural heritage and therefore Apex Archaeology cannot make a determination on the cultural significance without the input of the RAPs. Aboriginal people often have a strong connection to their Country, and to their ancestors, both past and present.

Material evidence of past Aboriginal occupation of an area is a tangible link to the intangible traditions, lore, customs, beliefs and history. These intangible values provide a sense of belonging for Aboriginal people, and cultural heritage and cultural practices are kept alive through being incorporated into everyday life, which helps maintain a connection to the past and to the present. It is a vital part of the identity of Aboriginal people.

Therefore, it is important that Aboriginal people are afforded the opportunity to understand, comment on and have input into projects that may impact areas which may be culturally sensitive, or damage items of cultural significance. The process of Aboriginal community consultation provides this opportunity, and this ACHAR details the results of the consultation undertaken for this project.

3.1 ADDITIONAL CONSULTATION PROCESS

Full consultation for the HCC REZ project has been documented and detailed in the original Apex Archaeology 2025 ACHA. and ongoing consultation maintenance has occurred periodically to ensure that the RAPs are kept up to date. As such, full details of the consultation undertaken as part of the original ACHA are not reproduced within this addendum survey report; however additional consultation pertaining to the additional survey areas has been detailed below.

In November 2025 an updated methodology and project information document was sent to the RAPs for the project to provide information about the additional areas requiring assessment.

Comments were received from four separate RAPs and all were supportive.

Carolyn Hickey from A1 Indigenous Services noted “I have reviewed the document and am pleased with the attached detailed information and methodology. The thoroughness and clarity provided are greatly appreciated. I believe the area requires a thorough test pitting layout”, which was noted with thanks.

George Sampson responded on behalf of both Cacatua Culture Consultants and Ashley Sampson Services “AGA Services and Cacatua tabled the Hunter - Central



Coast Renewable Energy Zone (REZ) - Additional Areas Method and Project Information. After reading and discussing all aspect of the supplied information both groups are in support of the information", which was noted with thanks.

Paul Boyd and Lilly Carroll from DNC noted "We are happy with everything that has been proposed and hope to work with you on this one", which was noted with thanks.

Ethan Trewlynn stated "I agree with the methodology as it's up to standards", which was also noted with thanks.

No further comments were received from any of the other RAPs regarding the updated methodology and no amendments to the methodology were made as a result of the comments received. A copy of this methodology is attached in Appendix A, along with RAP correspondence.

In addition, a copy of the AHIP for the original assessment area was provided to all RAPs on 17 December 2026, and a project update was sent to all RAPs on 16 June 2026 to advise that the project was still ongoing.

This draft Addendum ACHA was provided to all RAPs on 4 August 2026, with comments accepted until 2 September 2026. Responses were received from three separate RAPs, as follows:

Carolyn Hickey from A1 Indigenous Services noted "thank you for sharing the draft Aboriginal Cultural Heritage Assessment for the Hunter Central Coast Renewable Energy Zone. I have reviewed the document and agree with the information presented in the assessment", which was noted with thanks.

Thomas Dahlstrom stated "because I have been totally excluded from every aspect of this ACHA so far, I am trying to understand your perspective while playing me like a token Aborigine [sic] that doesn't have any idea about our culture and heritage" which was somewhat surprising as Mr Dahlstrom has been consulted in accordance with the ACHCRs at every point of this assessment. It is noted that consultation does not guarantee engagement for employment as part of the archaeological assessment process.

Laurie Perry from Wonnarua Nation Aboriginal Corporation stated "Let me have a read and get back to you ASAP" which was noted with thanks. No further responses were received.

It should be noted that a response, or lack thereof, should not be taken as tacit approval or disapproval of a project.

4.0 ABORIGINAL CULTURAL HERITAGE

An analysis of previous archaeological work within the study area assists in the preparation of predictive models for the area, through understanding what has been found previously. By compiling, analysing and synthesising the previous archaeological work, an indication of the nature and range of the material traces of Aboriginal land use is developed. An understanding of the context in which the archaeological assessment is vital, as development does not occur within a vacuum, but within a wider cultural landscape, and this must be considered during any archaeological assessment in order to develop appropriate mitigation and management recommendations.

This has been extensively detailed in section 4.0 of the original ACHA and as such has not been reproduced here.

4.1.1 AHIMS RESULTS

In addition to the AHIMS sites identified and discussed in the original ACHA within section 4.4.1, the following sites have been identified within the addendum survey areas.

Three AHIMS sites have been identified as being within or in close proximity to the current areas of additional assessment.

Table 2: Known sites within study area

Site ID	Site Name	Site Type
37-6-2062	KR57	Artefact Scatter
37-6-2063	KR58	Artefact Scatter
37-3-1201	DR-OS1	Artefact Scatter

AHIMS site 37-6-2062 (Figure 9) was identified by ABMS during survey for the proposed upgrade of the 132kV Kurri-Redbank Feeder 953/95R. This site consists of three artefacts (two silcrete flakes and one indurated mudstone flake). The site is currently listed as valid and has not been subject to surface collection activities under an AHIP.

AHIMS site 37-6-2063 (Figure 11) was identified by AMBS during survey for the proposed upgrade of the 132kV Kurri-Redbank Feeder 953/95R. The site was subsequently impacted and collected by Joel Deacon from Arrow Energy under AHIP 3201 in 2017. As such, the site is listed as destroyed and no further work is required for this site. As a result, this site has not been considered further in this assessment.

AHIMS site 37-3-1201 was recorded in 2013 by OzArk Environment and Heritage for a proposed relief road alongside the rail corridor on behalf of ARTC. The site consists of three artefacts within an area 30m x 30m, which was able to be avoided by the proposed ARTC works and is listed as valid on the AHIMS database.

4.2 LITERATURE REVIEW

The archaeological work previously completed within the wider region is summarised in the original ACHA for the project in section 4.6 for the project.

4.3 PREDICTIVE MODEL

Based on the results of previous archaeological investigations within the wider regions discussed in the original ACHA for the project within section 4.6, a number of predictions regarding Aboriginal use of the area can be made. These predictions focus on the nature, extent and integrity of the remaining evidence.

The landscape characteristics of the area influence the prediction of the nature of potential sites within the landscape itself. Disturbance is the predominant factor determining whether or not artefacts are likely to be identified within a landscape.

Surface sites are likely to have been impacted by pedestrian activity, vegetation clearance, the construction of water drainage and structures within the area over the historic period. Natural actions such as erosion and bioturbation are likely to have also impacted not only the surface, but also at least the upper levels of subsurface archaeological deposits. Whilst these actions may impact the integrity of stratigraphy within the deposit, this does not necessarily mean associated archaeological objects will also be disturbed.

In general, Aboriginal use of an area is based on a number of factors, such as:

- Proximity to permanent water sources – generally permanent or areas of repeat habitation are located within approximately 200m of permanent water;
- Proximity to ephemeral water sources – generally sites near ephemeral water sources were utilised for one-off occupation;
- Ease of travel – ridgelines were often utilised for travel during subsistence activities; and
- The local relief – flatter, more level areas were more likely to be utilised for long term or repeat habitation sites than areas of greater relief, especially if the slopes are at a distance from water.

4.3.1 APPLICATION TO STUDY AREA

STONE ARTEFACTS

Stone artefacts can be identified on the ground surface or within subsurface deposits. Generally, artefact concentrations are representative of debris from knapping activities, which includes flakes, flake fragments, cores, and pieces likely to have been knapped but with no or inconclusive diagnostic features, referred to as flaked pieces. Modified artefacts can also be identified, including backed artefacts, scrapers, or edge ground axes, although these are generally a smaller proportion of the artefact assemblage. During excavation, very small debris (~3-



5mm) can be identified within sieved material, and is referred to as debitage. This is indicative of *in situ* knapping activities.

As the detection of stone artefacts relies on surface visibility, factors such as vegetation cover can prevent their identification. Conversely, areas of exposure can assist in their identification. Stone artefacts have been identified throughout the study area during previous academic research and consultancy projects. It is highly probable that more stone artefacts, either in isolation or in concentrations, may be identified within the study area during this current assessment; although they will likely be found in a disturbed context.

QUARRY AND PROCUREMENT

Exposures of stone which can be exploited for the production of lithics are referred to as quarries or procurement sites. Quarries generally have evidence of extraction visible, while procurement sites can be inferred through the presence of artefactual material made from raw material sources present within the area.

It is possible that areas of exposures containing gravels and cobbles may have been exploited in the past Aboriginal people. However no specific quarries have been identified and/or registered as a site during previous investigations the study area and immediate surrounds.

MIDDENS

Middens are concentrations of shell, and may also contain stone artefacts, bone and sometimes human burials. These sites are generally recorded along coastal areas. Middens are formed through the exploitation of locally available species by humans for resources, and accumulation of the shell material within a specific location. Middens can range in size from small, discrete deposits, to deposits covering a large area.

