



VIRTUS HERITAGE



LOT 99, DP 1020247 - MOLONG BESS PROJECT

Molong, NSW

Research Design and Methodology

Final | May 2026

Prepared for SLR on behalf of Storeenergy 3 Pty Ltd

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Document Controls

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Acknowledgement of Country

Virtus Heritage acknowledges the Traditional Custodians of the land on which this project was undertaken and pays respect to Elders past, present and emerging.

Content Warning

Aboriginal and Torres Strait Islander people are warned that this publication may contain names and images of deceased people, descriptions of traumatic historic events and parts of Country that have been impacted by development.

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All queries related to the content, or to any use of this report must be addressed to Dr Mary-Jean Sutton.

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Definitions

Abbreviations	Description
AA	Archaeological Assessment
ACHA	Aboriginal Cultural Heritage Assessment
ACHCR	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010)
AHD	Australian Heritage Database
AHIMS	Aboriginal Heritage Information Management System
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
ALRA	Aboriginal Land Rights Act 1976
AR	Archaeological Report, Archaeological Assessment
CABAH	Australian Research Council Centre of Excellence for Australian Biodiversity and Heritage
CHMP	Cultural Heritage Management Plan
Code of Practice, COP	Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010)
DA	Development Application
DD	Due Diligence
DD Code, Due Diligence Code	Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010)
DPC	NSW Department of Premier and Cabinet
DPIE	NSW Department of Primary Industry and Environment
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
GIA	Guide to investigating, assessing and reporting on Aboriginal Cultural heritage in NSW (OEH 2011)
HNSW	Heritage NSW
ILUA	Indigenous Land Use Agreement
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area

Abbreviations	Description
NNTT	National Native Title Tribunal
NPW ACT	National Parks and Wildlife Act 1974
NPW Reg	National Parks and Wildlife Regulation 2019
NPWS	NSW National Parks and Wildlife Service
NTA	Native Title Act 1983
OEH	NSW Office of Environment and Heritage (now Heritage NSW)
PAD	Potential Archaeological Deposit
PBC	Prescribed Bodies Corporate
RAP	Registered Aboriginal Party
RAPs	Registered Aboriginal Parties
RD&M	Research Design and Methodology
REF	Review of Environmental Factors
RNTBC	Registered Native Title Body Corporate
SSD	State Significant Development
SSI	State Significant Infrastructure
The Burra Charter	The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance, 2013 (Australia ICOMOS 2013)
UNESCO	United Nations Educational, Scientific and Cultural Organization

Glossary

Aboriginal object – A term used in the NPW Act legislation, meaning: ‘... any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains’ (s.5 NPW Act).

Registered Aboriginal party – An individual or party who registers for Aboriginal consultation as part of the consultation and notification process following Aboriginal cultural heritage consultation requirements for proponents 2010 (NSW DECCW 2010b).

Declared Aboriginal place – A term used in the NPW Act legislation, meaning any place declared to be an Aboriginal place (under s.84 of the NPW Act) by the Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects.

Harm – A term used in the NPW Act Amendments meaning ‘... any act or omission that destroys, defaces, damages an object or place or, in relation to an object – moves the object from the land on which it had been situated’ (s.5 NPW Act).

Project area – Area proposed to be impacted as part of a specified activity or development proposal. These activities include indirect impact.

Place – An area of cultural value to Aboriginal people in the area (whether or not it is an Aboriginal place declared under s.84 of the Act).

Proponent – A person proposing an activity that may harm Aboriginal objects or declared Aboriginal places and is the person undertaking the activity applied for in the Environmental Assessment for State Significant Development.

1. Introduction

Virtus Heritage Pty Limited (hereafter 'Virtus Heritage') was engaged by SLR on behalf of Storenergy 3 Pty Ltd ('Stor') to prepare an Aboriginal Cultural Heritage Assessment (ACHA), including an Archaeological Assessment (AA) for a proposed Battery Energy Storage System (BESS) at Lot 99 on DP 1020247 and Lot 1 on DP542283 and connecting to Transgrid's Molong Substation at 1 Deight Street and 19 Back Saleyards Road, Molong NSW 2866 via a 132kV overhead transmission line (the project area, refer to **Figure 1**). A broader buffer around the project area to consider for this assessment was provided by SLR for potential ancillary works and access points if required (the proposed disturbance footprint, refer to **Figure 1**). The project area is located within the Cabonne Shire Council LGA and Orange Local Aboriginal Land Council (OLALC) area.

This document constitutes the Archaeological Research Design and Methodology (ARDM) to accompany the ACHA report and approval pathway under SEARs.

1.1 PROPOSED PROJECT IMPACTS

The proposed development is for establishing a Battery Energy Storage System (BESS) facility at Lot 99 on DP1020247 and Lot 1 on DP542283 and connecting to Transgrid's Molong Substation at 1 Deight Street and 19 Back Saleyards Road, Molong NSW 2866 via a 132kV overhead transmission line.

Project works for this development include:

- Transport of construction personnel, equipment and materials to and from the project area during construction (dependent on construction schedule), including all associated heavy and light vehicle traffic movements.
- Site establishment works including limited vegetation clearing within the project area, bulk earthworks and a temporary construction compound.
- Road works to formalise a new driveway crossing from Back Saleyards Road and internal site access road (8 m wide) for construction purposes and ongoing access.
- Construction of hardstand/laydown areas, fencing, internal roads, control room, auxiliary transformer, battery enclosures, and inverter/transformer/switchgear stations (referred to as Power Conversion Stations (PCS)).
- Construction of approximately 900m of overhead 132 kV transmission line to facilitate connection to the existing Transgrid's Molong Substation and associated high voltage concrete or steel poles and wiring.
- Acoustic attenuation (to be determined as part of a detailed assessment).
- Construction of ancillary works including a parking area, water tank, Operations and Maintenance (O&M) building (including storage structures), stormwater management infrastructure, security lighting and fencing.
- Vegetative screening and landscaping.
- The installation of 264 BESS units (maximum) within individual, modular containers, on hardstand footings with a total capacity of 150 MW/730MWh.
- The installation of 50 inverters on hardstand footings.
- Installation of subsurface wiring infrastructure throughout the Indicative BESS area.
- Commissioning and testing of all installed equipment on the project area.

Figure 1 shows the project impact area boundary which constitutes the application area for this project area.

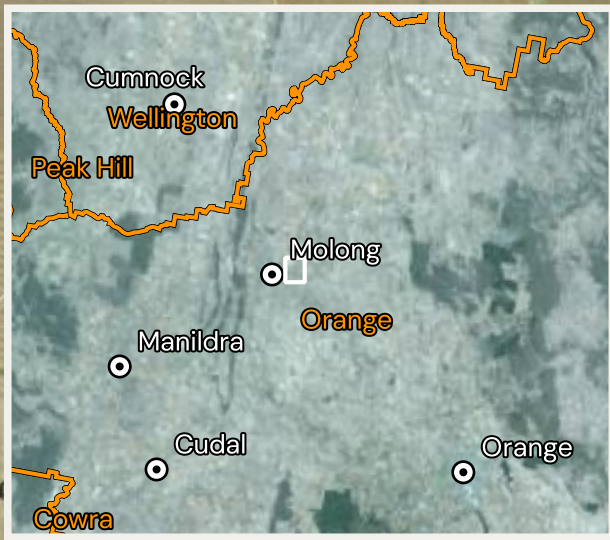
Table 1 outlines the proposed works and impacts to known sites and indicates the level and type of harm.

Table 1. Aboriginal Site located within the Project Area.

AHIMS # within Proposed Work Sites	Site Name	Site Type	Easting (MGA)	Northing (MGA)	Proposed Activity
44-1-0191	Molong Grinding Stone	Artefact	677318	6336606	Installation of the BESS units with the associated hardstand and subsurface wiring.
44-1-0192	Molong IF2	Artefact	677300	6336619	Installation of the BESS units with the associated hardstand and subsurface wiring.

Project impacts that relate directly to the project area will include:

- Site establishment, including earthworks.
- Construction of hardstand/laydown areas.
- Construction of overhead transmission lines.

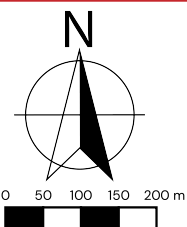


540 Stor Energy Molong
Molong, NSW
Figure 1. Project Area and Locality

Author: Antonella Skepasianos, Liam Clerke
 Date: 24/04/2026
 Scale: 1:10000 @ A4
 Datum: GDA2020 / MGA zone 55
 Source: ©Department of Customer Service - Spatial Services 2024

Legend

- Local Aboriginal Land Councils
- Project Area
- Survey Area
- Temporary Laydown Area
- Named Watercourse
- Roads
- Cities and Towns



1.2 ABORIGINAL CONSULTATION

As recognised by Heritage NSW, we acknowledge that Aboriginal people are the primary determinants of the cultural significance of their heritage. Aboriginal consultation for the ACHA was undertaken in compliance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (NSW DECCW 2010b) (hereafter referred to as the “ACHRs”). These consultation requirements are legal requirements that proponents must comply with during the ACHA process which are set out in Clause 80c of the NPW Regulation. Aboriginal consultation is crucial in the compilation of the ACHA in order to adequately assess and investigate Aboriginal cultural heritage.

A total of five Aboriginal Parties/individuals registered interest for this project during the notification process (responded to the advertisements in the local newspapers or to an invitation to register in the project after their contact details were provided by notified organisations. The groups/individuals registered for consultation are listed in **Table 2**.

Table 2. Representatives of Registered Aboriginal Parties.

Name of Contact	Registered Aboriginal Party
Ben Kemp	Orange Local Aboriginal Land Council
Raymond Moon	Wingarra Wilay Aboriginal Corporation
Diana Astin	Girragirra Murun Aboriginal Corporation
Bradley Bliss	Wellington Valley Wiradjuri Aboriginal Corporation
Judy Bell	Mirrabee

All registered Aboriginal parties were provided with the opportunity to discuss and develop the RDM presented in this document.

1.3 REPORT STRUCTURE

Section 2 of this research design and methodology summarises previous archaeological research which is relevant to the ACHA and mitigation of archaeological and cultural values for consideration of the SSDA.

Section 3 details the research design that has been proposed for the project area.

Section 4 provides the methodology proposed for salvage for sites and areas within the project area.

Section 5 discusses the ‘Care and Control’ of artefacts recovered during salvage works.

Section 6 lists the references cited within this document.

2. Summary of previous archaeological research

A review of the Heritage NSW AHIMS library and online searches were undertaken to obtain copies of previous Aboriginal heritage studies and archaeological investigations within the locality of the project area. Detailed summaries of all reports pertinent to the locality are provided in Section 4 of the Archaeological Assessment (Virtus Heritage 2025).