Generally, middens reflect the species available in the local area. In estuarine regions, estuarine species will dominate the composition of the midden, while around headlands, rock platform species tend to dominate. No shell middens have been registered within the study area. Given the distance of the study area from the coast, middens containing saltwater species are considered unlikely to occur within the area. However, it has been noted by Wood (1972:44) that 'Aborigines left heaps of mussel shells on the banks of Muscle Brook, hence its name and that of the town Muswellbrook'. So, although unlikely, there may be remnants of freshwater species in proximity to watercourses.

BURIALS

Aboriginal people across Australia utilised a range of burial forms, which depended on the customs of the individual tribes. Common burial practices included inhumation, cremation, desiccation and exposure. Burials are known to occur within sandy contexts in the wider region. These are generally found within coastal Holocene sand bodies, and generally are not identified during field survey as there is usually minimal surface expression of this type of site.



To date, there are no records of burials being identified within the specific study area, but this does not preclude burials from occurring. There are alluvial soils within sections of the study area that may be quite deep with a high sand content. However, given the extensive land disturbance and alternative areas which may have been more attractive for locating burials, it is considered unlikely that evidence of subsurface burials may still remain, but it is a possibility.

ROCK SHELTERS

Rock shelters are formed by rock overhangs which would have provided shelter to Aboriginal people in the past. Often, evidence of this occupation can be found in the form of art and/or artefacts. Shell, midden material, grinding grooves, pictographs (rock engravings), artworks including stencils and paintings, and potential archaeological deposits (PAD) are common features of rock shelter sites.

Previous investigations within portions of the study area and surrounds did not identify rock shelters and it is unlikely this site type will occur in the study area.

GRINDING GROOVES

Grinding grooves are formed on sandstone exposures through the creation and maintenance of ground edge tools, such as axes and spears. Usually, stone was ground to form a sharp edge, although bone and shell were also ground to create sharp points.

Generally, fine grained sandstone was favoured for these maintenance activities, and the presence of a water source nearby or overflowing the sandstone was also favoured. Grinding grooves range from individual examples through to hundreds of grooves within an area, sometimes arranged in a specific pattern. Horizontal sandstone was generally preferred, although there are examples of vertical grooves.

Previous investigations within portions of the study area have identified two grinding groove sites. It is possible that this site type may occur in the study area where suitable geological conditions exist.

SCARRED AND CARVED TREES

Scarred and carved trees are created during the removal of bark from a tree for a range of reasons, both domestic and ceremonial. This type of site can be identified within areas containing trees of the correct species and appropriate age. Deliberately scarred trees can be difficult to differentiate from naturally occurring damage to trees, and specific criteria must be considered when assessing a scar for a cultural origin.

Previous investigations within portions of the study area and surrounds did not identify culturally modified trees. It is unlikely this site type is present within the study area given the extensive vegetation clearance and land use history.



CEREMONIAL SITES

Specific places were used for ritual and ceremonial purposes, including initiation and burial practices. Secret rituals were also undertaken at specific places by specific individuals, such as at water holes and by clever men.

The landscape itself was also considered to hold significance to Aboriginal people, and the understanding of this is referred to as a sacred geography. This includes natural features which were associated with spirits or creation beings. The meaning attributed to the landscape provided Aboriginal people with legitimacy regarding their role as guardians of the places which had been created by the spiritual ancestors (Boot 2002).

Many areas within the Hunter Valley region in NSW are considered to be sacred to the original inhabitants. However, there are no known recorded areas within the study area, although this does not preclude these values from existing within this location.

CONTACT SITES

Contact sites contain evidence of Aboriginal occupation concurrent with initial colonisers in an area. This could include evidence such as flaked artefacts formed on glass, or burials containing non-Aboriginal grave goods. Often Aboriginal camps would form around newly built towns, allowing for employment (or exploitation) of the Aboriginal people by the colonists, and also for trade to exist between the two communities. Contact sites can also occur around Aboriginal mission sites, where Aboriginal children were taken from their families to raise in the European manner. Families often camped around the mission boundaries to try to catch a glimpse of their children.

At least one contact site was recorded within the wider study area, with glass flakes associated with an artefact scatter (37-6-3835). It is possible that additional contact sites may be present within the additional study areas.



5.0 FIELD WORK

5.1 SAMPLING STRATEGY

An updated sampling strategy was developed and provided to the Registered Aboriginal Parties (RAPs) as part of the consultation process completed for the addendum survey report. The strategy included assessment of all landforms within the study areas that have the potential to be impacted by the proposed development. Areas considered likely to have archaeological potential were closely scrutinised, although the entire study area was considered.

The sampling strategy included assessment of the entirety of the study area due to the nature of the development proposal, in order to provide an accurate assessment of the study area in relation to the proposed impacts.

5.2 SITE INSPECTION

A site survey was undertaken over six days from 16 February 2026 to 10 June 2026 by Apex Archaeology in conjunction with the RAPs for the study area as part of the assessment under the Code of Practice and ACHCRs. The following people participated in the site survey:

- Leigh Bate, Apex Archaeology
- Marian Bailey, Apex Archaeology
- Cat Fenech, Apex Archaeology
- Ashley Sampson, Cacatua Culture Consultants
- Sue Cutmore, Cacatua Culture Consultants

5.3 SURVEY COVERAGE

The survey was conducted on foot for the purposes of discovering Aboriginal objects within the study area, including areas considered to have potential for subsurface objects to be present. The survey was undertaken in accordance with the sampling strategy prepared for the project.

The study area was surveyed in one linear transect along each additional area (access track or transmission line deviation) from the southern end (Ausgrid's Kurri Kurri STS at Hebdon Greta) to the central portion (Lake Liddell). Areas of extreme disturbance (ie road verge location along the New England Highway) were not surveyed by pedestrian transect but rather driven as vehicular reconnaissance. This was agreed with all members of the survey team for each of these sections.

Further, areas of severe vegetation growth or swampy areas were not traversed due to inaccessibility. Landform elements have been described; however significant disturbance relating to the original sub-transmission line easement construction, subsequent ongoing easement maintenance and vegetation clearance/control, along with mining related impacts and agriculture have modified the original land surface.

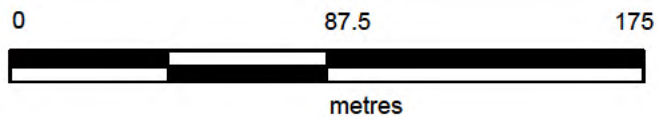
Each participant was responsible for inspecting a 2m wide portion of the transect walked. This meant that on each pass an area covering 6m would be observed for archaeological material by the survey team.

Due to the linear nature and high level of disturbance within much of the study area, survey units were based on an arbitrary assessment of the survey transect within the study area. Survey units are discussed following and depicted in related mapping.

Survey Unit:		1	Survey Area:		Kurri Kurri STS
Number of Survey Participants:		3			
Landform Element:	Flat/Modified/Disturbed		Distance to Watercourse:	1.5km (Swamp Creek)	
Slope:	Level-very gentle (<1.45°)		Vegetation:	Cleared, Grass	
Detection Limiting Factors:	Grass, Gravels, Leaf Litter		Ground Disturbance:	High	
Survey Unit Length:	320m		Ground Surface Visibility:	45%	
Total Area surveyed	1,920m ²		Arch Visibility:	<1%	
					
Plate 1: Looking west along the addendum survey area along the northern boundary of the Kurri Kurri STS.			Plate 2: Looking west along the addendum survey area along the northern boundary of the Kurri Kurri STS.		
					
Plate 3: Looking southwest along the addendum survey area to the west of the Kurri Kurri STS.			Plate 4: Looking southwest along the addendum survey area to the west of the Kurri Kurri STS.		
AHIMS Sites within Study Area:			None		
Newly Recorded Sites:			None		



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Projection:
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Base Map:
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Figure 3: Survey transect (Kurri Kurri STS).



Survey Unit:	2	Survey Area:	Branxton
Number of Survey Participants:	3		
Landform Element:	Flat, Modified/Disturbed	Distance to Watercourse:	1.2km (Black Creek)
Slope:	Gentle (>1.45°-5.45°)	Vegetation:	Grass, Regrowth Forrest
Detection Limiting Factors:	Grass, Gravels, Leaf Litter, Ballast	Ground Disturbance:	High
Survey Unit Length:	85m	Ground Surface Visibility:	15%
Total Area surveyed	510m ²	Archaeological Visibility:	5%



Plate 5: Looking north at HCC REZ Alignment deviation directly south of the Hunter Express Way, Branxton.

AHIMS Sites within Study Area:	None
Newly Recorded Sites:	None

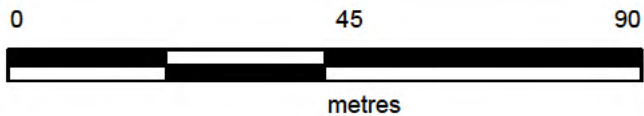


Survey Unit:	3	Survey Area:	Belford
Number of Survey Participants:	3		
Landform Element:	Flat, Gentle Simple Slope, Modified/Disturbed	Distance to Watercourse:	182m (Saltwater Creek)
Slope:	Gentle (>1.45°-5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter, Ballast	Ground Disturbance:	High
Survey Unit Length:	184m	Ground Surface Visibility:	15%
Total Area surveyed	1104m ²	Archaeological Visibility:	5%
			
Plate 6: Looking north west towards rail corridor and HCC REZ alternate alignment deviation.		Plate 7: Looking east along HCC REZ alternate alignment deviation.	
AHIMS Sites within Study Area:		None	
Newly Recorded Sites:		None	

-  HCC REZ original Study Area
-  Updated HCC REZ Alignment
-  Stringing pads updated
-  Survey Transect



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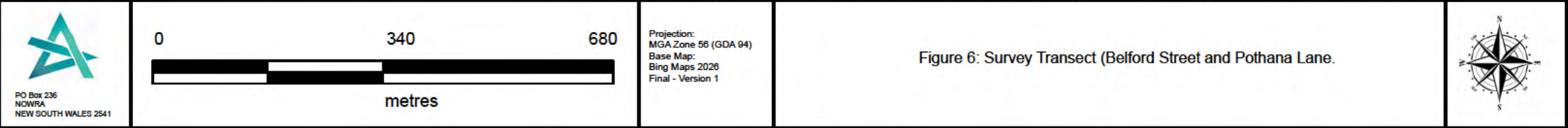
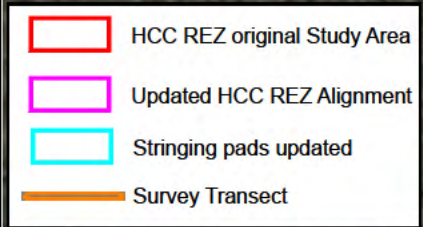


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Figure 5: Survey Area (Branxton).

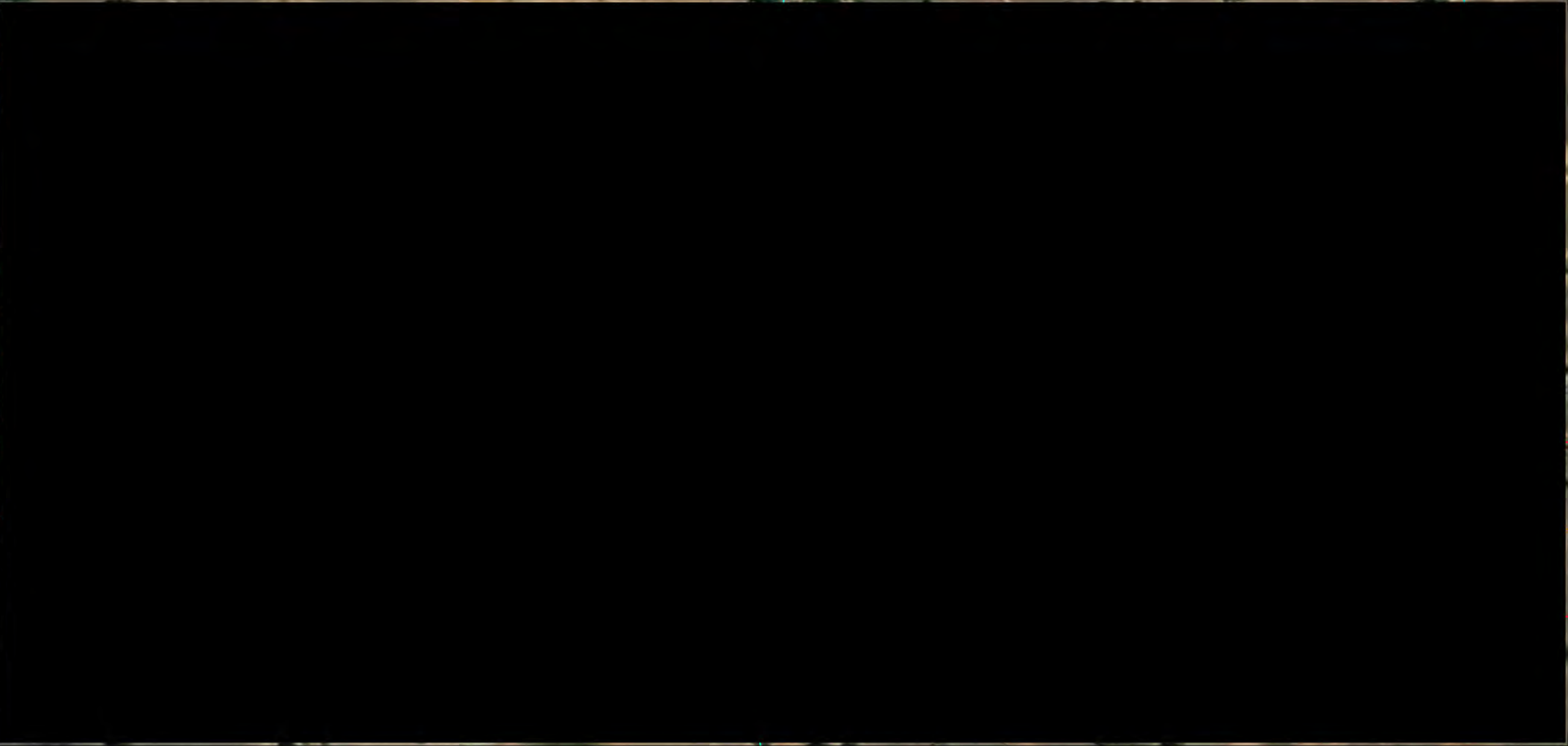


Survey Unit:	4	Survey Area:	Belford Street & Pothana Lane
Number of Survey Participants:	3		
Landform Element:	Flat, Gentle Simple Slope, Modified/Disturbed	Distance to Watercourse:	2km (Jump Up Creek)
Slope:	Gentle (>1.45°-5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter, Ballast	Ground Disturbance:	High
Survey Unit Length:	629m	Ground Surface Visibility:	15%
Total Area surveyed	3774m ²	Archaeological Visibility:	5%
			
Plate 8: Looking east along the New England Highway and HCC REZ alternate alignment deviation.		Plate 9: Looking north at modified embankment along The New England Highway along HCC REZ alternate alignment deviation.	
			
Plate 10: Looking east along former road way within HCC REZ alternate alignment deviation.		Plate 11: Looking east along HCC REZ alternate alignment deviation.	
AHIMS Sites within Study Area:		None	
Newly Recorded Sites:		None	

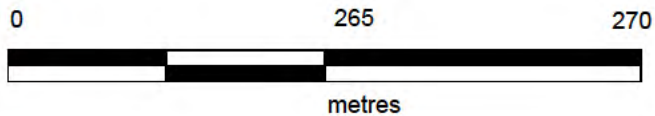


Survey Unit:	5	Survey Area:	Mushroom Composters
Number of Survey Participants:	3		
Landform Element:	Flat, Modified/Disturbed	Distance to Watercourse:	1.4km (Doughboy Hollow Creek)
Slope:	Gentle (<1.45°-5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter	Ground Disturbance:	Moderate to High
Survey Unit Length:	160m	Ground Surface Visibility:	20%
Total Area surveyed	960m ²	Archaeological Visibility:	25%
			
Plate 12: Looking west along deviation HCC REZ alignment within Mushroom Composters property.		Plate 13: Looking west over MushroomC-AS-01 artefact scatter location along the edge of the alignment deviation.	
AHIMS Sites within Study Area:		None	
Newly Recorded Sites:		MushroomC-AS-01	

-  Study Area - HCC REZ
-  Access Tracks
-  Hydrology
-  Additional Survey Transect
-  Updated Alignment
-  MushroomC-AS-01 Artefact Scatter Extents



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Figure 7: Survey transect (Mushroom Composters)



Survey Unit:	6	Survey Area:	Mitchell Line of Road
Number of Survey Participants:	3		
Landform Element:	Flat, Modified/Disturbed, Road Verge	Distance to Watercourse:	1.1km (Loder Creek)
Slope:	Level-very gentle (<1.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter	Ground Disturbance:	High
Survey Unit Length:	1,500m	Ground Surface Visibility:	15%
Total Area surveyed	9,000m ²	Archaeological Visibility:	<1%



Plate 14: Looking east along Mitchell Line of Road along HCC REZ alignment deviation.



Plate 15: Looking east along Mitchell Line of Road along HCC REZ alignment deviation.

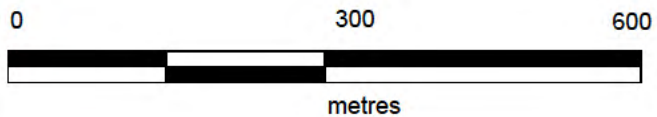


Plate 16: Looking west along Mitchell Line of Road along HCC REZ alignment deviation.