2.1 SITE CONTEXT

Twelve reports were identified on the AHIMS database associated with the search area. No reports include an analysis of the project area. No Aboriginal cultural heritage management plans (ACHMPs) were found in association with the project area. This absence of ACHMPs is not due to an absence of cultural heritage, but a result of minimal archaeological investigations in the locality. The landholder mentioned that there was an archaeological investigation next door to the project area which found artefacts which were being managed in situ. Attempts have been made through Heritage NSW, AHIMS and review of the Planning Portal and Council's DA portal to identify the consultant and the report, to date none of these efforts have located the report which details the results of these investigations.

The most relevant report identified on the database is **AHIMS report # 98928**: OzArk Cultural Heritage Pty Ltd, 2004, *Archaeological Test Excavation of PAD # 44-1-0077 at Molong Creek: Proposed Realignment of the Mitchell Highway*. This assessment displays a similar landscape and history of disturbance to the project area, including clearing, ploughing and grazing. This study drew upon the work of Pearson's 1981 unpublished PhD thesis to determine that sites were more frequently identified on low ridge tops, creek banks, gently undulating hills and river flats and usually in open woodland vegetation.

An additional report reviewed for this assessment is **AHIMS report # 98401**: Navin Officer, 2003, *Molong to Manildra 132kV Transmission Line Stage 2: Cultural Heritage Assessment*. This assessment identified seven artefact scatters and six isolated finds during this investigation. Many landforms and features with potential for archaeological sites were identified to exist in proximity to the current project area. These include riparian zones, namely the Molong Creek corridor which is described as '... represent[ing] the only significant riparian zone' (Navin Officer 2003:8). Additionally, surface rock outcrops have been identified as having potential for archaeological sites.

Navin Officer (2003) describes a Cultural Heritage Assessment of the Molong to Manildra 132kV transmission line completed in 2002 (**AHIMS report # 98338**). This assessment also identified the riparian zones and surface rock outcrops as having potential for archaeological sites. This study area was identified as consisting primarily of paddocks with pasture grasses, similar to the project area.

AHIMS report # 104611: NSW National Parks and Wildlife Service, 1999, *Yuranigh's Aboriginal Grave Historic Site Plan of Management*.

The site has state-wide cultural, historical, social, education and archaeological significance and is located approximately 3.5km from the current project area. The site contains four carved trees, three living and one dead. Living carved trees 'are extremely rare' (NSW NPWS 1999:4).

Scarred trees and carved trees contain evidence of scars and carved patterns which can be attributed as having Aboriginal cultural origin. Scarred trees include the removal of bark from the trunk of the tree (usually with a stone axe) to make shields, canoes, implements and other types of items which leave a wound on the tree trunk. Carved tree contains carved patterns on the tree trunk and are often found in association with ceremonial grounds, burials, or cultural sites. Carved trees are a very rare site type.