AHIMS Sites within Study Area:	None
Newly Recorded Sites:	None



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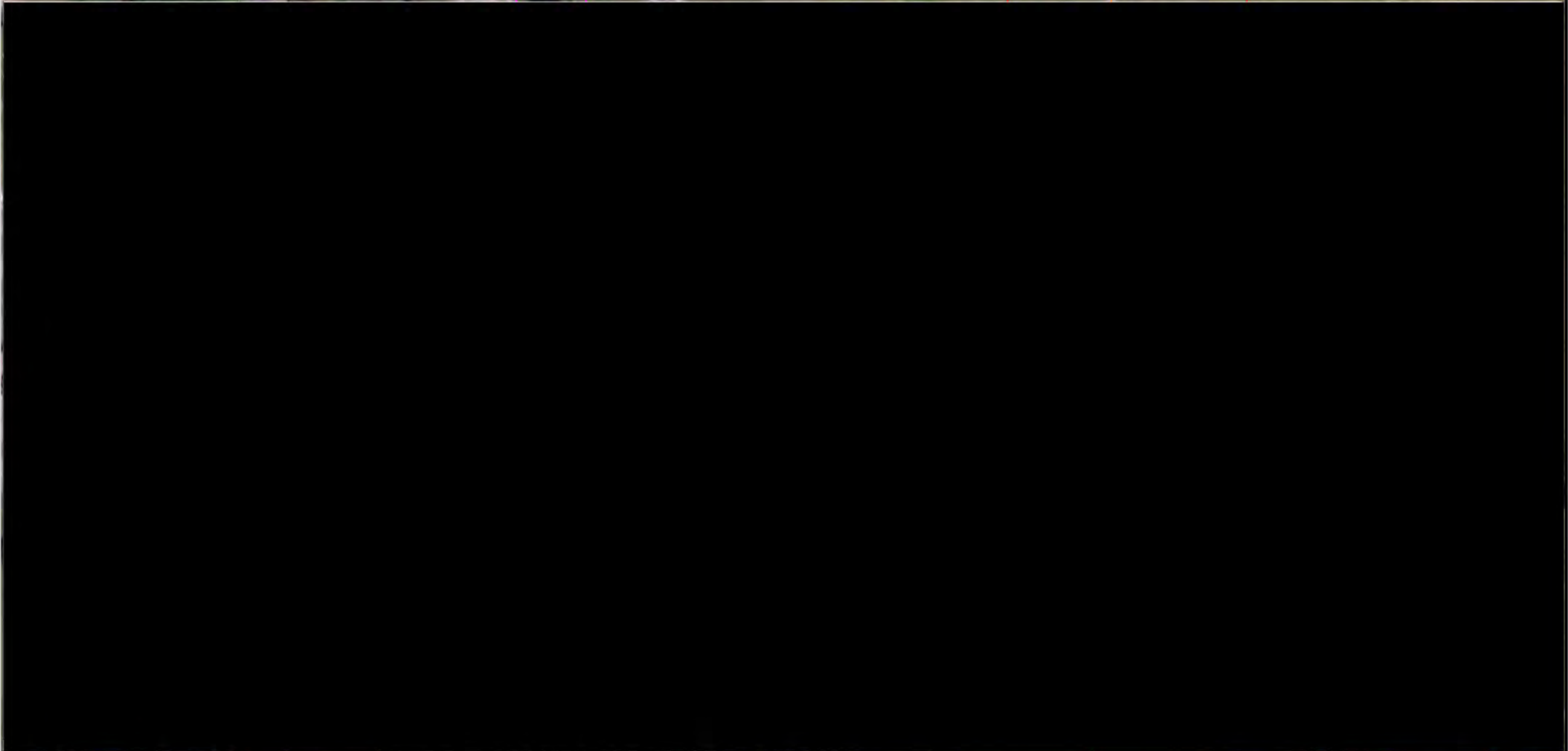
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Figure 8: Survey transect (Mitchell Line of Road).

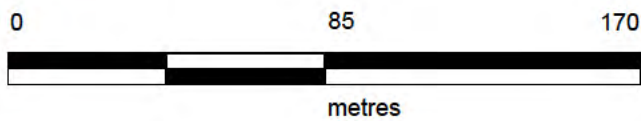


Survey Unit:	7	Survey Area:	Lydes Lane - Mt Thorley Zone Sub-Station
Number of Survey Participants:	3		
Landform Element:	Flat, Gentle Simple Slope, Modified/Disturbed	Distance to Watercourse:	756m (Doctors Creek)
Slope:	Gentle ($>1.45^{\circ}$ - 5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter	Ground Disturbance:	High
Survey Unit Length:	560m	Ground Surface Visibility:	15%
Total Area surveyed	3,360m ²	Archaeological Visibility:	5%
			
Plate 17: Looking east across updated alignment for HCC REZ connection to Mt Thorley STS.		Plate 18: Looking east across updated alignment for HCC REZ connection to Mt Thorley STS.	
			
Plate 19: Looking west across updated alignment for HCC REZ connection to Mt Thorley STS.		Plate 20: Looking north along the across updated alignment for HCC REZ.	
AHIMS Sites within Study Area:		None	
Newly Recorded Sites:		None	

- Study Area - HCC REZ
- Access Tracks
- Hydrology
- Additional Survey Transect
- AHIMS Sites
- Updated Alignment



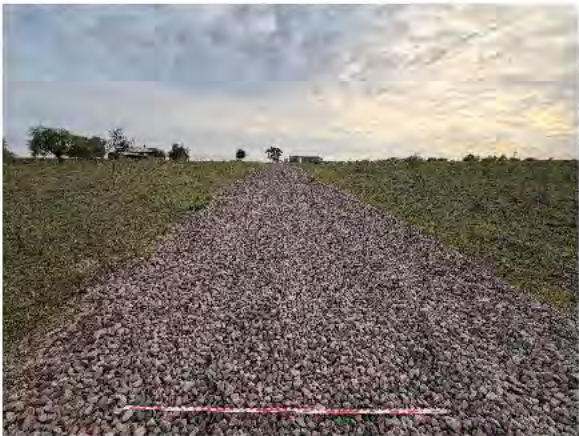
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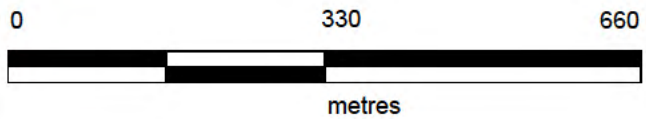
Figure 9: Survey transect (Lydes Lane - Mt Thorley Zone Sub-Station).



Survey Unit:	8	Survey Area:	Jerry's Plains Road
Number of Survey Participants:	3		
Landform Element:	Flat, Gentle Simple Slope, Modified/Disturbed	Distance to Watercourse:	20m (Doctors Creek)
Slope:	Gentle ($>1.45^{\circ}$ - 5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter, Ballast	Ground Disturbance:	High
Survey Unit Length:	883m	Ground Surface Visibility:	25%
Total Area surveyed	5,298m ²	Archaeological Visibility:	5%
			
Plate 21: Looking north east along updated HCC REZ alignment		Plate 22: Looking north down slope along updated HCC REZ alignment	
			
Plate 23: Looking south along updated HCC REZ alignment		Plate 24: Looking north west along updated HCC REZ alignment.	
AHIMS Sites within Study Area:		None	
Newly Recorded Site Complexes:		None	



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Figure 10: Survey transect (Jerry's Plains Road).

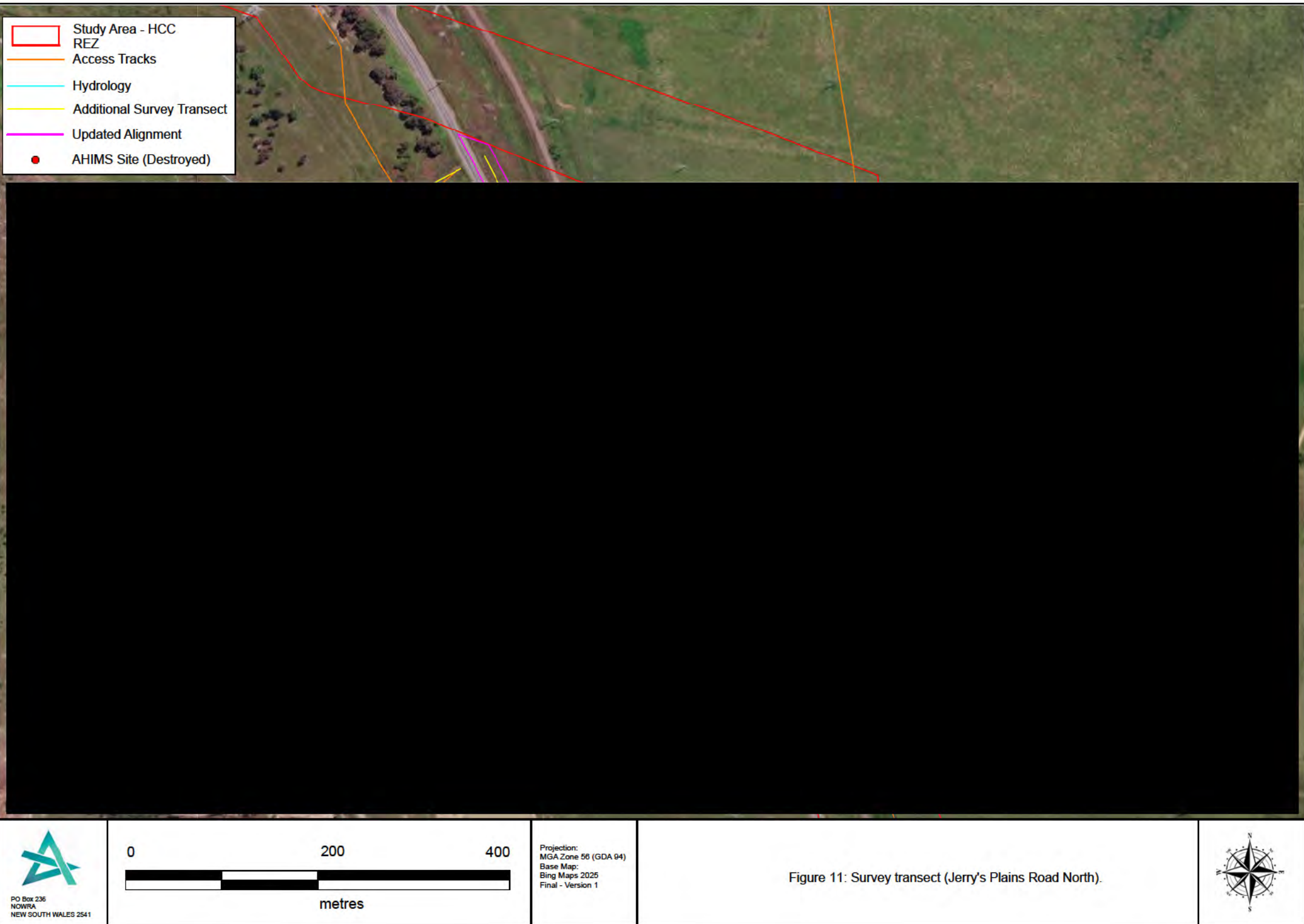


Survey Unit:	9	Survey Area:	Jerry's Plains Road North
Number of Survey Participants:	3		
Landform Element:	Flat, Gentle Simple Slope, Modified/Disturbed, Road Verge	Distance to Watercourse:	1km (Hunter River)
Slope:	Gentle (<1.45°-5.45°)	Vegetation:	Cleared, Grass
Detection Limiting Factors:	Grass, Gravels, Leaf Litter	Ground Disturbance:	High
Survey Unit Length:	722m	Ground Surface Visibility:	10%
Total Area surveyed	4,332m ²	Archaeological Visibility:	5%

	
Plate 25: Looking south east along STL easement crossing rail corridor (western corridor).	Plate 26: Looking north west along the STL easement (western corridor).


Plate 27: Looking north west along STL easement (western corridor).

AHIMS Sites within Study Area:	None
Newly Recorded Site Complex:	None

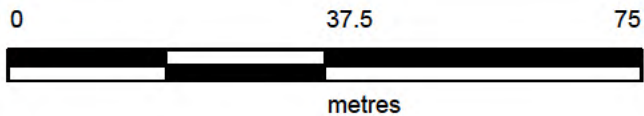


Survey Unit:		10	Survey Area:		Lake Liddell
Number of Survey Participants:		3			
Landform Element:	Flat, Modified/Disturbed		Distance to Watercourse:	2.3km (Bowmans Creek)	
Slope:	Gentle (<1.45°-5.45°)		Vegetation:	Cleared, Grass	
Detection Limiting Factors:	Grass, Gravels, Leaf Litter		Ground Disturbance:	Moderate to High	
Survey Unit Length:	632m		Ground Surface Visibility:	20%	
Total Area surveyed	3792m ²		Archaeological Visibility:	25%	
					
Plate 28: Looking south east at HCC REZ deviation alignment and AHIMS site 37-3-1201 site location.			Plate 29: Looking north west over AHIMS site 37-3-1201 within HCC REZ deviation alignment.		
					
Plate 30: Looking north west along HCC REZ deviation alignment.			Plate 31 Looking north west along HCC REZ deviation alignment.		
AHIMS Sites within Study Area:			37-3-1201		
Newly Recorded Sites:			None		

-  HCC REZ original Study Area
-  Updated HCC REZ Alignment
-  Stringing pads updated
-  Survey Transect



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Figure 12: Survey Transect (Lake Liddell).



**Table 3: Survey units**

Unit name	Landform Element	Number of participants	Total Length
Survey Unit 1	Flat/Modified/Disturbed	3	320m
Survey Unit 2	Flat, Gentle Simple Slope, Modified/Disturbed	3	85m
Survey Unit 3	Flat, Modified/Disturbed	3	184m
Survey Unit 4	Flat, Modified/Disturbed, Road Verge	3	629m
Survey Unit 5	Flat, Gentle Simple Slope, Modified/Disturbed	3	160m
Survey Unit 6	Flat, Gentle Simple Slope, Modified/Disturbed	3	1500m
Survey Unit 7	Flat, Gentle Simple Slope, Modified/Disturbed, Road Verge	3	560m
Survey Unit 8	Flat, Gentle Simple Slope, Modified/Disturbed, Road Verge	3	883m
Survey Unit 9	Flat, Gentle Simple Slope, Modified/Disturbed, Road Verge	3	722
Survey Unit 10	Flat, Gentle Simple Slope, Modified/Disturbed, Road Verge	3	632m

During the survey completed by Apex Archaeology the additional study areas were inspected for Aboriginal archaeological evidence. An assessment of landform element and slope was made for the study area, with the results presented in Table 4.

The total survey coverage (meaning the areas physically inspected for archaeological evidence) was approximately 34,050. A range of factors were considered and recorded during the survey, including the surface visibility (percentage of bare ground within a survey unit); archaeological visibility (amount of bare ground within an area in which artefacts could be expected to be identified if present); exposure type (A or B soil horizon) and calculations of how effective the survey coverage was. The results of the survey coverage are presented in Table 4.

Table 4: Survey coverage results

Survey Area #	Total Area Surveyed (m ²)	Surface Visibility (%)	Arch Vis (%)	Exposure Type (A/B)	Effective Coverage (m ²)	% Total Effective Survey Coverage of Context
SU 1	1920	45	1	A and B	8.64	0.45
SU 2	510	15	5	A and B	3.82	0.74
SU 3	1104	15	5	A and B	8.28	0.75
SU 4	3774	15	5	A and B	28.30	0.74
SU 5	960	20	25	A and B	48	5
SU 6	9000	15	1	A and B	13.5	0.15
SU 7	3360	15	5	A and B	25.2	0.75
SU 8	5298	25	5	A and B	66.22	1.24
SU 9	4332	10	5	A and B	21.66	0.5
SU 10	3792	20	25	A and B	189.6	5



Surface visibility across the study areas was limited due to surface vegetation such as exotic grasses, leaf litter, gravels and weeds.

5.4 SURVEY RESULTS

The area has clearly been disturbed by previous transmission and distribution electricity line construction, operation and vegetation maintenance, mining related activities, rail infrastructure, road construction and upgrades along with sub surface telecommunication cabling (Telstra copper cable & fibre optic cable) and farming/agricultural activities. The levels of disturbance were assessed as being overall quite high.

Ground surface visibility (GSV) was moderate throughout the study area. GSV was rated from a range of 10 to 45% overall. No raw material sources were identified.

AHIMS site 37-6-2062 is located in close proximity to the Mt Thorley study area but is outside of the proposed works area, and can be avoided by the proposed works. As such, no further mitigation is necessary for this site.

5.5 NEW SITES

One new site was identified during the survey (Table 5). This comprised an artefact scatter. No areas of potential archaeological sensitivity were identified.

Table 5: Newly identified Aboriginal sites located within the study area.

Site ID	Site Name	Site Type	Context	Comment
37-6-4757	MushroomC-AS-01	Artefact scatter	Open Site	Avoided

MUSHROOMC-AS-01 (AHIMS #37-6-4757)

Artefact scatter located within the northern portion of the Mushroom Composters property located along the Golden Highway. Artefacts located along a disturbed and raised area. Four artefacts identified along the area of disturbance in an approximate 50m x 7m area.



Plate 32: Looking west along over MushroomC-AS-01 along the edge of the updated HCC REZ alignment.



Plate 33: IMSTC flake and silcrete flakes associated with MushroomC-AS-01.

6.0 SCIENTIFIC VALUES AND SIGNIFICANCE ASSESSMENT

6.1 INTRODUCTION

The *Aboriginal cultural heritage consultation requirements for proponents 2010* acknowledge that:

- Aboriginal people have the right to maintain their culture, language, knowledge and identity
- Aboriginal people have the right to directly participate in matters that may affect their heritage
- Aboriginal people are the primary determinants of the cultural significance of their heritage

Undertaking consultation with Aboriginal people ensures that potential harm to Aboriginal objects and places from proposed developments is identified and mitigation measures developed early in the planning process.