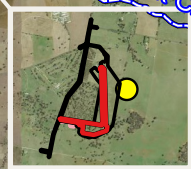
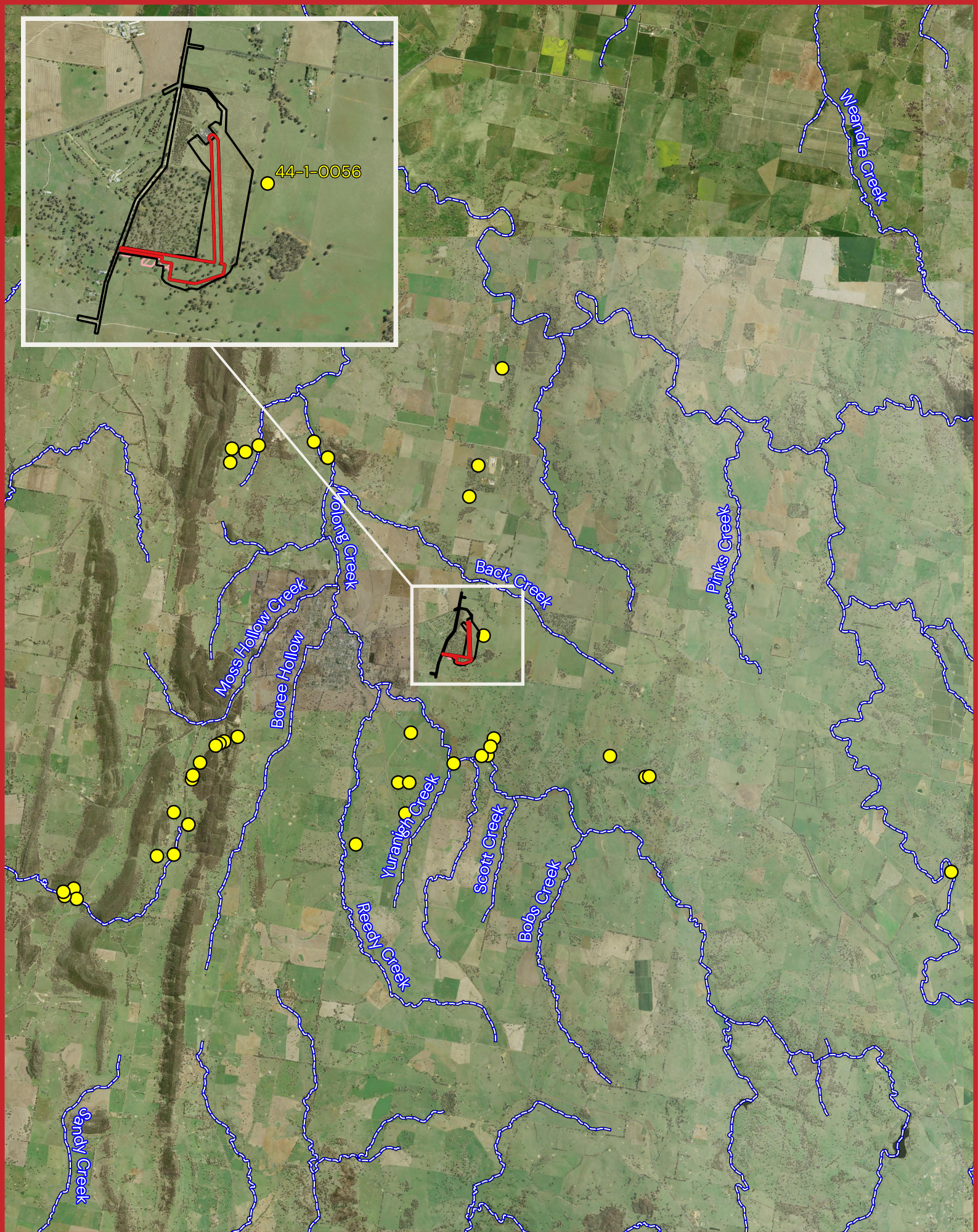
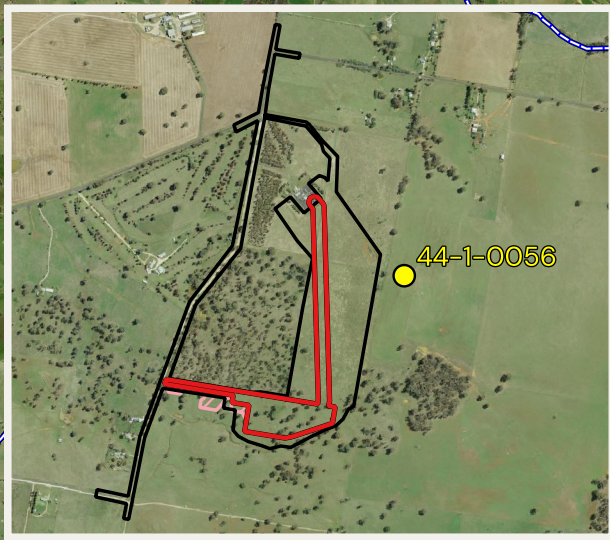
Within the wider region, Pearson's 1981 unpublished PhD (as referenced in Navin Officer 2003:6) is noted as one of the 'only major and regionally based research investigation' relevant to the Molong area and the current project area. Pearson's thesis 'was an investigation of Aboriginal and early European settlement patterns within the Upper Macquarie River region of NSW' (Navin Officer 2003:6).

The review of previous archaeological research revealed that a number of assessments have been undertaken in areas comparable to the project area. Archaeological sites in the vicinity of the project area have mostly been found near the numerous watercourses that traverse the landscape. The previous assessments identify that despite the rich resources for Aboriginal occupation that existed in the Molong region, past land use history has impacted the potential to find Aboriginal material culture, and also the integrity of occupation deposits.

2.2 REGIONAL CONTEXT

Archaeological and environmental research within the region has identified the following predictive statements regarding archaeological potential in the region:

- Generally, Aboriginal cultural sites have typically been identified within close proximity to permanent, temporary, or past water sources; with site sizes decreased with distance from water (OzArk 2004:16).
- Low ridge tops, creek banks, gently undulating hills and river flats have also been associated with an increased potential for Aboriginal cultural sites to occur (OzArk 2004: 17).
- The extensive agricultural activities, particularly ploughing, that have been undertaken throughout the region have generally impacted the potential for artefacts to occur as ground surface assemblages.
- Mature trees have potential to be culturally modified and are most frequently identified in proximity to water sources.
- Stone artefacts will likely be of basalt, chert, quartz, rhyolite or tuff, as these raw materials are naturally occurring in the region (ERM 2003).
- Aboriginal cultural heritage materials may have been disturbed by the agricultural activities that have been undertaken in the region; however, subsurface deposits may remain in-situ.



3. Research Design

The past archaeological research within the vicinity of the project area and surrounds (**Section 2** of this document, Section 4.2 of the AA i.e. Appendix 1 of the ACHA) indicates that there is potential for evidence of Aboriginal occupation to have survived previous land use history. Previous archaeological assessments around Molong, and AHIMS registered sites in proximity to the project area have established that the region was habituated by the local Wiradjuri People. Evidence of this occupation is seen through the record of stone artefacts and culturally modified trees identified in the region, in proximity to, and within the project area.