6.2 CRITERIA

The Burra Charter is considered an appropriate framework for the assessment of cultural heritage, which can be made based on the following assessment criteria:

- **Social value:** Also referred to as cultural value, this criterion considers the spiritual, traditional, historical or contemporary associations an area or place has for Aboriginal people
- **Historic value:** the relationship between a place and people, events, phases or activities of importance to the Aboriginal community; specifically considering the “associations of a place with a historically important person, event, phase or activity in an Aboriginal community” (DECCW 2010)
- **Scientific value:** assessment under this criterion considered the ability of a landscape, place, area or object to inform scientific research and/or analysis and to assist in answering research questions
- **Aesthetic value:** the ability of a place, area, landscape or object to demonstrate aesthetic characteristics, or possess creative or technical values

Additionally, archaeological significance is assessed based on the archaeological or scientific values of an area. These values can be defined as the importance of the area relating to several criteria. Criteria used for determining the archaeological significance of an area are as follows:

- **Research or educational potential:** Can the site contribute to an understanding of the area/region and/or the state’s natural and cultural history? Is the site able to provide information that no other site or resource is able to do?



- **Representativeness:** is the site representative of this type of site? Is there variability both inside and outside the study area? Are similar site types conserved?
- **Rarity:** is the subject area a rare site type? Does it contain rare archaeological material or demonstrate cultural activities that no other site can demonstrate? Is this type of site in danger of being lost?
- **Integrity/Intactness:** Has the site been subject to significant disturbance? Is the site likely to contain deposits which may possess intact stratigraphy?

Further, an assessment of the grade of significance is made, based on how well the item fulfils the assessment criteria. The Heritage Branch of the Department of Planning (now the Heritage Division of the Department of Planning, Industry and Environment) 2009 guideline *Assessing Significance for Historical Archaeological Sites and 'Relics'* defines the grading of significance as follows:

Table 6: Grading of significance, from Heritage Branch 2009

Grading	Justification
Exceptional (E)	Rare or outstanding item of local or State significance. High degree of intactness. Item can be interpreted relatively easily.
High (H)	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.
Moderate (M)	Altered or modified elements. Elements with little heritage value but which contribute to the overall significance of the item.
Little (L)	Alterations detract from significance. Difficult to interpret.
Intrusive (I)	Damaging to the item's heritage significance.

Whilst this was developed for the assessment of significance of historical items, the criteria are applicable to Aboriginal significance assessments as well. It is important to note that the below assessment is specific to Aboriginal cultural heritage and does not consider the non-Aboriginal significance of the site.

6.3 SIGNIFICANCE ASSESSMENT

The significance of each site within the study area has been assessed and is presented in Table 7.

It is noted that all evidence of Aboriginal cultural heritage is of high social significance to the Aboriginal community and so all sites have been assessed as of high significance.

It is further noted that all sites have been assessed as being of low historical significance. This is due to no known associations of the study area with historically important people or persons, events, phases or activities in the Aboriginal community.



Table 7: Summary of significance assessment for all valid sites within study area

Site ID	Social	Historic	Scientific	Aesthetic	Research	Representativeness	Rarity	Integrity	Overall
MushroomC-AS-01 (AHIMS # 37-6-4757)	High	Low	Low	Low	Low	Low	Low	Low	Low
37-3-1201	High	Low	Low	Low	Low	Low	Low	Low	Low



6.4 CULTURAL SIGNIFICANCE ASSESSMENT

Generally, all Aboriginal sites are of high significance and importance to the Aboriginal community, both locally and more broadly. The Aboriginal social or cultural value of the study area can only be determined by the Aboriginal community and to date, no comments have been received regarding the specific social significance of the study area.

It is acknowledged that the overall significance of a site is determined by both the cultural and scientific values of the area; with cultural values potentially extending beyond a specific study area and incorporating cultural landscapes in many cases. The cultural significance of an area can only be determined by the Traditional Owners of that area. Generally, all sites with evidence of Aboriginal occupation are considered significant to Aboriginal people as part of a larger cultural landscape.

Given the range and number of sites known to exist within and around the study area, it is understood that the region would hold moderate to high cultural significance to Aboriginal people.

6.5 STATEMENT OF ARCHAEOLOGICAL SIGNIFICANCE

The additional sub-transmission line access tracks for the proposed Hunter Renewable Energy Zone traverses an area rich in Aboriginal cultural heritage. There are areas of high disturbance with little to no archaeological significance, and other areas of moderate to high archaeological significance. Overall, it is acknowledged that a wealth of Aboriginal archaeological sites is present within the route itself and in the wider area, and this significant landscape should be protected wherever possible. However, the current study areas under assessment are considered to be of overall limited archaeological significance.

7.0 IMPACT ASSESSMENT

7.1 PROPOSED DEVELOPMENT

The proposed works for the Hunter Renewable Energy Zone (REZ) project will be undertaken in two stages. The first stage will encompass a 132kV sub-transmission line augmentation, pole replacements, access tracks, and upgrades of sub-transmission stations covering a distance of approximately 60 km from Singleton to Kurri Kurri (Hebdon Greta). Two fibre-optic underground cables from Singleton to Muswellbrook will also be constructed within the existing overhead powerline easements.

The second stage of the proposed works will include the construction of a new Antiene 132kV switching station comprising approximately 8 ha. This will connect with the Singleton to Kurri Kurri sub-transmission line. Additional rearrangement of the existing Upper Hunter sub-transmission network will also be necessary to connect between the new Antiene switching station and existing network in Muswellbrook. All these works will require pole replacements, access track works and vegetation clearing, as well as an upgrade to Ausgrid's Muswellbrook sub-transmission substation with an extension to the existing yard.

During the course of the assessment, the detailed design was developed further and provided opportunities for avoidance of areas that were originally within the proposed impact areas. However, this identified the need for alternative access tracks which had not previously been assessed. This report assesses route modifications due to additional detailed design development and landholder negotiations.

7.2 POTENTIAL IMPACT

One newly identified site is located within or in very close proximity to the proposed realignment areas for the Ausgrid's Hunter-Central Coast REZ project, and three previously registered sites are located in close proximity. The proposed works have the potential to impact on these sites.

However, one previously registered site (AHIMS site #37-6-2063) has been impacted under a previous AHIP and is no longer valid. The proposed works will not impact on this site. Another previously registered site (37-6-2062) can be avoided by the proposed works. As such, only two valid sites are located within the proposed works area and thus the proposed works have the potential to impact on these two sites.

7.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

It is a requirement of Section 2A(2) of the NPW Act to apply the principles of Ecologically Sustainable Development (ESD) when considering any impact to Aboriginal objects and places. ESD integrates economic and environmental considerations, which includes cultural heritage, into decision-making processes. In



general, ESD can be achieved through consideration and implementation of two key principles, being intergenerational equity and the precautionary principle.

Intergenerational equity refers to the present generation having consideration for the health, diversity and productivity of the environment for those generations to come. In terms of Aboriginal cultural heritage, this relates to cumulative impacts to Aboriginal objects and places within a region. Intergenerational equity therefore relies on the understanding that a reduction in the number of Aboriginal objects and places within a region results in fewer opportunities for Aboriginal people to access their cultural heritage in the future. Thus, it is essential to understand what comprises the Aboriginal heritage resource, both known and potential, when assessing intergenerational equity within a region.

The precautionary principle relates to threats of serious or irreversible environmental damage, and that lack of scientific certainty regarding the degree of potential damage should not be a reason to postpone adequate reasonable measures to prevent harm to the environment. Regarding Aboriginal cultural heritage, the precautionary principle relates to where a proposed development may seriously or irreversibly impact Aboriginal objects or places, or their significance; and where there may be uncertainty relating to the integrity, rarity or representativeness of Aboriginal cultural values. The Code of Practice outlines that a precautionary approach should be taken to avoid or reduce damage to Aboriginal objects or places, with cost-effective measures implemented wherever possible. Additionally, a cumulative impact assessment should be completed to determine how the proposed development would impact the cultural resource in the wider region.

Consideration should be given to the significance of the sites present within an area, and whether they are able to transmit cultural information to future generations, or to act as teaching aids.

The current study areas are considered to have moderate to high cultural significance, at least in some parts, and low archaeological significance. Thus avoidance of impact is essential wherever possible; and where avoidance is not possible, appropriate mitigation is required.

7.3.1 INTERGENERATIONAL EQUITY

The site types within the study area are generally common in the region and destruction of generally disturbed sites would not impact on the knowledge of the past use of the area. The generally disturbed nature of the sites means they are unlikely to have significant value as teaching aids, particularly given most if not all items are considered to be in a secondary depositional context, and thus the sites do not warrant conservation on those grounds. Overall, it is considered that the impact of the destruction of these sites would be negligible with regards to the ongoing transmission of cultural knowledge to future generations, although it is acknowledged that destruction should be avoided where possible.



7.3.2 CUMULATIVE IMPACTS

The cumulative impact of the project on the Aboriginal cultural resource must be considered as part of an assessment, and managed appropriately and sensitively. Avoidance of impact is the best practice approach wherever possible, particularly for sites that are intact, contain high numbers of artefacts, or are considered significant to the community.

In terms of cumulative impact, the site contains evidence of Aboriginal occupation in a range of contexts, with high cultural significance.

Overall, it is considered that the proposal has an acceptable impact on the Aboriginal cultural heritage of the region, particularly if the proposed mitigation measures are enacted.

7.4 ABORIGINAL COMMUNITY INPUT

Consultation with the Aboriginal community has been undertaken for this project in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010*. The Aboriginal community have been afforded an opportunity to provide feedback regarding the proposed works and their potential impact on Aboriginal cultural heritage, and the views of the community, where shared, have been incorporated into this addendum ACHA.

8.0 MITIGATION MEASURES

8.1 GUIDING PRINCIPLES

Wherever possible and practicable, it is preferred to avoid impact to Aboriginal archaeological sites. In situations where conservation is not possible or practicable, mitigation measures must be implemented.

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013 (The Burra Charter) provides guidance for the management of culturally sensitive places. The Burra Charter is predominantly focussed on places of built heritage significance, but the principles are applicable to other places of significance as well.

The first guiding principle for management of culturally significant sites states that “places of cultural significance should be conserved” (Article 2.1). A cautious approach should be adopted, whereby only “as much as necessary but as little as possible” (Article 3.1) should be changed or impacted.

Mitigation measures depend on the significance assessment for the site. Cultural significance of sites should also be considered in consultation with the Aboriginal community during community consultation.

8.2 POTENTIAL MITIGATION MEASURES

8.2.1 AVOIDANCE OF KNOWN SITES

Two sites have been identified within the additional survey areas. It is understood that one site (MushroomC-AS-01 – AHIMS #37-6-4757) can be avoided by the proposed works required for the access tracks and additional alignment changes. Avoidance can be achieved through the use of alternative access tracks and ensuring pole placement in that area avoids the location of this site. No ground disturbing works should occur in the vicinity of this site.

AHIMS site 37-3-1201 cannot be avoided by the proposed alignment changes within the Hebden locality, and as such this site will require an amendment to AHIP 5498 to allow for surface collection to occur. This site was avoided by the original alignment for the HCC REZ but unavoidable constraints mean this is no longer possible. Justification for the alignment change and subsequent impact of AHIMS site 37-3-1201 can be understood by the following.

The realignment of the REZ feeders at Lake Liddell was driven by a combination of environmental, stakeholder, and constructability constraints:

1. Environmental/stakeholder constraints



The Lake Liddell Trust (headed by Stephen Thatcher) undertook significant revegetation works along the north-eastern shoreline using grant funding. These planted areas intersected the original three-circuit alignment.

2. Agreed design response

In consultation with the Trust, Ausgrid reduced the design from three circuits to two and committed to utilising the existing 20 m easement, rather than acquiring a wider easement on the southern side of the railway. This approach minimised impact to established vegetation and community investment.

3. Network configuration implications

The constrained 20 m easement could not accommodate the third circuit. As a result, the third circuit was diverted around the Antiene STSS via the existing 45 m easement currently containing the 132 kV H-pole line. Noting that the 132kV H-Pole will be recovered before installation of the third circuit.

4. Constructability improvements

The original alignment also presented constructability challenges, particularly at the rail crossing where levels were incompatible. The revised alignment allows a more feasible crossing directly between the northern and southern easements, reducing complexity and enabling smaller structures.

Overall, the realignment represents a balanced outcome that addresses stakeholder concerns, reduces environmental impact, and improves constructability.

8.2.2 APPLICATION FOR AHIP VARIATION

An AHIP will be required for any sites which cannot be avoided within the proposed access tracks or realignment areas for the Hunter REZ project. It is proposed to apply for an AHIP variation to the current AHIP (AHIP #5498) if avoidance of these sites cannot be achieved. This permit variation should include surface collection of sites which cannot be avoided. At this stage, avoidance for one site cannot be achieved and as such a variation to AHIP 5498 will need to be sought to permit surface collection of AHIMS site #337-3-1201.

8.2.3 SURFACE COLLECTION

Areas with surface expression of artefacts but without subsurface potential for archaeological deposits may require surface collection of these objects prior to impact occurring. This would require an approved AHIP to permit the collection to occur.

In some instances, surface collection may be proposed and permitted under an approved AHIP, but the artefacts associated with the site may no longer be present at the site due to taphonomic processes over the site in the years since its recording and the attempt to collect the item. In instances where an attempt for collection has



been made, and the item cannot be recovered despite best efforts, no further archaeological mitigation would be required for the site and works that would impact the site may proceed.

Surface collection should be undertaken in accordance with the methodology outlined in the ACHMP for the project.

8.2.4 UPDATE OF ACHMP

An Aboriginal Cultural Heritage Management Plan for sites within the transmission line route has been prepared to provide guidance on future management of these sites. This provides guidance for unexpected finds within the area and management recommendations for sites that can be avoided. This document includes guidance for on-going, periodic monitoring of fencing, ideally prior to vegetation management occurring, along with other management recommendations including surface salvage and salvage excavations as recommended. This existing document should be updated to include the additional survey areas and proposed mitigation measures for the newly identified sites along the tracks.

8.2.5 FENCING

In some instances, avoidance of sites will be possible. Wherever surface artefact concentrations can be avoided by the proposed works, including vegetation management works, the extent of the concentration should be fenced to prevent unintentional impact. Ideally fencing would be robust, visible, and signed to ensure no impact occurs to these sites. This would include site MushroomC-AS-01 (AHIMS # 37-6-4757) which should be avoided.

8.2.6 UPDATE OF SITE CARDS

One previously recorded site is noted in the literature to have been destroyed as part of previous works, but the site remains valid on AHIMS (#37-6-1314). This site should be updated on AHIMS to reflect its current status through preparation of an Aboriginal Site Impact Recording Form (ASIRF).

8.3 KNOWN SITE MANAGEMENT

The following table outlines the known sites within the alternative alignment sections of the sub-transmission line route and recommended management actions for each, if avoidance is not possible.

Table 8: Valid sites within and adjacent to STL route

AHIMS #	Site Name	Features	Suggested Management
37-6-4757	MushroomC-AS-01	Artefact Scatter	Avoidance
37-3-1201	DR-OS1	Artefact Scatter	Surface collection; unmitigated impact



9.0 PERMIT REQUIREMENTS

9.1 PERMIT AREA

An application for an AHIP variation under Part 6 of the *National Parks and Wildlife Act 1974* is required for the proposed works associated with the Hunter Renewable Energy Zone project, prior to the commencement of required works. The study area is further defined as Ausgrid's Hunter-Central Coast Renewable Energy Zone. Figure 13 shows the proposed AHIP boundary modifications. In this instance, it is recommended that a variation to AHIP 5498 be sought to include the additional area at Lake Liddell, where avoidance of a known site is not possible.

The amended coordinates amend the original AHIP boundary, as shown on Figure 13. An updated shape file for the AHIP 5498 area has been provided as part of the current application. The additional area is so minor that it cannot be seen on overview mapping for the AHIP area, but is shown on Figure 13.

9.2 RECOMMENDED PERMIT TYPE

It is recommended that as per the original AHIP (5498), the AHIP variation permit mitigation measures as outlined above, prior to the commencement of works. This includes surface collection of AHIMS site 37-3-1201. The current term of the existing AHIP is 10 years and at this stage there is no request to increase this term.

9.3 AHIMS NUMBERS

A total of two valid AHIMS sites fall within the addendum study area. Impact is proposed to one of the artefact sites, while one site can be avoided by the proposed works. Site 37-6-4757 which can be avoided by the proposed works is located within the original area for AHIP 5498. As it can be avoided, it is included in the AHIP as not being harmed. Table 9 provides a summary of the impact assessment for valid sites within the study area.

Table 9: Summary of Impact Assessment

Site Number	Type of harm	Degree of harm	Consequence of harm
37-6-4757	None	None	No loss of value
37-3-1201	Direct	Total	Total loss of value

9.4 PREVIOUS AHIPs

Five previous AHIPs have been previously issued over parts of the study area. The areas of these AHIPs have been excised from the current AHIP (5498) boundary. These AHIPs are as follows:

- AHIP #5199 for the New England Highway Muswellbrook Bypass on behalf of Transport for NSW. This AHIP is currently valid.
- AHIP #C0000623 for Liddell Coal Operations Development Modification 5 (DA 305-11-01) on behalf of Liddell Coal Operations Pty Ltd. This AHIP has expired.



- AHIP #C0004064 for the New England Highway upgrade between Belford and the Golden Highway on behalf of the Roads and Maritime Services. This AHIP has expired.
- AHIP #C0004290 for the upgrade of the Golden Highway at Mudies Creek UXO investigation, clearance, and test excavations on behalf of Transport for New South Wales. This AHIP has expired.
- AHIP #5053 for the upgrade of B84 Golden Highway at Mudies Creek, Wittingham on behalf of Transport for New South Wales. This AHIP is currently valid.

9.5 RESTRICTED INFORMATION AND CONFIDENTIALITY

Aboriginal stakeholders for the project have not identified any restricted, confidential or culturally sensitive information related to the project and this AHIP application.

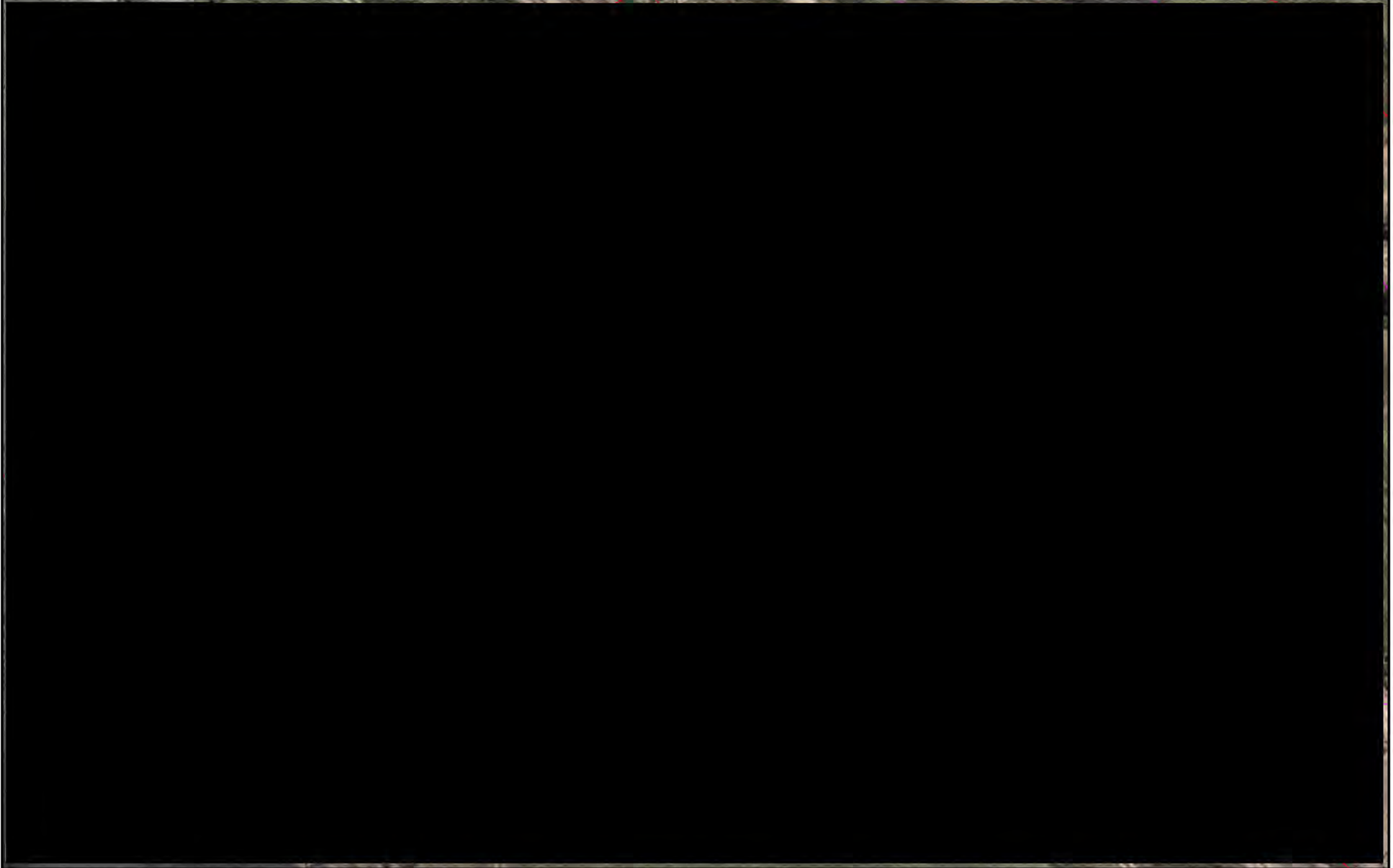
It is noted that all AHIMS data and Aboriginal site specific information, along with associated mapped information, must be treated as confidential and not shared with the general public.

9.6 COPYRIGHT

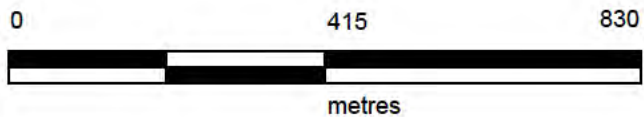
Apex Archaeology asserts its Moral Rights in this work, unless otherwise indicated, in accordance with the Commonwealth *Copyright (Moral Rights) Amendment Act 2000*. Apex Archaeology vests copyright in all material produced in this report by Apex Archaeology (excluding pre-existing material) in Ausgrid, and retains the right to use all the material produced by Apex Archaeology for our ongoing business and professional activities (including but not limited to professional presentations, academic papers and/or publications).

9.7 ARTEFACT MANAGEMENT

Artefacts collected during surface collections will be reburied on site at a location that will not be impacted in future, in consultation with Ausgrid and the RAPs for the project. Reburial will likely be completed once the proposed works have been finalised to ensure no impact occurs to the items. Reburial will be undertaken in accordance with Requirement 26 of the Code of Practice.



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Figure 13: Amended AHIP Boundary for HCC REZ (Hebden Locality)



10.0 RECOMMENDATIONS

The following recommendations are made on the basis of:

- The statutory requirements of the NP&W Act 1974;
- The requirements of Heritage NSW;
- The results of the cultural and archaeological assessment;
- An assessment of the likely impacts of the proposed development; and
- The interests of the registered Aboriginal stakeholders and the cultural heritage record.

It was found that:

- The Hunter-Central Coast Renewable Energy Zone (HCC REZ) passes through a rich cultural landscape with many previously and newly recorded sites present.
- One newly recorded AHIMS site and three previously recorded AHIMS sites are located within or in close proximity to the addendum survey areas for the additional realignment areas and access tracks.
- One of the previously registered sites has been subject to a previous AHIP and is no longer valid.
- One of the previously registered sites is located outside of the proposed works area and can be avoided by the proposed works.
- The proposed works can avoid two of the AHIMS sites, either through ensuring pole placement avoids the known site location, or the use of alternative access tracks to reduce or avoid impact.
- Mitigation and management recommendations have been made for the sites within the proposed works area.

Therefore, the following recommendations have been made.

RECOMMENDATION 1: APPLICATION FOR VARIATION TO AHIP NECESSARY

Application for a variation to the existing Aboriginal Heritage Impact Permit (AHIP) #5498 to permit impact to AHIMS site #37-3-1201 as the HCC REZ alignment has altered and it was identified that this site will now be impacted. AHIMS site #37-3-1201 cannot be avoided, and the variation should include permission to undertake surface collection of any artefacts on the ground surface within the proposed impact area, with the items reburied on site.

If the surface artefacts cannot be relocated, the AHIP should permit unmitigated impact to the site location.



RECOMMENDATION 2: AVOIDANCE OF KNOWN SITES

One newly identified site (MushroomC-AS-01) was located within the additional survey areas. This site can be avoided by the proposed works, via use of alternative access routes, and ensuring pole placement avoids the known site location.

If avoidance is no longer possible, application for a variation to the existing AHIP for the HCC REZ would be necessary.

RECOMMENDATION 3: IMPLEMENTATION OF ACHMP

An Aboriginal Cultural Heritage Management Plan (ACHMP) has been prepared to guide the management of Aboriginal sites before, during and after upgrade works have been undertaken. This includes guidance around salvage excavations, management of recovered artefacts, and management of unexpected finds during on-going maintenance works. This should be updated to include the additional survey undertaken and the recommendations made should be implemented during construction works.

RECOMMENDATION 4: STOP WORK PROVISION

Should unanticipated Aboriginal archaeological material be encountered during site works, all work must cease in the vicinity of the find and an archaeologist contacted to make an assessment of the find and to advise on the course of action to be taken. Further archaeological assessment and Aboriginal community consultation may be required prior to the recommencement of works. Any objects confirmed to be Aboriginal in origin must be reported to Heritage NSW.

In the unlikely event that suspected human remains are identified during construction works, all activity in the vicinity of the find must cease immediately and the find protected from harm or damage. The NSW Police and the Coroner's Office must be notified immediately. If the finds are confirmed to be human and of Aboriginal origin, further assessment by an archaeologist experienced in the assessment of human remains and consultation with both Heritage NSW and the RAPs for the project would be required.

This recommendation should be included in any Construction Environmental Management Plan (CEMP) developed for the site.

RECOMMENDATION 5: DEVELOPMENT BOUNDARIES

The proposed development works must be contained within the assessed boundaries for this project. If there is any alteration to the boundaries of the proposed development to include areas not assessed as part of this archaeological investigation, further investigation of those areas may be necessary to assist in appropriately managing Aboriginal objects and places which may be present.



RECOMMENDATION 6: REPORTING

One digital copy of this report should be forwarded to Heritage NSW to support the required AHIP variation application for the project, along with required supporting documentation.

One digital copy of this report should be forwarded to Heritage NSW for inclusion on the Aboriginal Heritage Information Management System (AHIMS).

One copy of this report should be forwarded to each of the registered Aboriginal stakeholders for the project.



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APPENDIX A: UPDATED METHODOLOGY



APPENDIX B: PROJECT UPDATES