The site survey of the project area (Virtus:2025) identified and recorded seven previously unknown Aboriginal sites, including SCT1, SCT2, SCT3, Molong IF, Molong Grinding Stone, Molong IF2, and AS1:

- SCT1 (AHIMS # 44-1-0199)
 - **Outside project area:** SCT1 (AHIMS # 44-1-0199) is a mature Eucalyptus melliodora species (Box) and has a long elliptical scar facing north-northeast. It is located adjacent to the eastern boundary of the proposed BESS.
- SCT2 (AHIMS # 44-1-0195)
 - **Outside project area:** SCT2 (AHIMS # 44-1-0195) is a mature Eucalyptus melliodora species (Box) and has a long elliptical shaped scar, facing southwest. It is located 30 m north of the proposed driveway crossing from Back Saleyards Road to the internal portion of the site.
- SCT3 (AHIMS # 44-1-0196)
 - **Outside project area:** SCT3 (AHIMS # 44-1-0196) is a mature Eucalyptus melliodora species (Box) and has a long elliptical shaped scar, in the central section of the tree where the tree branches out and is east facing. It is situated on the eastern fence line of Back Saleyards Road, close to the existing Transgrid Molong Substation.
- Molong IF (AHIMS # 44-1-0190)
 - **Outside project area:** Molong IF (AHIMS # 44-1-0190) is a broken hammerstone of red-brown quartzite, located along a fence line east of Back Saleyards Road and west of the proposed transmission line.
- Molong Grinding Stone (AHIMS # 44-1-0191)
 - **Inside project area:** Molong Grinding Stone (AHIMS # 44-1-0191) is a grinding stone located at a slightly elevated point of a grazing paddock within the proposed BESS unit installation.
- Molong IF2 (AHIMS # 44-1-0192)
 - **Inside project area:** Molong IF2 (AHIMS # 44-1-0192) is an isolated basalt core, located adjacent to the Molong Grinding Stone (AHIMS # 44-1-0191).
- AS1 (AHIMS # 44-1-0197)
 - **Outside project area:** AS1 (AHIMS # 44-1-0197) is a low-density artefact scatter exposed within the banks of an ephemeral tributary of Molong Creek, located adjacent to the eastern boundary of the proposed BESS.

The broad objective of this research design is to assist in further understanding how Aboriginal people utilised the project area in the past through collection of the Molong Grinding Stone (AHIMS # 44-1-0191) and Molong IF2 (AHIMS # 44-1-0192), and salvage of artefacts uncovered during site works to determine the significance, extent, and integrity of the site and to analyse any artefacts recovered to document values.

Other research questions that will be investigated under the investigations will be (and not limited to):

- What does the artefact assemblages indicate about how Aboriginal people were utilising the local landscape?
- How does the results of the testing, collection and artefact analysis compare to other analyses carried out in the locality and the greater Molong region?
- Are certain types of artefact types and artefact materials more prevalent within the project area than others as predicted in the ACHA in the predictive model? How do these results compare to previous archaeological research in the locality and the Molong region?
- Is there any evidence of a change in occupation strategy over time? and
- How have the descendants of the Traditional Aboriginal people and the broader Aboriginal community utilised this landscape through generations to the present day? Are there any dateable features (charcoal or hearths) that can provide information on the chronology of the artefacts, if identified? What is the age of such features (e.g. Holocene or Pleistocene)? What is their significance within the broader cultural landscape?

4. Methodology

This section of the document presents the methodology for community collection and salvage of Aboriginal objects, to be impacted by the proposed works, and any previously unknown Aboriginal objects within the project area that may be exposed during proposed works.

Initially, test excavations were not recommended for the project area within the AA based on our understanding of current impacts for this proposal. Based upon a later revision of impacts by Stor along the proposed access road and advice from HNSW, **testing in accordance with this methodology is recommended within the area of moderate archaeological sensitivity along the ephemeral creek. Depending upon the presence and extant of any Aboriginal objects, further investigation may be required.**

4.1 IMPACT AND MITIGATION AREAS

Table 3 below sets out the proposed impacts and mitigation measures in each works area.

Table 3. Proposed Impacts and Recommended Mitigation.

Works Area	Proposed Impacts	Recommended Mitigation
Proposed BESS unit installation area, including proposed access roads (low archaeological sensitivity).	Main BESS facility and associated infrastructure and ancillary works; Road works for site access and maintenance.	Stop work protocols for chance finds.
Proposed BESS unit installation area (moderate archaeological sensitivity).	Main BESS facility and associated infrastructure (proposed substation).	Molong Grinding Stone (AHIMS # 44-1-0191) and Molong IF2 (AHIMS # 44-1-0192) are within areas of moderate archaeological sensitivity which are impacted by the project where harm cannot be avoided. Surface salvage is recommended to be conducted by a qualified archaeologist(s) and representatives of the Registered Aboriginal Parties, with surface salvage taking place both prior to and after initial ground breaking works (within the top 15cm of soil disturbance) and clearing to collect any Aboriginal objects revealed in modified contexts.
Zone of moderate archaeological sensitivity along the west- and south-trending ephemeral creeks	Main BESS facility and associated infrastructure (west-trending creek); Road works for site access and maintenance (south-trending creek)	In the areas of moderate archaeological sensitivity which are impacted by the project where harm cannot be avoided, surface salvage and subsurface testing is recommended to be conducted by a qualified archaeologist(s) and representatives of the Registered Aboriginal Parties, with surface salvage taking place both prior to and after initial ground breaking works (within the top 15cm of soil disturbance) and clearing to collect any Aboriginal objects revealed in modified contexts.

Works Area	Proposed Impacts	Recommended Mitigation
Overhead transmission lines (low archaeological sensitivity)	Construction of power transmission infrastructure	Stop work protocols for chance finds.
Soil testing locations	Soil testing for acid sulphate soils Geotechnical testing	Opportunity to provide RAPs to inspect the soil testing process and collect Aboriginal objects, if identified and manage following repository measures (refer to Section 4.3).

4.2 METHODOLOGY FOR SURFACE COLLECTION WITH ARCHAEOLOGICAL SUPERVISION

A surface collection with archaeological supervision prior to and after initial groundbreaking works (within the top 15cm of soil disturbance) and clearing is proposed in areas as shown on **Figure 3** (areas of moderate and high archaeological sensitivity). All initial ground disturbing works in areas of moderate sensitivity will be supervised by an archaeologist, and at least one representative from the Registered Aboriginal Parties (RAP). The proposed surface collection methodology is as follows:

- Surface collection will be undertaken by one archaeologist and at least one representative from registered Aboriginal parties during the top 15cm of soil disturbance works and after clearing to record and collect any identified Aboriginal objects (artefacts);
- Surface artefacts will be flagged prior to collection. The flagged site will be photographed to record the spatial distribution of artefacts within the site;
- The location of each surface artefact will be recorded using a handheld GPS to record the spatial distribution of artefacts within the site; and
- Artefacts will be individually bagged and labelled (including site name, date, and MGA co-ordinate).
- Artefact attribute recording and photography will be completed by the archaeologist on site, unless numerous artefacts are found which require this recording to be undertaken off site to the CoP requirements. AHIMS and ASIR site recording forms will be completed off site.

4.3 METHODOLOGY FOR COMMUNITY COLLECTION/CULTURAL SALVAGE

For areas nominated for community collection/cultural salvage, the proposed works will be supervised by the general contractor for Stor-Energy working with at any given time at least one representative from the RAPs (noting all RAPs will be afforded the opportunity to provide a RAP on site during the program of proposed works). The proposed community collection/cultural salvage methodology is as follows:

- Surface collection will be undertaken at least one representative from registered Aboriginal parties during proposed works. If undertaking soil testing, the opportunity for RAPs to hand sieve or rake through any soils or inspect core logs can be provide dependent on what is possible with the soil testing contractor;
- Surface or sieved artefacts will be flagged prior to collection by the RAP representative or general contractor. The flagged site will be photographed to record the spatial distribution of artefacts within the site by the RAP representative or general contractor;
- The location of each surface artefact will be recorded using a handheld GPS to record the spatial distribution of artefacts within the site by the RAP representative or general contractor; and
- Artefacts will be individually bagged and labelled (including site name, date, and MGA co-ordinate) by the RAP representative and general contractor.

Information for AHIMS and ASIR site recording forms will be completed off site with assistance by an archaeologist or by the RAP representative.

4.4 MANUAL TESTING

If cut is proposed within areas of moderate archaeological sensitivity, archaeological testing will be required before works may commence.

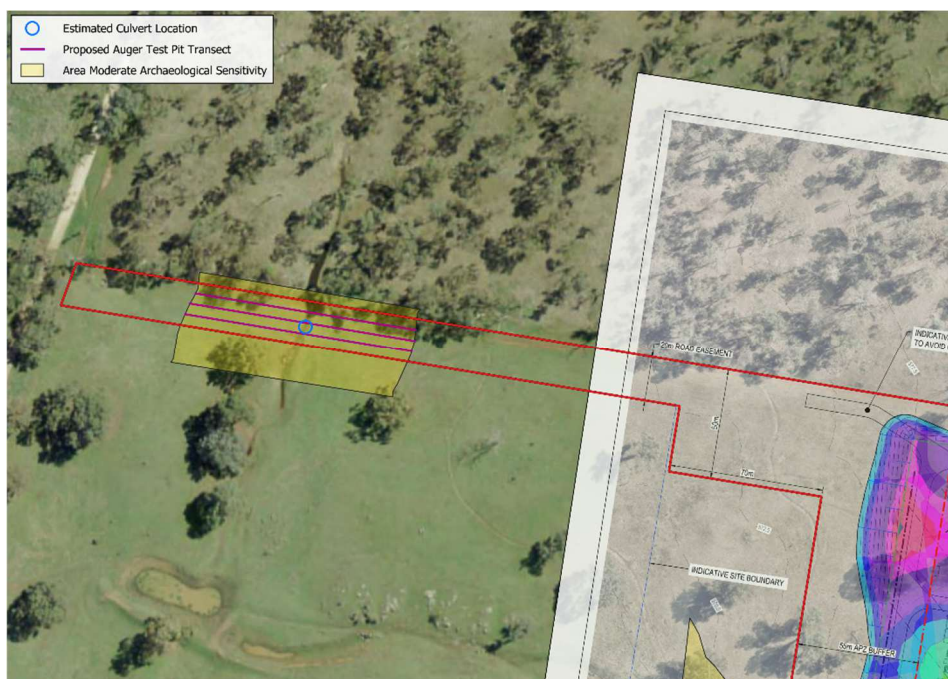
4.4.1. Testing – Manual Auger and Triggers for exploratory test pits

A total of 60 manual test augers with up to a 15 cm maximum diameter are proposed to determine the presence, extent, and integrity of any Aboriginal cultural material within areas of impact across the project area. These would include the following:

- Fill (including concrete, bitumen, road base and imported fill) will be removed in bulk and not sieved.
- Augering will be conducted by hand (using a manual auger, and other hand tools where necessary) in approximately 5cm spits until maximum depth of excavation for proposed works, or B horizon is reached (between approximately 15 – 20 cm), or at least two spits of culturally sterile deposit are reached to mitigate the level of disturbance proposed at the project impact area;
- If 5 or more artefacts are located within a test auger pit, and Stor cannot avoid harm, further exploratory manual test pits may be required to follow the extent of the concentration of artefacts to determine the extent of a feature, dependent on the decision of the supervising archaeologist in consultation with the RAPs. Exploratory manual test pits would be expanded 50cm by 50cm pits manually excavated and sieved and would be confined to understanding the extent of the concentration of artefacts within the project impact area.
- If Stor cannot avoid harm after testing is completed, an amended methodology for salvage will be submitted to DPHI as part of the testing report to inform DPHI's considerations of the project approval, further salvage of adjoining areas may be required prior to construction in consultation with DPHI.
- We do not expect manual archaeological salvage investigations to be triggered based on the findings of the ACHA and consultation with the RAPs on the cultural values of the project area to date and the landform contexts in previous archaeological research where significant numbers of artefacts were identified locally (in higher order streams and on larger and well defined crests). We recommend salvage for low density artefacts based on defined impacts, if triggered, as already defined in the stage community collection (refer to Section 4.3).
- All excavated soil will be sieved through five mm and two mm nested sieves;
- Munsell, soil texturing and pH analysis will be undertaken for each stratigraphic unit within each salvage pit.
- Photographic and scale drawn records of the stratigraphic/soil profile will be taken for each salvage pit; and
- Excavations will cease if suspected human remains are encountered. If suspected human remains are uncovered during salvage excavations, the area of these suspected remains should be secured, and the NSW Police notified. If these remains are deemed to require archaeological investigation by the NSW Police or NSW Coroner, then Heritage NSW, and all Registered Aboriginal Parties must be notified.
- Lithic artefacts will be analysed recording the general attributes on all artefacts and additional attributes on flakes and cores as listed in Table 4 below.
- Animal and fish bones will be attempted to be analysed by species and by weight, as well as type of bone found.

The breakdown of proposed testing locations is as follows:

- The proposed access road and culvert, which bisects the area of moderate archaeological sensitivity (100 m x 8 m) located in the western portion of the project area, includes cut impacts of approximately 15 cm depth. To account for the need to temporarily widen the access road during initial construction, the entire 20 m width of the area of moderate sensitivity within the project area will be tested. To do this, a total of 60 auger test pits, set out as three parallel transects 5 m apart with each auger placed every 5 m has been proposed to capture any Aboriginal cultural material within this area.



In the event that manual augering is deemed unfit, mechanical augering may be utilised and will follow the same methodology and auger locations.

4.5 COLLECTION OF ANY ADDITIONAL UNKNOWN ABORIGINAL OBJECTS

If any additional unknown Aboriginal artefacts are located during and/or after the completion of the program during the life of the consent approval, an archaeologist and a representative from registered Aboriginal parties for the project will be contacted to record and collect the artefact and Heritage NSW and AHIMS will be notified. Collection of the artefact/s (if any) will be conducted in accordance with the surface collection and should include the following steps:

- Artefacts will be flagged prior to collection. The flagged site will be photographed to record the spatial distribution of artefacts within the site;
- The location of each artefact will be recorded using a handheld GPS to record the spatial distribution of artefacts within the site; and
- Artefacts will be individually bagged and labelled (including site name, date, and MGA co-ordinate).

4.6 ATTRIBUTES TO BE RECORDED ON STONE ARTEFACTS

Table 4 below lists the attributes to be recorded on each Aboriginal artefact recovered during the consent works and has been separated into general attributes to be recorded on all artefacts, additional attributes to be recorded on flakes, and additional attributes to be recorded on cores.

Table 4. Attributes to be recorded.

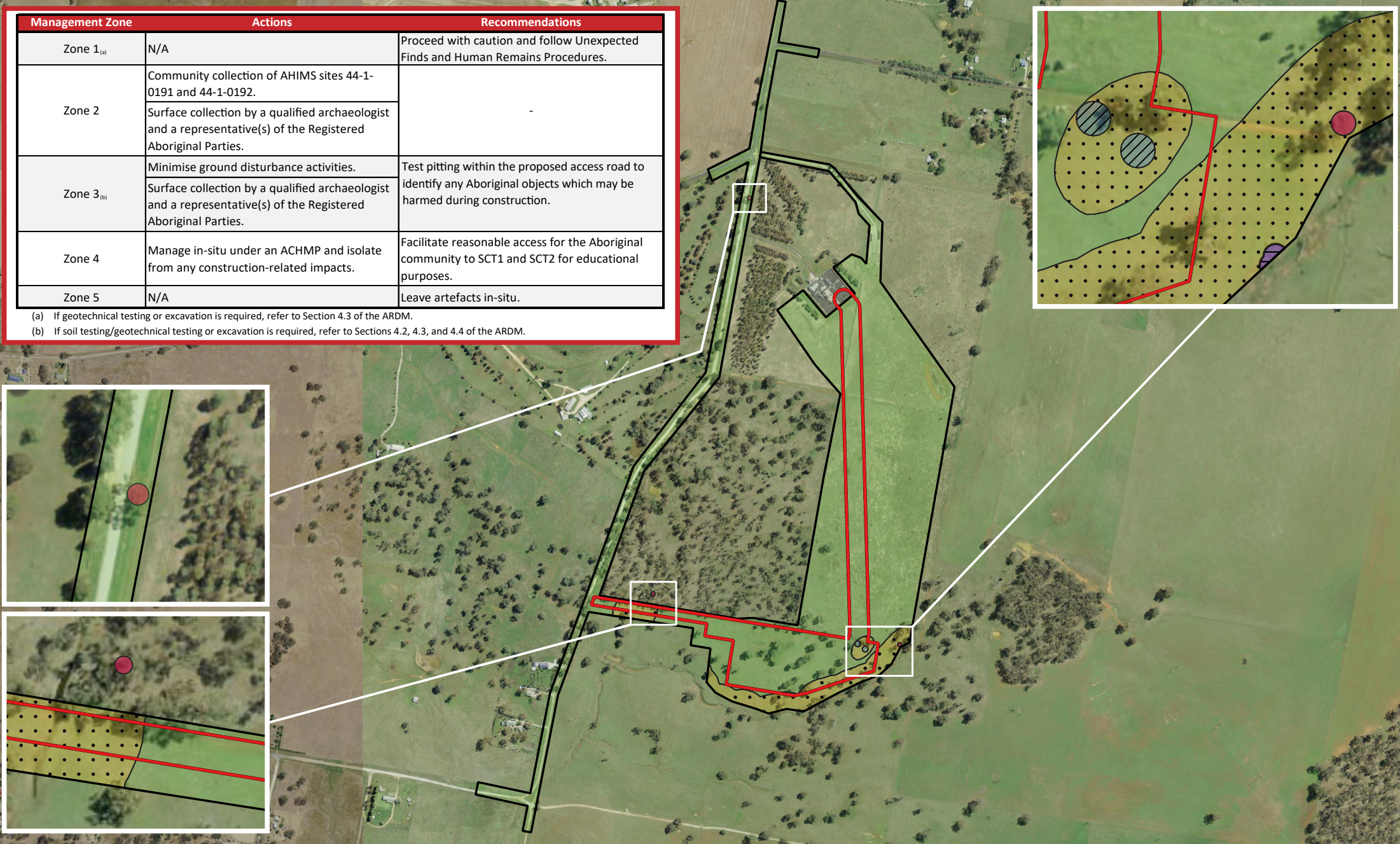
General Attributes (All Artefacts)	Additional Attributes (Flakes)	Additional Attributes (Cores)
Artefact Type	Platforms (width, thickness, surface, overhang removal)	Rotated
Raw Material	Termination	Platform Preparation

General Attributes (All Artefacts)	Additional Attributes (Flakes)	Additional Attributes (Cores)
Artefact Weight (g)	Retouch (Location and Type)	Scar Type
Artefact Measurements (Length, Width, Thickness)	Breakage	Exhausted
Cortex (Amount and Type)		
Heat Affect		

The project archaeologist will take artefacts off site for recording and analysis in their offices in a secure location, prior to their final repository. No issues were recorded in consultation on earlier drafts of this ARDM and the ACHA report by RAPs.

Management Zone	Actions	Recommendations
Zone 1 ^(a)	N/A	Proceed with caution and follow Unexpected Finds and Human Remains Procedures.
Zone 2	Community collection of AHIMS sites 44-1-0191 and 44-1-0192.	
	Surface collection by a qualified archaeologist and a representative(s) of the Registered Aboriginal Parties.	
Zone 3 ^(b)	Minimise ground disturbance activities.	Test pitting within the proposed access road to identify any Aboriginal objects which may be harmed during construction.
	Surface collection by a qualified archaeologist and a representative(s) of the Registered Aboriginal Parties.	
Zone 4	Manage in-situ under an ACHMP and isolate from any construction-related impacts.	Facilitate reasonable access for the Aboriginal community to SCT1 and SCT2 for educational purposes.
Zone 5	N/A	Leave artefacts in-situ.

- (a) If geotechnical testing or excavation is required, refer to Section 4.3 of the ARDM.
 (b) If soil testing/geotechnical testing or excavation is required, refer to Sections 4.2, 4.3, and 4.4 of the ARDM.



5. Short and Long Term Care of Aboriginal Objects

During archaeological/cultural works, temporary storage of any collected artefacts may be stored in a secure location on-Country as agreed by GDA and RAPs.

Following the completion of archaeological/cultural works, temporary, short-term care agreement is requested for the Virtus Heritage offices in Pottsville or in Sydney to undertake photography, cleaning, and analysis prior to a long-term care and control option being implemented, when recording cannot be completed on site or at the request of RAPs. Materials will be stored in boxes and within locked cabinets when they are not being analysed.

Once the required analysis is complete, reburial of any Aboriginal objects identified within proposed areas of impact will be conducted by community, as requested during earlier stages of consultation associated with the ACHA and this methodology. However, only one organisation has commented requesting reburial, WVVAC has provided comment on the recommendation of a preference for reburial after analysis and detailed documentation is complete in a place where no future farming or potential impacts would occur. The location of future reburial should involve consultation with all RAPs as is standard practice for similar projects and also respects the wishes of all RAPs during consultation to be included in decisions for future cultural heritage management on site. There is also the opportunity for RAPs to suggest alternative options for long-term care at any time throughout the duration of this project.



6. References

DECCW. 2010a. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* and Archaeological Investigation of Aboriginal Objects Code of Practice.

DECCW. 2010b. Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW.

DECCW. 2010c. Aboriginal heritage consultation requirements for proponents 2010.

ICOMOS Burra Charter 2013.

Office of Environment and Heritage (OEH) 2011. Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW.