



510 Beach Road, Berry: Aboriginal Cultural Heritage Assessment

Prepared by AMBS Ecology & Heritage
for Shoalhaven City Council

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Executive Summary

AMBS Ecology & Heritage (AMBS) was commissioned by Shoalhaven City Council to undertake an Aboriginal Cultural Heritage Assessment (ACHA) for 510 Beach Road, Berry. The assessment was required to inform and assist the preparation of a Planning Proposal (PP), and to provide guidance for the appropriate management of Aboriginal cultural values throughout the planning process.

Archaeological survey of the study area in April 2018 identified a previously unrecorded culturally scarred tree site, located on a large ridge landform approximately 600m north east of Coomonderry Swamp. The site retained two scar features, and was assessed as having high heritage significance due primarily to its rarity. In particular, the Registered Aboriginal Parties (RAPs) participating in the assessment identified that the site is of high cultural significance to the Aboriginal community.

Limited ground visibility restricted the effectiveness of the survey, and it was not possible to identify the presence of Aboriginal artefact sites through surface survey alone. Archaeological test excavations were subsequently undertaken in compliance with the Office of Environment and Heritage (OEH) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010).

Forty 50cm² test pits were archaeologically excavated in June 2018, recovering eleven Aboriginal stone artefacts, distributed across the southern and eastern portion of the study area on elevated, well drained slope and ridge landforms overlooking Coomonderry Swamp. The results conformed to the local archaeological predictive model, which generally considers that the stone artefact site types would be likely to be identified in proximity to major watercourses and resource sources, and on good vantage points. The assemblage, while small in number, is typical of those found in the region. Based on the results of the test excavations, archaeological survey, background analysis and predictive modelling, a site and associated area of Potential Archaeological Deposit (PAD) likely to retain additional subsurface archaeological deposits was identified, encompassing the elevated slope and ridge landforms overlooking Coomonderry Swamp.

As development plans for the area had not yet been prepared, it was not possible to assess specific impacts to Aboriginal heritage values which might occur during future rural residential subdivision and development. In general, future development has potential to impact the scarred tree site, and it is recommended that impacts to the site be avoided during development planning. During any future development and construction works, a buffer of at least 10m should be maintained around the tree to avoid accidental impacts. If future residential development is proposed in the vicinity of the tree the proponent should engage a suitably qualified arborist to determine if the tree poses a safety risk, and if direct impacts such as pruning or removal are required an Aboriginal Heritage Impact Permit (AHIP) will be required to allow such impacts.

Given the level of archaeological assessment undertaken, and the results of the background analysis, it was determined that further archaeological excavation of the stone artefact and PAD site is unlikely to increase the current scientific understanding of the region. However, impacts to Aboriginal heritage sites in NSW require an AHIP under the NPW Act regardless of their level of significance. Future proponents wishing to impact the stone artefact and PAD site within the study area are required to apply to OEH for an AHIP to allow the proposed development, accompanied by a supporting ACHA assessing specific development impacts to heritage values.

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1 Introduction

AMBS Ecology & Heritage (AMBS) has been commissioned by Shoalhaven City Council (Council) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) for 510 Beach Road, Berry (the study area). Council requires the assessment to inform and assist the preparation of a Planning Proposal (PP) over the study area, and to provide guidance for the appropriate management of Aboriginal cultural values throughout the planning process.

1.1 Study Area and Planning Proposal

The study area is located at 510 Beach Road (Lot 4 DP 834254), approximately 4km east of the main township of Berry NSW (Figure 1.1), within the Shoalhaven Local Government Area (LGA). The PP is being prepared to amend the Shoalhaven Local Environmental Plan (LEP) 2014 over the study area, to permit rural residential subdivision and development, and environmental protection, and to facilitate the transfer of Coomonderry Swamp lands to the NSW National Parks and Wildlife Service (NPWS).

Advice received by Council from the Office of Environment and Heritage (OEH) has indicated that Aboriginal objects may be present in the study area, and as such Council have engaged AMBS to prepare this assessment of Aboriginal heritage in accordance with OEH guidelines.

1.2 Methodology

This assessment has been prepared in accordance with the principles of the *Burra Charter* (*The Australian ICOMOS Charter for the conservation of places of cultural significance*), and in accordance with current heritage best practice and the guidelines of OEH (formerly known as the Department of the Environment, Climate Change and Water NSW [DECCW]) as specified in the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011), *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a; 2010b). As such, the key heritage assessment requirements for this assessment are to:

- undertake a review of existing information on the Aboriginal heritage values and archaeology of the area;
- consult with representatives of the local Aboriginal community to ensure their involvement and input into the Aboriginal heritage assessment, description of Aboriginal heritage values, and heritage impact management and mitigation;
- undertake an Aboriginal heritage assessment of the study area; and
- develop appropriate impact mitigation options and recommendations for the development, based on an understanding of scientific and cultural heritage significance, in line with OEH guidelines and archaeological best practice.

The following tasks have been undertaken to fulfil the above requirements:

- a search and review of the NSW OEH Aboriginal Heritage Information Management System (AHIMS) database, to identify the location and type of any Aboriginal sites recorded within the study area or its vicinity;
- a review of relevant environmental information and the Aboriginal heritage context;
- a review of available relevant previous Aboriginal heritage reports, to determine the extent of past archaeological research into the local area;
- a visual inspection undertaken by an AMBS archaeologist to confirm the results of the background review; and
- the preparation of a report outlining the results of the background research; detailing whether future development is likely to impact on identified Aboriginal sites or areas of

potential archaeological sensitivity; identifying appropriate recommendations for avoidance of impacts to identified Aboriginal heritage sites and areas of archaeological potential; and, if required, identifying triggers for additional archaeological assessments and recommendations for Aboriginal heritage management within the study area.

1.3 Authorship

This report has been prepared by Christopher Langeluddecke, AMBS Director Aboriginal Heritage, with the assistance of Heritage Consultant Samantha Fidge, and Heritage Consultant Jenna Weston, who undertook the analysis of stone artefacts.

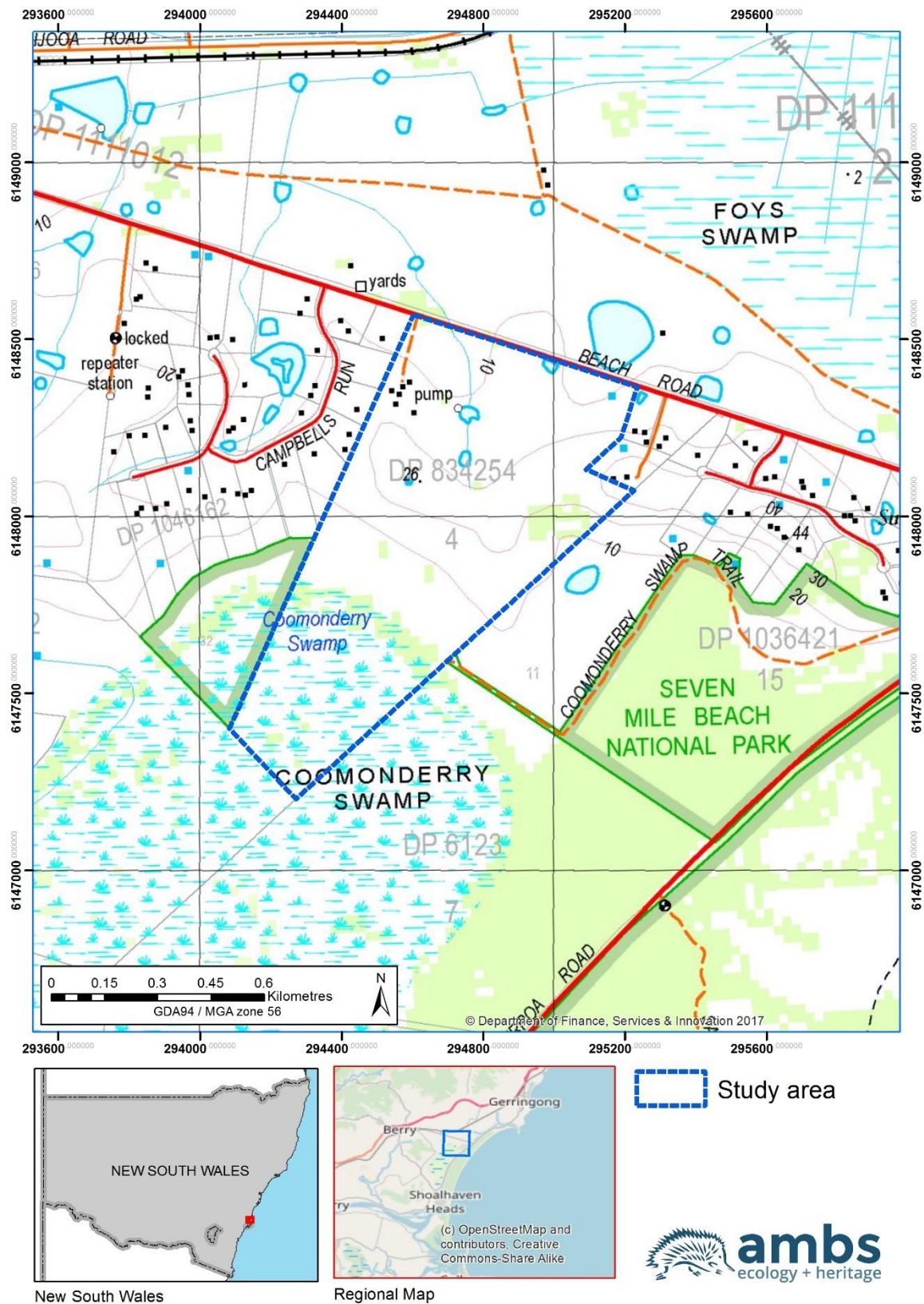


Figure 1.1 Location of the study area.

2 Statutory Context

The conservation and management of Aboriginal heritage items is undertaken in accordance with relevant Commonwealth, State or local government legislation. Listings relevant to the study area are summarised below.

2.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) aims to protect and manage places of national environmental significance. Several heritage lists, including the National Heritage List (NHL) and the Commonwealth Heritage List (CHL), are addressed by the EPBC Act. The NHL lists places that have outstanding value to the nation, while the CHL includes items and places owned or managed by Commonwealth agencies. Ministerial approval is required for controlled actions which would have a significant impact on items and places on the NHL or CHL.

There are no Aboriginal heritage items or places listed on the NHL or CHL within the study area or its vicinity.

2.2 *National Parks and Wildlife Act 1974 and National Parks and Wildlife Amendment Regulation 2010*

The *National Parks and Wildlife Act 1974* (NPW Act) specifies that the Director-General of the National Parks and Wildlife Service (NPWS; now OEH) is responsible for the care, control and management of various natural and cultural areas, including Aboriginal places and objects throughout NSW. Under this Act, all Aboriginal Objects are protected regardless of significance or land tenure. Such Aboriginal Objects include pre-contact features like scarred trees, middens and open camp sites, and post-contact features such as Aboriginal fringe camps. The Act also protects Aboriginal Places, which can only be declared by the Minister administering the NPW Act; these are defined as being a place that *is or was of special significance with respect to Aboriginal culture*.

There are no declared Aboriginal Places within the study area or its vicinity.

Under Section 90 of the NPW Act, it is an offence to destroy, deface, damage or desecrate an Aboriginal Object or Aboriginal Place, unless an Aboriginal Heritage Impact Permit (AHIP) has been issued by the Environmental Protection and Regulation Division (EPRD) of OEH. The Act requires that reasonable precautions and due diligence be undertaken to avoid impacts on Aboriginal Objects.

The *National Parks and Wildlife Amendment Regulation 2010* excludes activities carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* from the definition of harm in the NPW Act, meaning that test excavations may be carried out in accordance with this Code of Practice, without requiring an AHIP. The Regulation also outlines Aboriginal community consultation requirements (*Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*), and a Due Diligence Code of Practice which specifies activities that are low impact, thus providing a defence to the strict liability offence of harming an Aboriginal object.

2.2.1 *Aboriginal Heritage Information Management System*

The Aboriginal Heritage Information Management System (AHIMS) is part of the regulatory framework for the implementation of the NPW Act. Maintained by OEH, the AHIMS includes a database of Aboriginal heritage sites, items, places and other objects that have been reported to

OEH, as well as site cards describing Aboriginal sites registered in the database, and associated Aboriginal heritage assessment reports. Section 89A of the NPW Act requires individuals and corporations to notify OEH of the location of Aboriginal sites identified during field investigations, regardless of land tenure or any likely impacts to such sites. Nevertheless, the AHIMS is not a comprehensive list of all Aboriginal heritage sites in NSW; it only includes information that has been reported to OEH. The accuracy of site co-ordinates in the database therefore varies depending on the method used to record locations.

The results of a site search for the local area are presented in Section 4.2.1.

2.3 *Heritage Act 1977*

The *Heritage Act 1977* protects heritage places, buildings, works, moveable objects, precincts and archaeological sites that are important to the people of NSW. Items that have particular importance to the State of NSW are listed on the State Heritage Register (SHR). Such items can include those of Aboriginal and non-Aboriginal heritage significance.

There are no Aboriginal heritage items or places in the vicinity of the study area listed on the SHR.

2.4 *Environmental Planning and Assessment Act 1979*

The *Environmental Planning and Assessment Act 1979* (EP&A Act) regulates land use planning and development in NSW, including the making of environmental planning instruments (EPIs). The two types of EPIs are State Environment Planning Policies (SEPPs), which cover areas of State or regional environmental planning significance; and Local Environmental Plans (LEPs), which cover LGAs. SEPPs and LEPs identify and provide for the protection of local heritage items and heritage conservation areas.

2.4.1 *Shoalhaven Local Environmental Plan 2014*

Part 5, Clause 5.10 'Heritage Conservation' of the Shoalhaven LEP is consistent with current heritage best practice guidelines, and provides for the protection of heritage items, places, conservation areas, and archaeological sites. Schedule 5 'Environmental heritage' does not include any Aboriginal objects or places of heritage significance within the study area or its vicinity.

3 Aboriginal Community Consultation

Archaeological and heritage management best practice requires that representatives of the local Aboriginal community are included as stakeholders in decisions concerning any heritage objects, archaeological places or Sacred Sites within the study area. In addition, assessments of cultural significance, the values of a site to the Aboriginal community itself, can only be carried out by the relevant Aboriginal communities.

Aboriginal community consultation is an integral part of the Aboriginal cultural heritage assessment process, and this project has been undertaken in accordance with the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (see Appendix A). The aims of the consultation process are to:

- provide the opportunity for the local Aboriginal community to provide input into identifying cultural heritage values and be involved in the heritage assessment process;
- provide the opportunity for representatives of the local Aboriginal community to inspect the study area with the aim of identifying Aboriginal sites and areas of archaeological and cultural sensitivity;
- identify the Aboriginal cultural heritage significance of the study area;
- integrate Aboriginal heritage values into the heritage assessment; and
- provide an opportunity for the local Aboriginal community to comment on the heritage management strategy and proposed outcome.

In accordance with OEH requirements, a public notice was placed in the South Coast Register on the 4 April 2018. The advertisement sought expression of interest for participation in the Aboriginal community consultation process for this project. The closing date for registrations was 18 April 2018.

The following organisations were contacted on 29 March 2018, requesting notification by the 12 April 2018 of any Aboriginal organisations who may wish to register as stakeholders, or to pass on contact information regarding the project to any potential stakeholders of whom they may be aware:

- South East Local Land Services;
- Office of the Registrar, Aboriginal Land Rights Act (ORALRA);
- National Native Title Tribunal (NNTT);
- Native Title Services Corporation (NTSCorp);
- Jerrinja Local Aboriginal Land Council;
- Shoalhaven Council
- Office of Environment and Heritage (OEH).

Jerrinja LALC registered their interest in the project, but did not suggest any additional potential stakeholder. South East Local Land Services acknowledged receipt of the request. Shoalhaven City Council acknowledged receipt of the request and suggested two potential stakeholders. NNTT did identify known registered Native Title claimants, Native Title holders for the study area or surrounds. The NNTT did not identify known registered Indigenous Land Use Agreements for the study area or surrounds. OEH acknowledged receipt of the request sent via post, and requested by emailed confirmation of the LGA.

OEH identified the following individuals and organisations as potential additional stakeholders. The identified organisations and individuals were contacted by letter or email on 18 April 2018, inviting them to register as stakeholders by 02 May 2018:

- | | |
|---|--|
| • Ulladulla Local Aboriginal Land Council | • Murra Bidgee Mullangari Aboriginal Corporation |
| • Badu | • Murramarang |
| • Biamanga | • Murrumbul |
| • Bilinga Cultural Heritage Services | • Murrumbul Cultural Heritage technical services |
| • Bilinga | • Noel Webster |
| • Goobah Development Pty Ltd | • Nowra Local Aboriginal Land Council |
| • Cullendulla | • Nundagurri |
| • Darryl Caines | • Noel Butler |
| • Darug Land Observations | • Pemulwuy |
| • Dharug | • Guunamaa Dreaming Sites and Surveying |
| • Gayle Watts | • Tungai Tonghi |
| • Gadhu Dreaming | • Walbunja |
| • Gary Caines | • Warra Bingi Nunda Gurri |
| • Gundungurra Tribal Technical Services | • Wingikara Cultural Heritage technical Services |
| • Gunyuu | • Wingikara |
| • Gunyuu cultural heritage technical services | • Wullung |
| • Jerringong | • Yerramurra |
| • Jerrinja LALC | • Batemans Bay Local Aboriginal Land Council |
| • Karrial | • Ronald Carberry |
| • Three Ducks Dreaming Surveying and Consulting | • Minnamunnung |
| • Leanne Tungai | • Shoalhaven Elders and Friends Organisation |
| • Munyinga Cultural Heritage Technical Services | • South West Rocks Corporation |
| • Munyunga | |
| • Murra Bidgee Mullangari | |

The following organisations notified AMBS that they wished to be involved in the project as Registered Aboriginal Parties (RAPs):

- | | |
|---------------------------------|-----------------|
| • Jerrinja LALC | • Boonunga |
| • Barraby Cultural Services | • Bullawaya |
| • Yulay Cultural Services | • Yaxa Burra |
| • Yurrandaali Cultural Services | • Tharawal |
| • Murra Bidgee Mullangari | • Badu |
| • Warra Bingi Nunda Gurri | • Kuringgai |
| • Darug Land Observations | • Gadung |
| • Three Ducks Dreaming Survey | • Djiringanj |
| • Richard Campbell | • Golangaya |
| • Murramarang | • Eora |
| • Biamanga | • Murrumbul |
| • Cullendulla | • Dharug |
| • Walbunja | • Minnamunnung |
| • Goobah | • Walgalu |
| • Gulaga | • Murrin |
| • Thoorga Nura | • Troy Tungai |
| • Wirambie | • Leanne Tungai |

Information about the proposed project and a proposed heritage assessment methodology, along with an invitation to provide any relevant cultural knowledge to the assessment, by the 04 June 2018, was sent to each of the registered Aboriginal parties on 07 May 2018.

The following registered Aboriginal parties emailed stating that they support and agree with the methodology sent:

- Yurrandaali Cultural Services
- Murra Bidgee Mullangari
- Barraby Cultural Services
- Warra Bingi Nunda Gurri
- Yulay Cultural Services
- Darug Land Observations
- Walbunja
- Goobah
- Gulaga
- Cullendulla
- Murramarang
- Thoorga Nura

Jerrinja LALC, Walbunja, Walgalu, Warra Bingi Nunda Gurri, Murra Bidgee Mullangari, Minnamunnung and Three Ducks Dreaming were invited to participate in the archaeological test excavation. RAP representatives participating in the test excavation are detailed in Table 3.1.

Table 3.1 RAP representatives participating in the test excavation.

Date	Representative	RAP Organisation
12/06/2018	Gerald Carberry	Jerrinja LALC
	Dillan Ardler	Jerrinja LALC
	Keiran Campbell	Walbunja
13/06/2018	Gerald Carberry	Jerrinja LALC
	Dillan Ardler	Jerrinja LALC
	Keiran Campbell	Walbunja
14/06/2018	Timoti Kearns	Warra Bingi Nunda Gurri
	Dillan Ardler	Jerrinja LALC
	Gerald Carberry	Jerrinja LALC
	Keiran Campbell	Walbunja
15/06/2018	Shakiah Tungai	Walgalu
	Gerald Carberry	Jerrinja LALC
	Dillan Ardler	Jerrinja LALC
	Keiran Campbell	Walbunja
18/06/2018	Kevin Campbell	Walbunja
	(Works not undertaken due to rain)	
	(Works cancelled early due to rain)	
	Shaun Carroll	Murra Bidgee Mullangari
20/06/2018	Yeena Connolly	Jerrinja LALC
	Yeena Connolly	Jerrinja LALC
	Gerald Carberry	Jerrinja LALC
	Keiran Campbell	Walbunja
21/06/2018	Shaun Carroll	Murra Bidgee Mullangari
	Dillan Ardler	Jerrinja LALC
	Gerald Carberry	Jerrinja LALC
	Keiran Campbell	Walbunja
22/06/2018	Leanard Wright	Three Ducks Dreaming
	Yeena Connolly	Jerrinja LALC
	Gerald Carberry	Jerrinja LALC
	Keiran Campbell	Walbunja

A draft of this report was sent to all RAPs on 27 August 2018, requesting review and comment prior to finalisation of the report within 28 days. A brief response was received by email from Leanne Tungai on 27 August supporting the report. No further response was received from the RAPs prior to finalisation of the report.

4 Aboriginal Heritage Context

4.1 Environmental Context

Environmental factors of the local landscape can inform an understanding of past human occupation of an area. Analysing the nature of the local landscape, specifically factors which affect patterns of past human occupation including topography, geology, soils, hydrology and vegetation, contributes to predictive modelling of archaeological sites, contextualises archaeological material and enables the interpretation of past human behavioural patterns.

4.1.1 Geology

The study area is underlain by two geological formations: Quaternary alluvium, gravel, swamp formations and sand dunes; and the Berry Formation of the Permian Shoalhaven Group geology, comprising undifferentiated siltstone, shale and sandstone (Wollongong 1:250000 geological map). Should any sandstone from this geology form rockshelters suitable for human occupation or outcrops suitable for rock art/grinding grooves within the study area, then it is possible that such sites may be present.

4.1.2 Soils, Topography and Vegetation

The study area is located within the Seven Mile, Coolongatta and Shoalhaven soil landscapes (Figure 4.1). The Seven Mile soil landscape consists of a series of dune ridges and swales, swamps and lagoons on Quaternary marine sands on the Coastal Plain. This includes Coomonderry Swamp, which is located at the southern end of the study area. Quaternary alluvium and peats are found in this low-lying swampy area, and vegetation may include swamp mahogany (*Eucalyptus robusta*) and linear paperbark (*Melaleuca linariifolia*) (Hazelton 1992:93).

The Coolongatta landscape comprises undulating to rolling low hills on the Berry Formation, which consists of light grey to dark grey micaceous siltstone, mudstone and shale. It has generally been extensively cleared, with scattered open-woodland and occasional shrubs. Common species include spotted gum (*E. maculata*), blackbutt (*E. pilularis*), blue-leaved stringybark (*E. agglomerata*), cabbage tree palm (*Livistona australis*), illawarra flame tree (*Brachychiton acerifolium*) and wattle (*Acacia* sp.) (Hazelton 1992:49).

The Shoalhaven landscape consists of level to gently undulating active floodplain with small levees, minor depressions and backwater swamps on alluvium – gravel, sand, silt and clay derived mainly from sandstone and shale overlying buried estuarine sediments (Hazelton 1992:68).

Although small pockets of vegetation are present within the study area, the native vegetation is mostly regrowth, as the area has been extensively cleared since European settlement. Such clearing will have impacted the integrity of archaeological deposits, and will have removed many of the trees modified (scarred or carved) by Aboriginal people in the past.

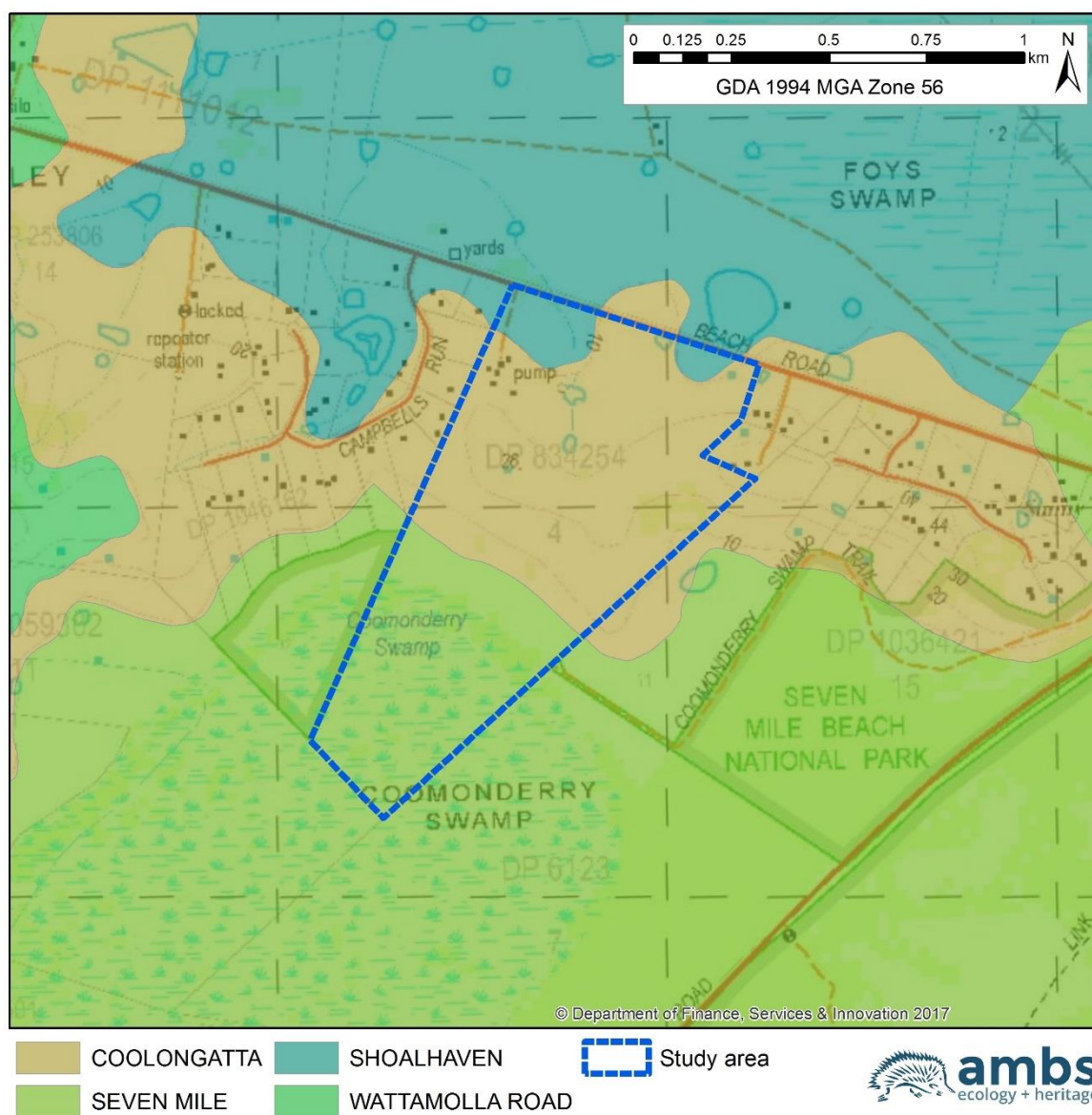


Figure 4.1 Soil landscapes of the study area and surrounds.

4.1.3 Hydrology and Drainage

The Shoalhaven River and its tributaries, including Broughton Creek, form the main drainage system in the local area. A small first-order tributary is present in the northern part of the study area, and has been dammed at two locations therein. Coomonderry Swamp is also present in the southern part of the study area, which would have provided abundant water and food resources and is likely to have been well-used by Aboriginal people in the past. Archaeological evidence in the form of stone artefact sites may be present in the vicinity of the swamp, within the study area, although perhaps more intensive Aboriginal occupation is likely to have occurred adjacent to the coastline, approximately 2km to the east.

4.1.4 Land Use and Disturbance

There has been disturbance to the original environment of the area since the arrival of European settlers, including the creation of dams and the clearance of vegetation for rural purposes. Nevertheless, given the study area's position adjacent to Coomonderry Swamp, there is potential for relatively intact subsurface Aboriginal archaeological deposits to remain within the study area.

4.2 Archaeological Context

This section describes the nature of the known Aboriginal archaeology of the study area, based upon a search of previously recorded sites in the AHIMS database, and a review of relevant archaeological reports. This review further enables the development of a predictive model for potential Aboriginal sites within the study area. A description of relevant Aboriginal heritage site features is provided in Table 4.1 below.

Table 4.1 Description of Aboriginal heritage site features (after OEH 2012:8-10).

Site Type	Description
Aboriginal Ceremony and Dreaming	Spiritual/story places, which may not include physical evidence of previous use of the place, e.g. natural unmodified landscape features, ceremonial/spiritual areas, men's/women's sites, dreaming (creation) tracks, marriage places.
Aboriginal Resource and Gathering	Places related to everyday activities such as food gathering or hunting, or collection/manufacture of materials/goods for use or trade.
Art	May be found in shelters, overhangs or across rock formations. Techniques may include painting, drawing, scratching, carving/engraving, pitting, conjoining or abrading. A range of binding agents or natural pigments obtained from clays, charcoal and plants may have been used.
Artefact	Object(s) such as stone tools, and associated flaked material, spears, manuports, grindstones, discarded stone flakes, modified glass or shell, which provide evidence of Aboriginal use of the area.
Burial	Pre- or post-contact burial of an Aboriginal person, which may occur outside of designated cemeteries and may or may not be marked by stone cairns/carvings/mounds, e.g. in caves or sand areas, along creek banks etc.
Ceremonial Ring	Raised earth ring(s) associated with ceremony.
Conflict	Sometimes referred to as massacre sites, these are places where confrontations occurred between Aboriginal and non-Aboriginal people, or between different Indigenous groups.
Earth Mound	Round or oval-shaped mounded deposit containing baked clay lumps, ash and charcoal, and often black or dark grey sediment. Deposit may be compacted or loose and ashy, and may contain various economic remains such as mussel shell, bone or stone artefacts. Occasionally may contain burials.
Fish Trap	Modified area in a watercourse where fish were trapped for short-term storage and gathering.
Grinding Groove	Groove(s) in a rock surface resulting from the manufacture of stone tools such as ground edge hatchets and spears; or rounded depressions resulting from grinding of seeds and grains.
Habitation Structure	Structures built by Aboriginal people for short- or long-term shelter. May include historic camps of contemporary significance. More temporary structures are commonly preserved away from the NSW coastline. Smaller structures may make use of natural materials such as branches, logs and bark sheets, or manufactured materials such as corrugated iron. May include archaeological remains of a former structure such as a chimney/fireplace, raised earth building platform, excavated pits, rubble mounds etc.
Hearth	Cultural deposit usually containing charcoal and sometimes marked by hearth stones. May also contain heat-treated stone fragments.
Modified Tree (Scarred or Carved)	Scarred trees show modification marks resulting from cutting of bark from the trunk for foot holds; for use in the production of shields, canoes, boomerangs, burials shrouds etc; or for medicinal purposes. Carved trees have had the heartwood of the tree intentionally carved to form a permanent marker, which may indicate ceremonial use/significance of a nearby area, or which may have functioned as territorial or burial markers.
Non-Human Bone and Organic Material	Object(s) found within Aboriginal cultural deposits such as fish or mammal bones, ochres, or cached objects which may otherwise have broken down such as resin, twine, dilly bags, nets etc.
Ochre Quarry	Source of ochre used for ceremonial occasions, burials, trade and artwork.
Potential Archaeological Deposit (PAD)	Area where Indigenous objects are considered likely to occur below the ground surface.
Shell	Accumulation/deposit of shellfish from beach, estuarine, lacustrine or riverine species resulting from Aboriginal gathering and consumption, usually found in association with other objects like stone tools, fish bones, charcoal, fireplaces/hearths or burials. May vary greatly in size and components.
Stone Arrangement	Human-produced arrangements of stone usually associated with ceremonial activities;

	used as markers for territorial limits; or used to mark/protect burials.
Stone Quarry	Source of (usually) good quality stone, which is quarried and used in the manufacture of stone tools.
Waterhole	Source of fresh water for Aboriginal groups, which may have traditional ceremonial or dreaming significance, and which may also be used to the present day as a rich resource gathering area, e.g. waterbirds, eels, clays, reeds etc.

The study area seems to have been traditionally occupied by Aboriginal people of the Wodi Wodi language group, Tindale (1974) identifying their boundaries as extending from north of the Shoalhaven River to Wollongong, and inland to Moss Vale.

Creeks and other water resources, including swamps, were foci for Aboriginal occupation, providing fresh water, fish, shellfish, eels, waterbirds and plant foods, in addition to terrestrial animals drawn to the water (Attenbrow 2010:70-71). Trees provided shade, habitat for animals and birds, and bark for shelters (huts), canoes, paddles, shields, baskets and bowls. Stone outcrops provided material with which to make tools. When overhanging they provided shelter from the elements, and flat stone surfaces and shelters were sometimes engraved or painted by Aboriginal artists (Attenbrow 2010:105, 113-116, 120-122).

Aboriginal occupation of the greater Sydney region is likely to have spanned at least 20,000 years, although dates of more than 40,000 years have been claimed for artefacts found in gravels of the Cranebrook Terrace on the Nepean River (Nanson et al. 1987; Stockton 2009; Stockton and Holland 1974). Late Pleistocene occupation sites have been identified on the fringes of the Sydney basin and from rock shelter sites in adjoining areas. Dates obtained from these sites were 14,700 Before Present (BP) at Shaws Creek in the Blue Mountain foothills (Kohen et al. 1984), c.15,000-c.11,000 BP at on a levee near Pitt Town adjacent to the Hawkesbury River (Williams et al. 2012), c.11,000 BP at Loggers Shelter in Mangrove Creek (Attenbrow 1981, 2004), and c.20,000 BP at Burrill Lake on the South Coast (Lampert 1971). The majority of sites in the Sydney region, however, date to within the last 5,000 years, with some researchers proposing that occupation intensity increased from this period (Kohen 1986; McDonald 1994; McDonald and Rich 1993); although it has recently been argued that this is part of a longer trend in stepwise population growth and diversification of economic activity evident in south east Australia from the Early to Mid-Holocene (Williams 2013). This increase in sites may reflect an intensity of occupation that was influenced by rising sea levels, which stabilised approximately 6,500 years ago. Older occupation sites along the now submerged coastline would have been flooded, with subsequent occupation concentrating on and utilising resources along the current coastlines and in the changing ecological systems of the hinterland (Attenbrow 2010:55-56).

There have been a number of archaeological investigations previously undertaken in the vicinity of the study area. The information summarised in Table 4.2 below is based on reports that have been registered with the OEH AHIMS, and which are most relevant and informative to archaeological background of the current project; listed in order of increasing distance from the current study area.

Table 4.2 Summary of past Aboriginal heritage reports in the vicinity of the study area.

Report Area and Reference	Distance	Main Findings
Archaeological Survey of a Proposed Sand Quarry near Gerroa (Colley 1988)	c.1.5-3km north east	Shell midden deposits, including stone artefacts, we found to extend throughout the area of sand quarrying, many having already been disturbed by the quarrying. The site was registered as AHIMS #52-5-0261. Shells present were mainly pipi and mussel. A midden had previously been recorded in the area (AHIMS#52-5-0206) by a local resident, who noted pipi, mussel, whelk and oyster, as well as bone, charcoal and stone artefacts. It was concluded that rich archaeological deposits were present throughout the study area, particularly in the northern section where a high density of stone artefacts was identified. It was recommended that quarrying cease to

		allow detailed recording and excavation of the sites (see Lance 1989 below).
Archaeological Studies of a Sand Extraction Development at Seven Mile Beach (Lance 1989)	c.1.5-3km north east	Following Colley's (1988) recommendations, archaeological deposits in the sand quarrying area were mapped and recorded, with auguring undertaken to determine intact midden deposits, and subsequent excavation of 2 areas of undisturbed midden at the previously recorded location of site AHIMS#52-5-0261. One area (20m x 15m, with further scattered surface deposit over 30m x 0.5m) was near the brickies quarry, and the second (approximately 2.5m x 2m) was located at the northern end of a stone artefact scatter (exposed in an L shape 90m x 40m E-W and 100m x 30m N-S), from which 262 stone artefacts (mainly small quartz and chert flaked pieces) were collected. Another area (c.0.25m ²), which was not excavated, was adjacent to the main sand extraction area near Beach Road. Previously recorded site AHIMS#52-5-0206 was noted to contain a diffuse scatter of shell over 250m x 2m, which had been previously impacted by ploughing. Relatively intact midden deposit only remained in one small area (40m x 15m), which was outside of the proposed quarrying area and therefore could be preserved. Also, approximately 500m west of these deposits a diffuse scatter of shell and stone artefacts (10m x 0.5m) were identified adjacent to a previously dug materials testing pit. In conclusion, intact midden in the quarry sites was seen as a dense 7-8cm layer of dark ashy sand and dense shell (predominantly pipi, with some mud oyster and whelk, mussel and nerite), with charcoal and (mainly fish) bone, around 20cm below the surface. The predominance of pipi may be related to targeted use of the long sandy Seven Mile Beach, as pipi is a beach (not rock platform or estuarine) species.
Gerroa Sand Mine: Salvage of Aboriginal Artefacts (Barber 2004)	c.1.5km east	Monitoring of grader stripping in a new extension of a sand-mining lease was undertaken, with 5 stone artefacts recovered. A surface survey of the area by Barber in 2000 identified scattered fragments of pipi and a quartzite core. Sub-surface testing of the area was undertaken with 220 augur holes and a hand-excavated test-pit, with archaeological material found in 20 of these holes (including the test-pit). This material comprised 25 stone artefacts and scattered (mainly pipi) shell. Fragmented shell was located 10-30cm below the surface but no obvious shell lenses were identified, suggesting that the midden material in this area had been more disturbed than in other areas of Seven Mile Beach (see Lance 1989 above).
An Inspection of Aboriginal Sites on Moeyan Hill, Berry (Officer 2016)	c.2-3km west	In order to develop a future bush care plan for the Moeyan Hill Reserve, a survey was undertaken to confirm the location of a previously recorded shelter with PAD site (AHIMS #52-5-0192) and grinding groove site (AHIMS #52-5-0191). A previously unrecorded grinding groove site was also identified. Other sites were considered likely to occur in the area.
Princes Highway Upgrade, Mt Pleasant to Toolijooa Rd, Gerringong – Cultural Heritage Assessment: (Officer and Navin 2010)	c.4-5km north	2 artefact scatters (assessed to have low, local significance), 1 artefact scatter with PAD (potentially with moderate-high, local significance), 9 PADs and 5 mature fig trees with Aboriginal cultural significance, were identified as potentially being impacted by the road upgrade. Test excavation was recommended to determine the significance of the PADs, although it was considered that PADs along other sections of the highway had greater potential for intact archaeological deposits. Collection of the surface artefacts from the 3 scatters, and avoidance of impacts to nearby fig trees was also recommended.
Princes Highway Upgrade, Foxground and Berry Bypass Survey and Test Excavation (Navin Officer Heritage Consultants 2012)	c. 4-5km north	Survey identified 23 PADs, 2 artefact scatters, 12 mature fig trees and 4 places of Aboriginal cultural significance. Test excavation of 21 of the PADs found 236 stone artefacts (mainly chert and quartz flakes and flaked pieces) across 19 PADs, within 92 test pits. The richest artefact assemblages were noted at PASA 25 (AHIMS #52-5-0721; reclassified as G2B A32, AHIMS #52-5-0665), PASA 27 (AHIMS #52-5-0723; reclassified as G2B A33, AHIMS #52-5-0664) and PASA 29 (AHIMS #52-5-0725; reclassified as G2B A36, AHIMS #52-5-0662). A change to the development footprint adjacent to Broughton Creek was proposed after test excavation was complete; this area was considered to have moderate/high archaeological potential, and was classified as G2B PAD1. Salvage excavation was recommended at this PAD and at 9 other sites, including G2B A32, G2B A33 and G2B A36.

Princes Highway Upgrade, Foxground and Berry Bypass Geotechnical Testing Program Salvage Excavation (Dibden 2013)	c. 4-5km north	215 stone artefacts (predominantly chert, silcrete and quartz flakes and flake fragments) were salvaged from 18 2m x 1m test pits across 6 PADs, in areas where geotechnical testing was required. No artefacts were found at the 7 th PAD tested, PASA 16 (AHIMS #52-5-0715). 53% of the artefacts were recovered from pits 17 (PASA 25 and G2B A32, AHIMS #52-5-0721 and #52-5-0665) and 18 (PASA 27 and G2B A33, AHIMS #52-5-0723 and #52-5-0664), on either side of Broughton Creek. The most significant sites seemed to be located on the creek floodplain and/or on microtopography within c.200m of former wetland basins.
Archaeological Assessment of Proposed Tourism Development, Coolongatta Estate (Kuskie and Clarke 2002)	c.5km south	An Aboriginal heritage survey was undertaken on the southern slopes of Coolangatta Mountain. No sites were identified, and the area was considered to have been infrequently utilised by Aboriginal people in the past.

4.2.1 Registered Aboriginal Sites

An extensive search of the AHIMS database was undertaken on 17 April 2018 (AHIMS client service ID #339459), which identified 67 registered Aboriginal sites (one of which was later identified as not being an Aboriginal site) within an area 9x10km centred on the study area (Datum: GDA94/MGA Zone 56, Eastings: 290000-299000, Northings: 6143000-6153000). The search results are presented in full in Appendix B, summarised in Table 4.3, and presented in Figure 4.2.

Table 4.3 Summary of Aboriginal sites previously recorded in the vicinity of the study area.

Site Type	Number of Sites Present	Percentage
PAD	23	34.32%
Artefact Scatter and PAD	20	29.85%
Artefact Scatter	10	14.93%
Midden and Artefact Scatter	3	4.48%
Midden	2	2.99%
Conflict Site	2	2.99%
Aboriginal Resource and Gathering Site	2	2.99%
Art Site and PAD	1	1.49%
Axe Grinding Groove	1	1.49%
Shelter with Deposit	1	1.49%
Bora/Ceremonial Site and Carved Tree	1	1.49%
Modified Tree	1	1.49%
Total	67	100.00%

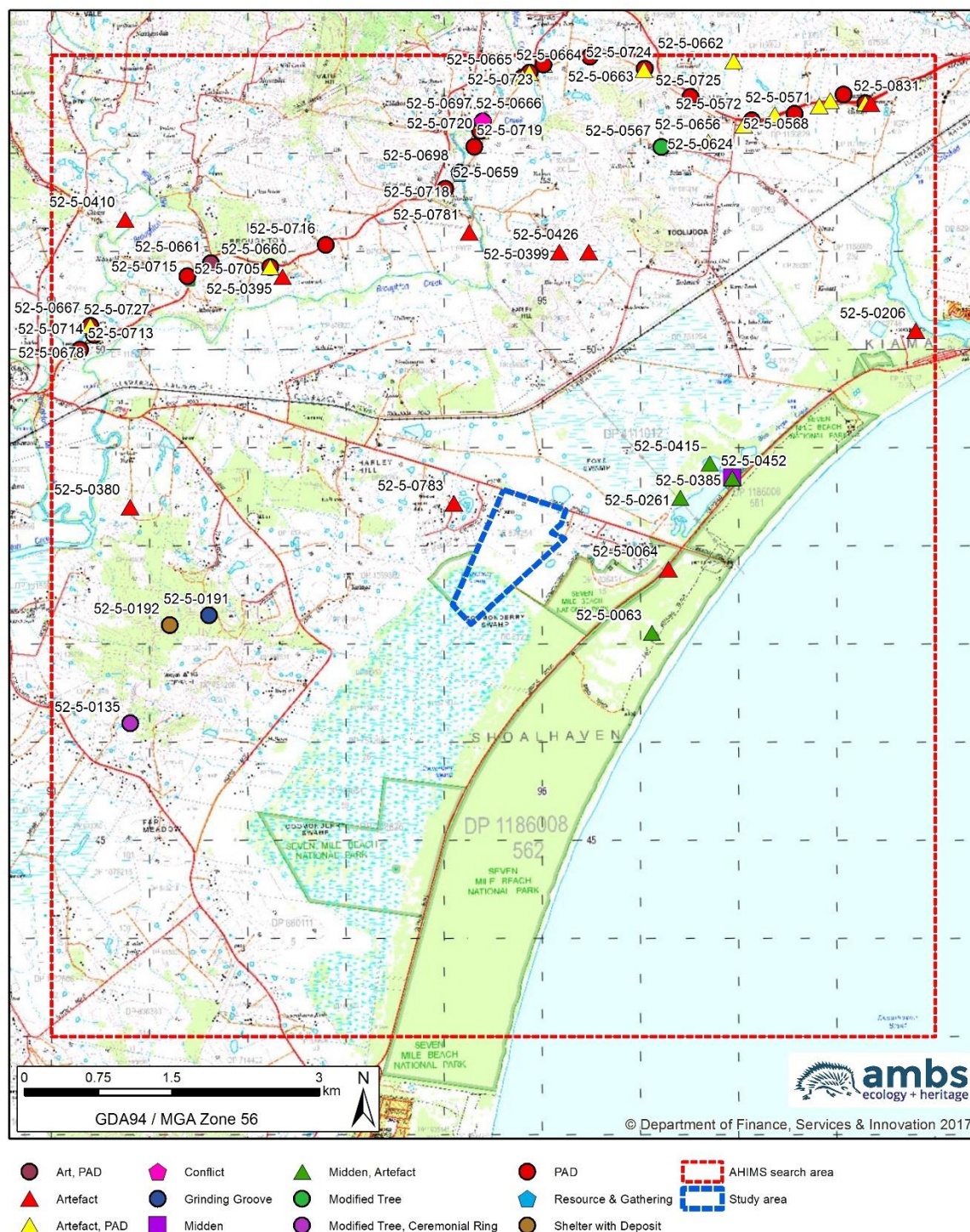


Figure 4.2 Registered AHIMS sites within the vicinity of the study area.

4.2.2 Summary

There are no sites registered within the study area. The closest registered site is approximately 300m to the west, site #52-5-0783 ("Campbells Run axe"). The site card appears to be unavailable from AHIMS, and there is no associated report listed; however, the registered name probably indicates that the site comprises a single Aboriginal stone axe, located near Campbells Run road. Nevertheless, the lack of registered sites within the study area is not unexpected, as the majority of the registered sites are located in areas previously subject to archaeological surveys associated with the development of roads (such as the Princes Highway) and other infrastructure. Open stone artefact scatters and Potential Archaeological Deposits (PADs) are the most frequent site

types previously recorded in the local area, although the high number of PADs is the result of assessments by Navin Officer Heritage Consultants for the Princes Highway upgrade (e.g. Officer and Navin 2010, Navin Officer Heritage Consultants 2012), which also located some Aboriginal resource/gathering sites and conflict sites. Modified trees, ceremonial sites, axe grinding grooves, art sites and shelters are also recorded in the vicinity, while closer to the coastline, shell middens/artefact scatters are more common.

Stone artefact scatters may occur in all landform contexts throughout the study area, although water is often the defining characteristic in distribution patterns. From the body of research throughout the region and within the broader state context, it is generally accepted that people tended to camp in proximity to water, resources or vantage points, with camping occurring more frequently the more permanent the water source. As such, stone artefact sites are the most likely type of site to be present within the study area, and may in fact be extensive on land adjacent to or overlooking Coomonderry Swamp.

Shell middens tend to be located within sand dunes adjacent to the coastline, and as such, are unlikely to occur within the study area.

Rock shelter sites and grinding grooves may only occur where suitable geology is present. In addition, grinding grooves are generally located in close proximity to water. Given the lack of suitable geology, these site types are unlikely to be found within the study area.

Distribution of scarred trees within the region is most directly influenced by the vegetation clearance, and land use history has a great impact on tree survival. Modified trees are only expected within areas of native, mature vegetation, and may occur in any landform context. As such, they are unlikely to be found within the study area. Ceremonial sites are also unlikely to remain given the land use history and previous disturbance.

5 Archaeological Survey

An Aboriginal archaeological survey and assessment of the study area was undertaken on Friday 20 April 2018 by AMBS archaeologists Christopher Langeluddecke and Selene Kenady, and Jerrinja LALC representatives Greg Connolly and Gerald Carberry, accompanied by representative of the landholder, Richard Hall

The fieldwork methodology, archaeological context, results of previous investigations in the study area and surrounds, and proposed impact management and options for further archaeological investigation were discussed with the Aboriginal community representatives during fieldwork, and aerial photographs and plans of the proposed works were made available to guide the survey.

Photographs of the study area were taken using an Olympus TG-4 digital camera, and track logs and were recorded using a Garmin Oregon 650 handheld GPS unit. Where Aboriginal objects were encountered, notes were to be made about their type, size, and material; and descriptions of the site were to be recorded including the environmental setting and details of any disturbance to archaeological material in the site's vicinity. The pedestrian survey aimed to inspect the entire property, with close attention paid to areas with visible ground exposure.

5.1 Survey Results

A single culturally scarred tree was identified within the study area, discussed in Section 5.1.1 below. No additional Aboriginal sites, places or objects were identified within the study area or immediate surrounds during the survey.

Visibility across the majority of the study area was limited by pasture, as well as by the residence and farm sheds, and the driveway to the house at the north west of the property from Beach Road. The property is currently lightly grazed by cattle, and has been cleared of most of its native vegetation. What larger trees remain on the property are regrowth, with a small number of isolated older live and dead trees still present.

Soil exposures with visibility in the study area were limited to erosion areas along a fenced cattle run on the southern facing slope in the centre of the property, and around dams in the north west of the property, and on the northern boundary of the property, adjacent to Beach Road. The study area has been extensively disturbed in the north west corner of the property by past ground levelling and construction of the residence, farm sheds, and property driveway.

Landforms within the study area are dominated by a high crest running east-west, sloping south towards the swamp. A low lying flat landform is present at the base of the slope in the south of the study area, up to approximately 100m from the swamp. This flat area is regularly inundated when the swamp floods. Two low ridgelines slope away from the crest in the north east and north west of the study area, with several dams constructed between them on the northern side of the dominating crest landform.

The proximity of the study area to the swamp to the south, and the presence of high, well drained landforms, suggest that there is potential for subsurface archaeological deposits to be present in the study area. It was not possible to determine the depth of sub-surface impacts across the site.

Survey coverage data was gathered during the archaeological field survey to allow quantification of ground exposure and visibility, as adverse observation conditions can affect the detection of Aboriginal sites and material. This data does not reflect the extent of the area that was physically

surveyed, but represents an estimate of the area of ground surface examined, and presents an estimate of the effectiveness of the survey, given environmental conditions and ground visibility. Survey coverage data is presented in accordance with the OEH guidelines, and is detailed in Table 5.1 and Table 5.2 and presented in Figure 5.1.

Table 5.1 Survey coverage.

Survey Unit	Landform	Survey Unit Area (m ²)	Visibility %	Exposure %	Effective coverage area (m ²)
1	simple slope	6,800	30%	30%	612
2	crest	3,240	10%	10%	32.4
3	simple slope	27,660	5%	5%	69.15
4	flat	3,210	10%	10%	32.1
5	flat	6,620	2%	2%	2.648
6	flat	9,960	0%	0%	0
7	simple slope	7,470	0%	0%	0
8	simple slope	2,190	0%	0%	0
9	crest	4,980	0%	0%	0
10	simple slope	10,650	0%	0%	0
11	crest	1,950	0%	0%	0
12	simple slope	27,750	2%	2%	11.1
13	simple slope	8,070	2%	2%	3.228

Table 5.2 Surveyed landform summary.

Landform	Landform area (m ²)	Area effectively surveyed (m ²)	% of landform effectively surveyed	Number of sites	Number of artefacts or features
simple slope	90,590	695.478	0.77%	1	1 scarred tree site, containing 2 scars
crest	10,170	32.4	0.32%	0	0
flat	19,790	34.748	0.18%	0	0



Figure 5.1 Survey units within the study area.



Figure 5.2 Cattle run area in transect 3, view to south.



Figure 5.3 Erosion area in transect 3, view to west.



Figure 5.4 Slope landform in transect 3, view to east.



Figure 5.5 Crest landform in transect 9, view to west.



Figure 5.6 Wooded area in transect 10, view to south east.



Figure 5.7 view towards dam in transect 13, view to west.

5.1.1 Disturbance

For the purposes of assessing the archaeological potential of the study area, the level of disturbance within the study area has been estimated. Four categories have been assigned to distinguish levels of disturbance (Table 5.3). The associated impacts of past land use practices on the archaeological resource are summarised for each category. A disturbance map of the study area is presented in Figure 5.8.

Following the archaeological survey, it is clear that the study area has been subject to varying levels of ground disturbance associated with initial land clearing and agricultural land use. Vegetation clearance across the study area can be considered complete, and the majority of mature trees on site are regrowth of non-native. The residence, rural sheds and outbuildings, including the former dairy and associated yards, as well as the driveway leading from them to Beach Road, indicate that the north western portion of the property has experienced significant disturbance from past construction and ongoing use of the buildings.

Two fenced cattle runs established during the property's former use as a dairy are present leading east and south from the rural buildings. Both runs show evidence of soil compaction compared to the adjacent paddocks, and have erosion areas, both likely caused by the repeated movement of stock.

Two excavated dams are present in the northern half of the study area, located along an ephemeral drainage line running off the east-west slope that dominates the landforms in the property. In addition, a small excavated shale quarry is present in the north of the study area, adjacent to the northern property boundary, which was full of water during the archaeological survey. Low-lying flat landforms in the south of the study area form a floodplain adjacent to Coomonderry Swamp, which becomes inundated during periods when the swamp floods.

The majority of the study area has been impacted by extensive vegetation clearance, establishment of pasture, construction of buildings and agricultural sheds, and ongoing agricultural use of the property as a dairy and for cattle grazing. As such, the majority of the study area is considered to have experienced a moderate level of disturbance. The excavated dams and quarry pit have experienced significant impacts and are considered to have experienced a high level of disturbance.

Table 5.3 Categories of Disturbance

Level of Disturbance	Type of Disturbance	Impact on Archaeological Resource
None	No effective disturbance of natural ground surface	<i>In situ</i> archaeological deposits may be present
Low	Limited vegetation clearance; stock grazing	Archaeological material should retain some spatial integrity although localised displacement may be expected
Moderate	Complete vegetation clearance; pasture/cultivation (ploughing); minor to moderate erosion	Archaeological materials may be present, although localised spatial displacement and artefact damage are likely; <i>in situ</i> deposits may remain below plough zone
High	Removal of topsoil for urban and industrial development; irrigation; road works; infrastructure construction; landscaping; landfill; severe erosion	While archaeological sites may be destroyed, remnant dispersed archaeological material may survive; the context of such material may be unknown.

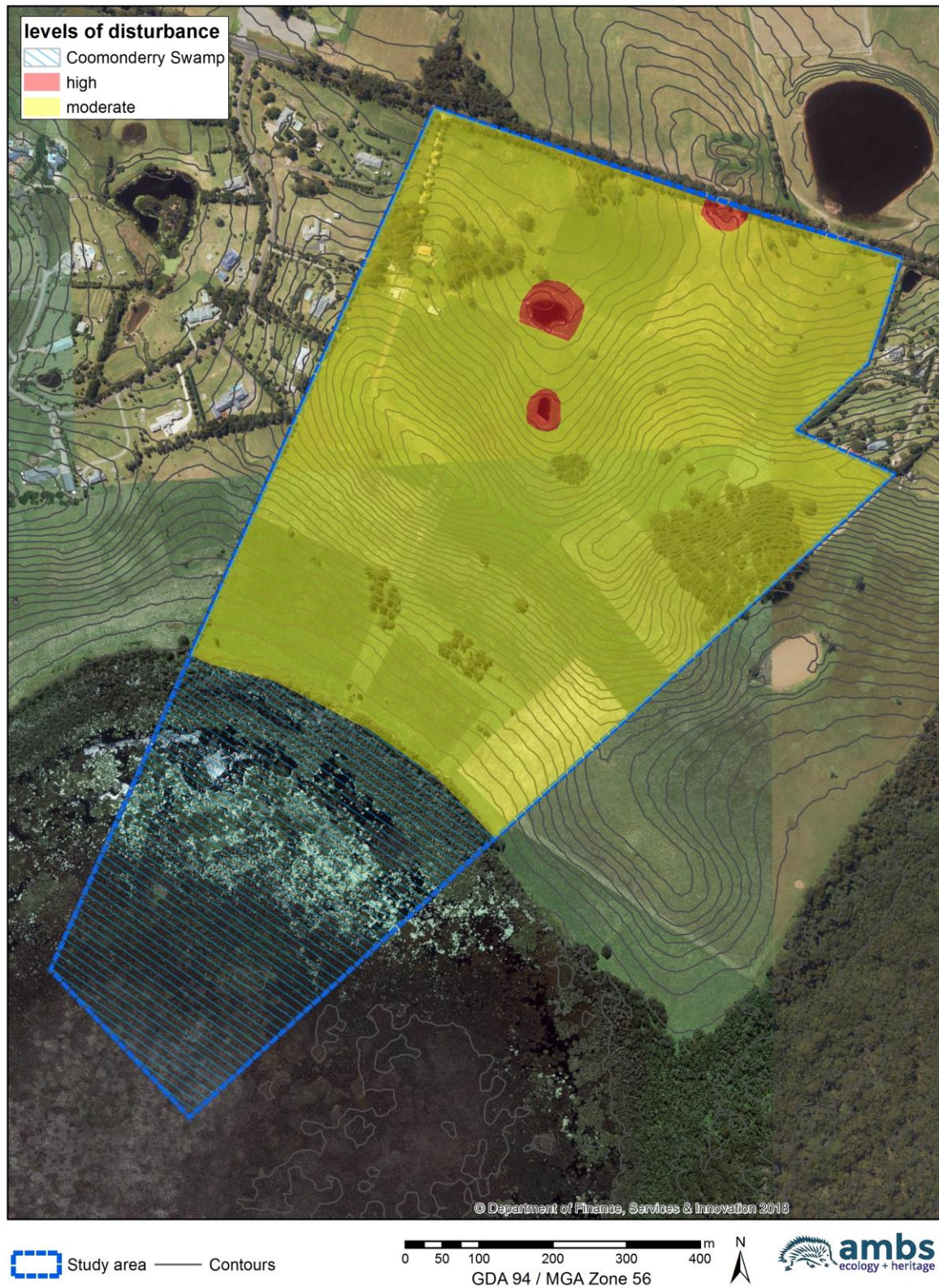


Figure 5.8 Assessed levels of disturbance across the study area.

5.1.2 Culturally Scarred Tree Site

Co-ordinates (GDA94/MGA Zone 56): 294964 E, 6148121 N

Landform: crest

Site Size: 10x10m

The culturally scarred tree site identified during survey is situated in a cleared paddock in the east of the study area. The tree is located approximately 600m north east of Coomonderry Swamp, on the lower edge of a crest landform that dominates the property (see Figure 5.9 and Figure 5.10). The site comprises two oval-shaped scars on a dead, but still standing, eucalypt. The tree has been dead for a significant period, possibly in excess of 10 years, and has no seed pods, leaves or other features which would allow its species to be further identified.

The tree retains two cultural scar features. One is located on the eastern facing side of the tree, and measures approximately 55cm high and 20cm wide (see Figure 5.11 and Figure 5.12). The other is on the southern facing side, and is approximately 25cm high by 15cm wide (see Figure 5.13 and Figure 5.14). Another scar is present on the western side of the tree, however the scar is triangular in shape and reaches to the ground, and is likely to be natural in origin (see Figure 5.15).



Figure 5.9 Location of culturally scarred tree recorded during archaeological survey.



Figure 5.10 Culturally scarred tree site identified during survey, view to south.



Figure 5.11 Scar feature on the eastern facing side of the tree, view to west.



Figure 5.12 Detail view of the scar feature on the eastern facing side of the tree, view to west.



Figure 5.13 Scar feature on the southern facing side of the tree, view to north.



Figure 5.14 Detail view of scar feature on the southern facing side of the tree, view to north.



Figure 5.15 Natural scar feature on western side of tree, view to east.

5.1 Survey Discussion

Limited ground visibility throughout the study area restricted the effectiveness of the archaeological survey, and as such it was not possible to identify the presence of Aboriginal artefact sites. All mature native trees old enough to retain cultural scarring were inspected during survey, and a single scarred tree was identified, although the tree had died was in poor condition. No additional Aboriginal artefacts or cultural objects were identified in the vicinity of the tree.

Given the close proximity of Coomonderry Swamp, which would have represented a significant resource area for Aboriginal people, and the presence of an elevated, well drained landform with views across the local area, there is potential for Aboriginal archaeological sites to be present within the study area which cannot be detected by archaeological survey. Although the study area has experienced impacts from past vegetation clearance, construction of the residence and farm buildings, and ongoing agricultural grazing, it is possible that subsurface archaeological deposits, if present, may remain present within the study area.

The planning proposal and results of the survey were discussed with the RAPs participating in the archaeological survey. Given that it was not possible to determine the presence or extent of any subsurface Aboriginal archaeological deposits during survey, it was determined that archaeological test excavations would be an appropriate measure to allow an understanding of the heritage of the study area, and to determine appropriate heritage impact management options for any future development of the study area.

6 Archaeological Test Excavation

Archaeological test excavations within the study area were undertaken from 12-22 June 2018, in compliance with Section 3.1 of the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010). Archaeological excavation was undertaken by AMBS Director Aboriginal Heritage Christopher Langeluddecke, AMBS Heritage Consultants Selene Kenady and Tanya Evofeev, and representatives of the RAPs as detailed in Section 3. The detailed excavation methodology provided to the RAPs is presented in Appendix A and is summarised in this section.

6.1 Test Excavation Sampling Strategy

In line with the Code of Practice a series of forty 50cm² test pits were manually excavated across the subject area, along transects sampling the study area's landforms. The test pits were placed approximately at 50m intervals across the slope, crest and flat landforms in the study area, allowing a suitable level of archaeological sampling. Where the test pit location were obviously disturbed or inaccessible, test pit locations were to be relocated no more than 5m along the transect. If the area of disturbance was such that the pit could not be relocated to avoid it, that pit would not be excavated. The total test excavation comprised no more than 0.5% of the study area.

Test Pit 1 was excavated in arbitrary 5cm units to allow examination of the nature and depth of the soils in the study area and to test the extent, integrity and composition of any archaeological deposits present. Subsequent test pits were excavated in 10cm units until it was determined that a culturally sterile deposit had been reached. Due to access and safety restrictions test pits were to be excavated no more than one metre in depth. Test Pits were numbered sequentially in the order in which they were excavated, and Geocentric Datum of Australia (GDA94) co-ordinates of each pit were taken using a Garmin Oregon 300 handheld GPS unit. Information was recorded on standard context recording forms (see Appendix C).

Where appropriate, stratigraphic sections were drawn detailing the stratigraphy and features within the excavated deposit and all units will be photographed, prior to and during excavation. Excavated soils were dry sieved as appropriate through nested 8mm and 5mm sieves, and all pits were backfilled on completion of the excavation using excavated.

6.2 Test Excavation Results

A total of 40 50cm² test pits were archaeologically excavated over eight days across the study area. A single planned pit location on the southern slope between test pits 34 and 35 was unable to be excavated, as the area was inundated at the time of excavation. A total of 11 stone artefacts were excavated from 9 test pits (test pits 1, 8, 9, 26, 27, 34, 35, 36 and 39). Test pit locations are presented in Figure 6.1 and detailed in Table 6.1.

Table 6.1 Archaeological test pit locations (GDA94, Zone 56H).

Test Pit #	Easting	Northing	Test Pit #	Easting	Northing	Test Pit #	Easting	Northing
1	294500	6148215	14	294965	6148117	27	294418	6148037
2	294523	6148171	15	294969	6148163	28	294389	6147996
3	294562	6148140	16	294972	6148212	29	294364	6147948
4	294598	6148102	17	294971	6148263	30	294484	6148060
5	294633	6148060	18	294971	6148313	31	294530	6148029
6	294671	6148028	19	294976	6148362	32	294568	6148006
7	294756	6147977	20	295009	6148072	33	294611	6147982
8	294709	6148002	21	295062	6148080	34	294654	6147951
9	294805	6147969	22	295110	6148075	35	294725	6147882
10	294851	6147959	23	295160	6148063	36	294759	6147849
11	294887	6148001	24	294478	6148167	37	294797	6147815
12	294918	6148029	25	294461	8148124	38	294829	6147778
13	294960	6148063	26	294440	6148079	39	294804	6147736
						40	294852	6147823



Figure 6.1 Archaeological test pit locations.

6.2.1 Soils Information

Full excavation data transcribed from all unit recording sheets used during the excavation, including the soil information, is presented in Appendix D, and a summary of soils identified during the excavation in each archaeological test pit is provided in Table 6.2. Photographs of examples of excavated test pits and their context are presented in Figure 6.2-Figure 6.9

Soils observed during excavation predominantly comprise of a layer of dark to medium brown organic clay loam topsoil (>20cm) over dark red/brown clay loam with shale inclusions (>30cm), followed by a hard layer of shale and grey clay (<40cm). The soil profile is typical of soils associated with the Coolongatta soil landscape, and was relatively consistent across the entire study area. Soils excavated within the cattle run portions of the property, which had experienced high levels of regular stock movement during the property's use as a dairy, were found to be more compacted and difficult to excavate. Pits 33-36, which were excavated along the mid-point of the southern-facing slope following several days of heavy rain, were found to be extremely wet, and water was observed soaking into the pits following completion of excavation, prior to backfilling.

The majority of test pits were excavated to between 30cm and 40cm deep, with the exception of test pit 2 which was excavated to a depth of 50cm. Modern material was not present within the a/b horizon in most test pits, with the exception of one test pit where fragments of glass were present in the topsoil (<10cm).

The depth and nature of the soils over the site were consistent with few colour variations. Inclusions of shale varied over the site and were observed to increase to a thick layer lining the base of the test pits at a depth of >40cm.

Table 6.2 Excavated soil information summary.

Test Pit	Soil Description and Disturbances
1	Excavated to 38cm. Dark brown organic loam onto dark red/black organic loam. Ends on brown/black/red loam and shale. Modern glass found at approx. 0 - 10cm
2	Excavated to 53cm. Dark brown organic loam onto light brown loam with shale inclusions. Ends on light brown clay and shale.
3	Excavated to 30cm. Dark brown clay loam onto dark brown clay loam with shale inclusions. Ends on shale with dark brown clay loam.
4	Excavated to 30cm. Dark brown clay loam onto dark brown clay loam with shale inclusions. Ends on shale with dark brown clay loam.
5	Excavated to 38cm. Dark brown clay loam onto dark brown clay loam with shale inclusions. Ends on shale with dark brown clay loam.
6	Excavated to 30cm. Moist dark brown clay loam onto dark brown clay loam with shale inclusions. Ends on shale with dark brown clay loam.
7	Excavated to 30cm. Moist dark brown organic loam onto dark brown/black clay loam with shale inclusions. Ends on shale with dark brown organic loam.
8	Excavated to 30cm. Dark black organic loam onto dark black loam with shale inclusions. Ends on shale with dark black organic loam. Burnt tree root at approx. 0 - 30cm
9	Excavated to 40cm. Moist dark brown clay onto moist dark brown clay with shale inclusions. End on shale with dark brown compacted clay.
10	Excavated to 20cm. Dark black organic loam with shale inclusions. Ends on dark red/brown organic loam.
11	Excavated to 30cm. Dark black organic loam onto dark red/brown loam with shale inclusions. Ends on shale with dark red/brown organic loam.
12	Excavated to 30cm. Dry Red/brown loam onto dry red/brown loam with shale inclusions. Ends on shale with dry red/brown loam.
13	Excavated to 40cm. Medium brown silty clay onto Medium dark brown silty clay with rock inclusions. Ends on medium brown compacted silty clay with rock inclusions.
14	Excavated to 40cm. Dark brown silty clay onto moist dark brown silty clay with rock inclusions. Ends on dark brown/black compacted clay with rock inclusions.
15	Excavated to 43cm. Dark red/brown organic loam onto black/red organic loam with shale inclusions. Ends on

	black/red loam with shale inclusions.
16	Excavated to 40cm. Grey compact silty loam with shale inclusions onto fine grey silty loam with shale inclusions. Ends on hard grey silt with shale inclusions.
17	Excavated to 37cm. Dark brown/black clay onto dark brown/black clay with gravel inclusions. Ends on hard orange/red clay.
18	Excavated to 30cm. Medium brown silty clay with shale inclusions onto medium brown silty clay with no inclusions. Ends on light brown hard clay.
19	Excavated to 30cm. Medium brown silty clay with gravel inclusions onto light brown mottled clay. Ends on light brown mottled clay with gravel inclusions.
20	Excavated to 30cm. Red/brown organic loam onto red/black organic loam with shale inclusions. Ends on shale with red/black organic loam.
21	Excavated to 30cm. Red/black organic loam with shale inclusions. Ends on shale with red/black organic loam.
22	Excavated to 30cm. Dark brown organic loam onto dark brown organic loam with shale inclusions. Ends on shale with dark brown organic loam.
23	Excavated to 40cm. Red/black organic loam with shale inclusions. Ends on shale with red/black organic loam. Tree root at Approx. 20 -30cm
24	Excavated to 20cm. Red/black organic loam with shale inclusions. Ends on shale with red/black organic loam.
25	Excavated to 20cm. Dark brown/black silty clay. Ends on hard moist light brown clay with gravel inclusions.
26	Excavated to 40cm. Red/brown organic loam onto grey/brown organic loam. Ends on grey loam clay with shale inclusions.
27	Excavated to 28cm. Red/brown organic loam onto dark grey clay loam. Ends on red/orange clay with gravel inclusions.
28	Excavated to 40cm. Dark brown organic silty clay onto medium brown/grey silty sand. Ends on medium brown/grey silty sand with orange clay inclusions.
29	Excavated to 30cm. Wet brown/grey silty clay. Ends on brown silty loam with red/orange clay inclusions.
30	Excavated to 20cm. Dark brown organic silty clay. Ends on shale with dark brown organic silty clay.
31	Excavated to 30cm. Grey silty loam with red/orange clay inclusions. Ends on shale with grey silty loam.
32	Excavated to 28cm. Dark brown organic silty loam. Ends on dark brown organic silty loam with shale inclusions.
33	Excavated to 37cm. Dark brown organic silty loam with shale inclusions. Ends on shale with dark brown organic silty loam.
34	Excavated to 41cm. Dark brown organic silty loam onto medium brown/grey silty loam with orange clay inclusions. Ends on wet grey mixed silty loam with clay and shale inclusions.
35	Excavated to 30cm. Wet brown silty loam onto dark brown organic silty loam with shale and charcoal inclusions. Ends on dark grey clayey silt with clay and shale inclusions.
36	Excavated to 30cm. Wet grey silty loam onto wet grey silty loam with shale inclusions. Ends on orange clay with shale inclusions.
37	Excavated to 30cm. Dark brown silty loam with clay inclusions onto dark brown loam. Ends on dark brown loam with shale inclusions.
38	Excavated to 30cm. Dark brown silty loam with clay and pebble inclusions. Ends on shale with dark brown silty loam with clay and pebble inclusions.
39	Excavated to 30cm. Dark brown organic loam. Ends on dark brown organic loam with clay inclusions.
40	Excavated to 20cm. Red/brown loam with shale inclusions. Ends on brown loam with shale inclusions.



Figure 6.2 Location of test pit 4 during excavation. View to north.



Figure 6.3 Base of test pit 1, excavated to the end of unit 5.



Figure 6.4 Test pit 14 being excavated adjacent to the scarred tree site located during archaeological survey. View to south.



Figure 6.5 location of test pit 12 during excavation. View to north west.



Figure 6.6 Test pit 24 being excavated, with test pit 25 in background. View to south.



Figure 6.7 Base of test pit 24, excavated to the end of unit 2.



Figure 6.8 Test pit 30, excavated to the end of unit 2.



Figure 6.9 Northern section of test pit 30, excavated to the end of unit 2.

6.2.2 Artefacts

Eleven stone artefacts were recovered during the test excavations, from nine test pits. Two of the pits contained two artefacts: pit 26 contained one artefact in unit 1 and one in unit 2; while pit 36 contained one artefact in unit 2 and one in unit 3. The latter two artefacts appear likely to have come from the same core or even the same flaking event, as their size, material and flaking pattern are similar, although they do not appear to conjoin. If this is the case, then it may indicate some movement of artefacts through the soil. One artefact was also broken into two pieces, although this is most likely to have occurred during the excavation process. The locations of the excavated artefacts are presented in Figure 6.1, and recorded artefact features are detailed in Table 6.3

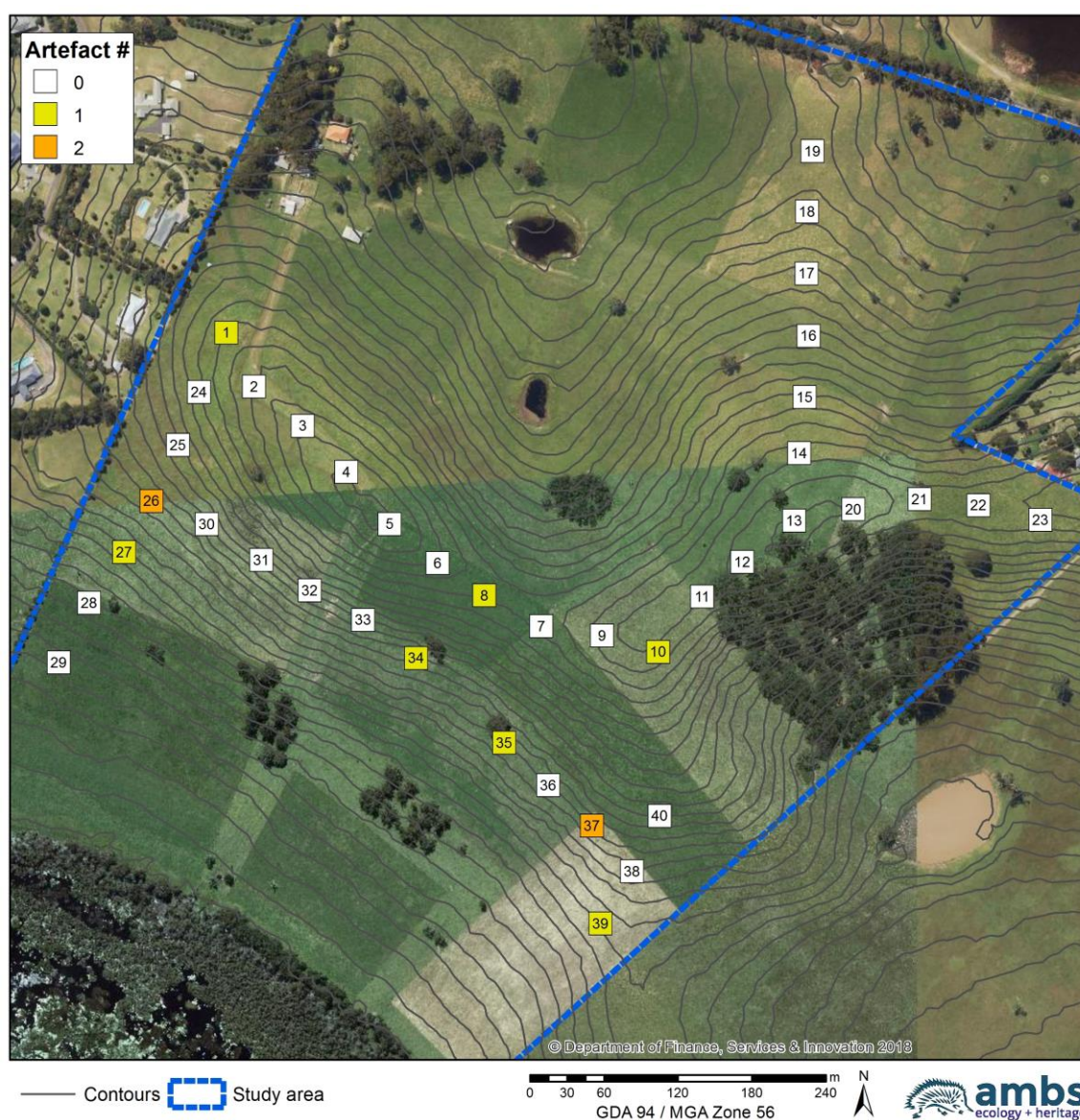


Figure 6.10 Excavated artefact distribution.

The small sample size of the artefacts recovered makes meaningful statistical analysis difficult, but the following brief observations may be made:

- Five artefacts (45%) were manufactured on silcrete, three (27%) on chert, two (18%) on fine-grained siliceous stone and one (9%) on quartz.
- All artefacts were flakes (with one identified as a backed blade), and all but one had no cortex, perhaps indicating that the sources of stone material were at a distance from this

site. Further, most of the artefacts (eight; 73%) were relatively small (weighing <1g), perhaps indicating that the flaking events that took place were with cores that were nearing the end of their use and thus preservation of stone material was desired; or perhaps merely indicating that the later stages of the core flaking were being undertaken at the site.

- The artefact with cortex was made of quartz, perhaps suggesting that it was manufactured from quartz pebbles located nearby.
- Evidence of the effects of heat were noted on one (chert) artefact, perhaps indicating deliberate heat treatment of stone to improve flaking properties.
- Two of the artefacts exhibited cone-split fracturing, and were likely discarded as a result of this error in the knapping process.
- The majority of artefacts had faceted, focal platforms and feather terminations, perhaps indicating that the same knapping technique was used by visitors to the site (or perhaps that it was even the same knapper). The presence of a backed blade indicates likely use of the site after c.5,000BP, which is not surprising given that sea level stabilisation occurred around this time.

Table 6.3 Artefact details.

ID	Square	Unit	Artefact Material	Artefact Type	Platform Surface	Platform Type	Termination	Length (mm)	Width (mm)	Thickness (mm)	% Surface cortex	Weight (g)	Additional information/ Comments
1	1	1	Silcrete	Backed blade	Faceted	Focal	Feather	19.6	7.3	4.7	0	0.69	
2	8	1	Chert	Flake	Indeterminate	Wide	Feather	19.8	9.4	3.6	0	0.51	
3	9	3	Fine grained siliceous	Flake	Faceted	Focal	Feather	24	9.4	4.7	0	0.83	Some retouch/ usewear along edges
4	26	1	Chert	Flake	Faceted	Focal		9	9.1	1.7	0	0.15	Proximal flake
5	26	2	Chert	Flake	Faceted	Focal	Feather	14.2	11.5	6.9	0	0.57	Cone-split fracture; evidence of heat treatment and platform preparation
6	27	3	Quartz	Flake	Cortex	Focal		8	8	1.5	30	0.13	Proximal flake
7	34	4	Fine grained siliceous	Flake	Indeterminate	Focal	Feather	37.6	22.2	8.1	0	5.65	
8	35	2	Silcrete	Flake	Indeterminate	Focal	Feather	21.4	11.8	3.4	0	0.45	
9	36	2	Silcrete	Flake	Faceted	Focal	Feather	47	35.4	13.4	0	15.77	Another bulb of percussion on the other side
10	36	3	Silcrete	Flake	Indeterminate	Focal	Feather	44.6	36.7	8.7	0	8.16	Cone-split fracture; likely from same core/flaking event as artefact ID #9
11	39	1	Silcrete	Flake	Faceted	Focal	Feather	19.2	13	3.2	0	0.66	In 2 pieces

6.3 Summary and Discussion of Results

Subsurface Aboriginal archaeological deposits identified during the test excavations recovered eleven Aboriginal stone artefacts, distributed across the southern and eastern portion of the study area. The artefacts are likely to represent the background archaeology of the local area, rather than long-term cultural activities that would result in extensive *in situ* archaeological sites. The assemblage, while small in number, is typical of those found in the region.

The test excavations recovered artefacts from elevated, well drained slope and ridge landforms overlooking Coomonderry Swamp. No artefacts were recovered on the northern side of the major ridge landform, or on the northern-facing slope and lower ridge landforms in the northern portion of the study area. These results conform to the established local archaeological predictive model, which generally considers that the stone artefact site types would be likely to be identified in proximity to major watercourses and resource sources, such as Coomonderry Swamp, and on good vantage points.

Although past impacts from land clearing and agricultural activities in the study area will have impacted *in situ* Aboriginal archaeological deposits, the test excavations have shown that subsurface Aboriginal stone tools remain present. Based on the results of the test excavations, archaeological survey, background analysis and predictive modelling, a PAD area likely to retain additional subsurface archaeological deposits has been identified, as presented in Figure 6.11. The PAD has been determined due to the presence of excavated artefacts, and encompasses the elevated slope and ridge landforms overlooking Coomonderry Swamp. The PAD excludes portions of the crest landform within the cattle run area of disturbance, which have been shown by test excavation not to retain artefacts. Given the small number of artefacts recovered by the test excavations, and the level of historic disturbance that has impacted the study area, it is unlikely that further archaeological assessment of the site will increase the current scientific understanding of the region.



Figure 6.11 Area of PAD.

7 Assessing Heritage Significance

A primary step in the process of Aboriginal cultural heritage management is the assessment of significance. Heritage significance relating to Aboriginal sites, objects and places in NSW is assessed in accordance with the criteria defined in the OEH guidelines, and cultural significance is identified by Aboriginal communities. The OEH Code of Practice states that archaeological values should be identified and their significance assessed using criteria reflecting best practice assessment processes as set out in the Burra Charter (DECCW 2010:21).

The criteria for assessing Aboriginal heritage significance are derived from the Burra Charter criteria of aesthetic, historic, scientific, social or spiritual value, for assessing cultural significance for past, present and future generations (Article 1.2). Therefore, the OEH guidelines for assessing significance require consideration of the following aspects of heritage sites:

- *Research Potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?*
- *Representativeness: how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?*
- *Rarity: is the subject area important in demonstrating a distinctive way of life, custom process, land-use, function or design no longer practiced? Is it in danger of being lost or of exceptional interest?*
- *Education potential: does the subject area contain teaching sites or sites that might have teaching potential? (OEH:2011:10)*

Not all sites are equally significant and not all are worthy of equal consideration and management. The significance of a site is not fixed for all time; what is considered as significant at the time of assessment may change as similar items are located, more research is undertaken and community values change. This does not lessen the value of the heritage approach, but enriches both the process and the long-term outcomes for future generations as the nature of what is conserved and why also changes over time (Pearson and Sullivan 1995:7).

7.1 Assessment Against Criteria

This assessment of heritage values against the OEH heritage assessment criteria is informed by the results of the environmental and heritage context, the predictive model for Aboriginal sites in the region, and the results of the Aboriginal heritage field survey. Aboriginal heritage sites are considered to be of heritage significance if they meet one or more of the following criteria:

Does the subject area have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons? – social value

Culturally scarred trees such as the site identified during archaeological survey are representative of past activity by Aboriginal people, and Aboriginal community representatives consulted with during the assessment have indicated that the scarred tree site retains high cultural significance to the local Aboriginal community.

The Aboriginal stone artefacts recovered from the excavation are representative of past activity by Aboriginal people. Although such archaeological sites/deposits retain cultural significance, a sense of place, and heritage value for local Aboriginal people, individually they are not rare at a local or regional level. Consultation undertaken to date with the stakeholder Aboriginal communities has indicated that, while all Aboriginal sites contain intrinsic cultural value, the artefacts recovered during the test excavations do not have any specific cultural significance to the local Aboriginal community, although they do indicate the importance of this cultural landscape.

Is the subject area important to the cultural or natural history of the local area and/or region and/or state? – historic value

The culturally scarred tree site is representative of Aboriginal occupation of the landscape, and provides evidence of Aboriginal use of the environment. Scarred tree sites are rare in the local region, and provide direct, visible evidence of the place's Aboriginal history. As such, the culturally scarred tree site has moderate historic value for Aboriginal heritage.

The Aboriginal stone artefacts recovered from the test excavation provide evidence of stone tool manufacturing processes, and use of the landscape by Aboriginal people. Such site types represent a continuity of Aboriginal occupation throughout the landscape, and have potential to provide evidence of the way that Aboriginal people used various places within the landscape. However, the information that can be obtained is limited by the small number of artefacts recovered. As such, the stone artefact site has low historic value for Aboriginal heritage.

Does the subject area have potential to yield information that will contribute to an understanding of the cultural or natural history of the local area and/or region and/or state? – Scientific (archaeological) value

The identified culturally scarred tree, although the tree has died, is a clear, intact example of Aboriginal tree scarring practices. As such, this site is considered to have high scientific (archaeological) value for Aboriginal heritage.

Aboriginal stone artefacts recovered from the study area were limited in number, and representative of artefact assemblages found in the local region. The stone artefact site and associated PAD is therefore considered to have low scientific (archaeological) value for Aboriginal heritage.

Is the subject area important in demonstrating aesthetic characteristics in the local area and/or region and/or state? – Aesthetic value

Aboriginal scarred trees are relatively rare in most areas throughout Australia due to past land clearing practices. Only two scarred trees have previously been recorded in the local area, and the scarred tree site identified in the study area can therefore be considered to be locally rare. In addition, the tree retains two separate scar features, which can be considered unusual in the local area and wider region. The culturally scarred tree site is therefore considered to have high aesthetic value for Aboriginal heritage.

Aboriginal stone artefacts recovered through test excavation in the study area are representative of artefact assemblages found in the local area. The study area itself is highly disturbed, has been modified and impacted since initial land clearing, and is unlikely to resemble the pre-contact landscape of the local area. The stone artefact site is therefore considered to have low aesthetic value for Aboriginal heritage.

7.1.1 Summary Statement of Significance

The study area contains a culturally scarred tree and a stone artefact site. The culturally scarred tree is considered to have high social, scientific and aesthetic value, and moderate historic value, and is therefore considered to have overall high significance for Aboriginal heritage value.

The stone artefact site, and associated area of PAD, is considered to have low scientific, historic and aesthetic value. Although all Aboriginal heritage sites contain intrinsic cultural significance, Registered Aboriginal Parties consulted with for this assessment did not identify any specific cultural significance attached to the artefact site, and it is therefore considered to have low overall significance for Aboriginal heritage.

8 Assessment of Heritage Impact

The current PP for the study area is being prepared to amend the LEP to permit rural residential subdivision and development, and environmental protection, and to facilitate the transfer of Coomonderry Swamp lands to the NSW National Parks and Wildlife Service (NPWS).

As development plans for the study area have not yet been prepared, it is not possible to assess impacts to the study area which might occur during future rural residential subdivision and development.

However, future works which are likely to be required as part of such a development may include levelling and construction of roads and driveways, installation of infrastructure such as power and water, installation of sewerage systems, levelling of ground in preparation for construction, and construction of residences. Where such works will occur within the identified PAD area, they will have negative impacts to the Aboriginal heritage site and any subsurface archaeological deposits which may be present.

Where future development will occur in the vicinity of the identified culturally scarred tree there is potential for the site to be negatively impacted. In addition, future residential development may require the tree to be altered or removed due to safety considerations, which would be a significant negative impact on the culturally significant site.

Implementation of future development in the area should observe the principles of the Burra Charter, which define standards of best practice for the conservation and management of heritage places. The aim of conservation is to preserve the cultural significance of a heritage place, and future development in the study area should seek to avoid or limit impacts to the Aboriginal heritage values of the sites where possible.

9 Conclusions and Recommendations

Archaeological survey of the study area identified a previously unrecorded culturally scarred tree site, located on a large ridge landform. The site retained two scar features, and has been assessed as having high heritage significance due primarily to its rarity. In particular, RAPs participating in this assessment have identified that the site is of high cultural significance to the Aboriginal community.

Archaeological test excavations conducted as per the OEH Code of Practice identified a subsurface Aboriginal archaeological deposit, located in the southern and eastern portion of the study area on elevated, well drained slope and ridge landforms overlooking Coomonderry Swamp. The excavated assemblage comprised 11 stone artefacts, and a total of 40 50cm² test pits were archaeologically excavated.

The stone artefact site, which retains subsurface archaeological deposit, has been determined to have low heritage value, as artefacts were found to be low in number, and representative of similar such sites across the region. Based on the results of the test excavations, archaeological survey, background analysis and predictive modelling, an area of PAD has been identified encompassing the elevated slope and ridge landforms overlooking Coomonderry Swamp. Given the level of archaeological assessment undertaken, and the results of the background analysis, further archaeological excavation within the study area is unlikely to increase the current scientific understanding of the region.

The following recommendations are based on the statutory requirements, a review of the environmental and Aboriginal heritage context of the study area, Aboriginal community consultation and the results of archaeological survey and test excavations undertaken as per the OEH Code of Practice.

As per Section 89A of the NPW Act, if a person identifies an Aboriginal heritage site in NSW which has not previously been recorded on AHIMS, they are legally bound to notify OEH of the object or site's location. AMBS will provide details regarding the culturally scarred tree site, and the artefact and associated PAD site, to OEH via AHIMS. Culturally scarred trees are considered to be highly significant both archaeologically and to the Aboriginal community, and are relatively rare in the Australian landscape due to past land clearing. SSC should consider including the scarred tree site as a heritage item in the LEP, to ensure that it is included in future planning decisions.

Recommendation 1

As per the requirements of the NPW Act, the culturally scarred tree site, and the artefact and PAD site identified by this assessment should be registered with OEH AHIMS by AMBS. Due to its heritage significance, Shoalhaven Council should consider including the scarred tree site as a heritage item in the LEP.

Future development in the study area has potential to impact the scarred tree site, and the preferred option is to avoid any direct impacts to the site during development planning. To avoid the risk of accidental impacts during future development a buffer area around the site should be established during construction in the vicinity of the site. The scarred tree buffer area may be at risk from accidental impacts during future development, and should be clearly demarcated during future works to prevent such impacts.

Recommendation 2

A buffer zone of at least 10m surrounding the scarred tree should be maintained during future development, to ensure the safety of this sensitive site. The buffer zone should be clearly demarcated during future development activities to prevent accidental impacts arising from the works, possibly through the use of temporary fencing. All impacts to this site and its immediate surrounds should be avoided.

As the culturally scarred tree is dead, there is a possibility that it may prove to be a safety risk if it begins to rot, or if its high branches are at risk of falling. If future residential development is proposed in the vicinity of the scarred tree the proponent should engage a suitably qualified arborist to determine if the tree is a safety risk.

If the arborist's assessment identifies that the tree requires direct impacts through pruning of limbs with potential to fall, or that the tree removed completely, an AHIP will be required to impact the site under the NPW Act. Application for an AHIP must be accompanied by an ACHA report assessing the proposed impacts, prepared in consultation with the local Aboriginal community.

Recommendation 3

If future residential development is proposed in the vicinity of the culturally scarred tree, an arborist should be engaged to determine if the tree poses a safety risk. If impacts are required to the tree in order to render it safe, including the removal of the tree, an ACHA assessing the specific impacts should be prepared, and an approved AHIP will be required in order to the works to proceed under the NPW Act.

The stone artefact and PAD site has been assessed as having low overall significance for Aboriginal heritage, and further archaeological investigation of the site is unlikely to increase the current scientific understanding of the region. As such, while heritage best practice requires that impacts to the site during future development should be avoided or minimised, and would require an approved AHIP under the NPW Act, it is not considered necessary for Council to establish a conservation area encompassing this site.

Recommendation 4

Future development in the study area should seek to avoid or limit impacts to the stone artefact and PAD site. Due to the low heritage significance of the artefact and PAD site, establishment of a conservation area encompassing the site is not recommended.

As there are currently no specific plans for development of the study area, it is not possible to assess impacts to the identified Aboriginal heritage values of the PAD area. Future development of the study area which has potential to impact on the stone artefact and PAD site will require an updated ACHA prepared by the proponent, including an impact assessment addressing the proposed development works.

Recommendation 4

Impacts to Aboriginal heritage sites in NSW require an AHIP under the NPW Act, and future proponents wishing to impact the stone artefact and PAD site within the study area should apply to OEH for an AHIP to allow the proposed development, with the support of the local Aboriginal community. The AHIP should be supported by an updated ACHA which addresses the specific impacts of the proposed development.

Input has been sought from the RAP organisations to determine if any wish to take possession of the excavated artefact assemblage under a Care and Control order, however no RAP has indicated that they wish to do so. Aboriginal stone artefacts excavated during this assessment should therefore be reburied on site as a condition of future AHIP applications

Recommendation 5

Approval for reburial of excavated artefacts should be sought as a condition of future AHIP applications in the study area.

No Aboriginal objects, or additional landscape features likely to indicate the presence of Aboriginal objects outside the identified APD and the culturally scarred tree site were identified by survey or test excavation. Based on the results of the background analysis, Aboriginal community consultation, archaeological survey and test excavations, it is considered highly unlikely evidence of previous occupation by Aboriginal people remains within the remainder of the study area, and no additional archaeological assessment is required before future development proceeds outside of the identified Aboriginal heritage sites.

Recommendation 6

No additional Aboriginal heritage sites, or areas with potential to retain Aboriginal heritage objects, have been identified outside of the PAD and the culturally scarred tree site. No additional archaeological assessment is required before development works proceed outside of the identified Aboriginal heritage sites.

The archaeological background analysis has indicated that there is little likelihood that Aboriginal ancestral remains would be present within the study area. However, should any suspected human remains be identified during future development of the study area, OEH protocols as per the Code of Practice should be followed:

If any human remains are disturbed in, on or under the land, you must:

- 1. not further disturb or move these remains*
- 2. immediately cease all work at the particular location*
- 3. notify NSW police*
- 4. notify OEH's Environment Line on 131 555 as soon as practicable and provide available details of the remains and their location*
- 5. not recommence any work at the particular location unless authorised in writing by OEH. (OEH 2010:34-35)*

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Appendix A: Aboriginal Community Consultation

Stage 1 Notification of Project Proposal

- Proof of newspaper advertisement
- Agency correspondence
- Correspondence with Aboriginal parties
- Registration of Interest

Stage 2 Presentation of Information about the project and Stage 3 Gathering information about cultural significance

- Proposed Methodology
- Written feedback provided by Aboriginal parties

Stage 4 Review of draft cultural heritage assessment report

- Correspondence with Aboriginal parties
- Draft report feedback provided by Aboriginal parties
- Aboriginal Community Consultation Log

Stage 1 Notification of Project Proposal

Proof of newspaper advertisement (published in the South Coast Register on the 4 April 2018)



Agency correspondence

Chris Langeluddecke <chris@ambs.com.au>
Cc: nsvenquiries@nntf.gov.au, Enquiries@nntf.gov.au, council@shoalhaven.nsw.gov.au, jlaic@bigpond.com.au, megan.meberson@oralra.nsw.gov.au, adminofficer@oralra.nsw.gov.au

29 March 2018 at 12:22

AMBS Ecology & Heritage has been commissioned by Shoalhaven City Council on behalf of Allen Price and Scanratts (consultants@allenprice.com.au) to prepare an Aboriginal Cultural Heritage Assessment for 510 Beach Road, Berry (Lot 4 DP 834254).

The assessment will be used to inform and update a Planning Proposal for the property, and will aim to identify any Aboriginal objects or places in the study area, assess their heritage significance, and provide recommendations regarding the future management of archaeological resources.

If you are able, can you please provide AMBS with a list of all known local Aboriginal people who may be interested in being consulted on this project, and who hold knowledge relevant to determining the cultural significance of Aboriginal objects and places, in accordance with the *Aboriginal Cultural heritage consultation requirements for proponents 2010* by 12 April 2018, to enable us to contact potential stakeholders prior to the close of the notification period.

If you are unable to provide stakeholder information directly, we request that you forward this correspondence to any local Aboriginal parties of whom you are aware, and who may be interested in registering as stakeholders for this project.

Potential stakeholders are invited to register their interest in the project with AMBS directly by email to chris@ambs.com.au or by post to: Attn: Chris Langeluddecke, AMBS Ecology & Heritage, Level 1, 33 Booth Street, Annandale NSW 2038

A map indicating the location of the project area is attached for your reference, and thank you very much for your time and assistance.

Regards,

Chris Langeluddecke
Director Aboriginal Heritage

ambs ecology & heritage
Level 1 33 Booth Street Annandale NSW 2038 - <http://ambs.com.au>
chris@ambs.com.au - 0421 613 149 - 02 9518 4489





17334 Beach Road Berry Study Area email.jpg
695K

Enquiry SouthEast <enquiry.southeast@ils.nsw.gov.au>
To: chris@ambs.consulting

29 March 2018 at 12:23

Thank you for your email.

A Customer & Administration Officer will action your request within 5 business days.

If your matter is urgent, please call 1300 795 299 between business hours to speak with a Customer Service Unit team member directly.

If you suspect an exotic animal disease please contact the Emergency Animal Disease hotline on 1800 675 888

If you suspect a plant health issue please contact the Exotic Plant Pest hotline on 1800 084 881

Stay up-to-date with advice, information, events and project updates from South East Local Land Services by [signing up to our e-newsletter](#).

--
Kind regards,

Customer & Administration Officer
South East Local Land Services
E: enquiry.southeast@ils.nsw.gov.au
T: Bega 6491 7800
Berry 4464 6000
Braidwood 4842 2594
Cooma 6452 1455
Goulburn 4924 1900
Yass 6118 7700
W: www.southeast.ils.nsw.gov.au/

Enquiries <Enquiries@nntt.gov.au>
To: "chris@ambs.com.au" <chris@ambs.com.au>

29 March 2018 at 16:26

UNCLASSIFIED

Native title search – NSW Freehold Parcel – Lot 4 DP834254 within Shoalhaven Shire Council LGA

Your ref: N/A - Our ref: SR4002

Dear Chris Langeluddecke,

Thank you for your search request received on 29 March 2018 in relation to the above area, please find your results attached.

Please note: Where the area identified to be searched is indistinct, generalised, or is for a freehold parcel, the results provided may relate to the Local Government Area (LGA) or Local Aboriginal Land Council (ALC).

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Register of Indigenous Land Use Agreements
- Notified Indigenous Land Use Agreements

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our [website](#).

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us on the free call number 1800 640 501.

Regards,

Enquiries

Public enquiry hours are 8.30am to 4.30pm

National Native Title Tribunal | Perth

Facsimile (08) 9425 1193 | Email enquiries@nntt.gov.au

Freecall 1800 640 501 | www.nntt.gov.au

Shared Country Shared Future

Council Email <Council@shoalhaven.nsw.gov.au>
To: Chris Langeluddecke <chris@ambs.com.au>

29 March 2018 at 12:23

Thank you for contacting Shoalhaven City Council.

Your email has been received and will be referred to the appropriate Council Officer and Section for action.

Please note this email has been generated automatically and does not require a response.

Meanwhile you may care to visit <http://shoalhaven.nsw.gov.au> for further information regarding Council activities and services. Your email may take a while to process so if the matter is urgent, please call Council during business hours on 02 4429 3111 or after hours on 02 4421 3100.

Shoalhaven City Council
02 4429 3111
Bridge Rd (PO Box 42) Nowra NSW 2541
council@shoalhaven.nsw.gov.au <<mailto:council@shoalhaven.nsw.gov.au>>
www.shoalhaven.nsw.gov.au <<http://www.shoalhaven.nsw.gov.au>>

Alfred Wellington <jalc@bigpond.com> 4 April 2018 at 09:41
To: Chris Langeluddecke <chris@ambs.com.au>
Cc: "nswenquiries@nntt.gov.au" <nswenquiries@nntt.gov.au>, "Enquiries@nntt.gov.au" <Enquiries@nntt.gov.au>, "council@shoalhaven.nsw.gov.au" <council@shoalhaven.nsw.gov.au>, "jalc@bigpond.com.au" <jalc@bigpond.com.au>, "megan.meberson@oralra.nsw.gov.au" <megan.meberson@oralra.nsw.gov.au>, "adminofficer@oralra.nsw.gov.au" <adminofficer@oralra.nsw.gov.au>

Hi Chris,

Jerrinja LALC formally register our interest as per requirements under the ALRA 1983. I will discuss this proposal with known cultural knowledge holders and will let you know if I find out about other stakeholders that need contacting.

Regards

Danielle Ratcliffe <Danielle.Ratcliffe@shoalhaven.nsw.gov.au> 10 April 2018 at 09:36
To: Chris Langeluddecke <chris@ambs.com.au>

Hi Chris,

Council can provide contact details of the key organisations involved in land related matters. The following groups may be able to identify other individuals who are known Aboriginal knowledge holders:

Nowra Local Aboriginal Land Council

Greg Peterson CEO (there is currently an interim CEO - Shane Snelson)

PO Box 528

Nowra NSW 2541

02 4423 3163 0432 114 123

Jerrinja Local Aboriginal Land Council

PO Box 167

Culburra Beach NSW 2540

I hope this is of assistance to you.



Office of
Environment
& Heritage

5 April 2018

Chris Langeluddecke
Director Aboriginal Heritage
AMBS Ecology & Heritage
Level 1, 33 Booth Street
Annandale NSW 2038

By email: chris@ambs.com.au

Dear Chris

**REQUEST FOR INFORMATION ABOUT POTENTIAL ABORIGINAL STAKEHOLDERS AS
REQUIRED UNDER OEH ABORIGINAL CULTURAL HERITAGE CONSULTATION
REQUIREMENTS FOR PROPONENTS 2010**

RE: 510 Beach Road, Berry (Lot 4 DP 834254)

Thank you for your letter dated 29 March 2018 regarding the above matter. Attached is a list of known Aboriginal parties for the Shoalhaven Local Government Area. OEH believes these groups and individuals are likely to have an interest in the project.

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

This list is not necessarily an exhaustive list of all interested Aboriginal parties and does not remove the requirement of a proponent or consultant to advertise in local print media and contact other groups in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (April 2010).

The contact details in the attached list are provided solely for the purpose of contacting people about this project. The contact details must remain private and must not be reproduced in publicly available reports or other documents.

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

PO Box 513 Wollongong NSW 2520
84 Crown Street, Wollongong NSW 2500
Email: rog.illawarra@environment.nsw.gov.au

Page 2

Please note that the contact details in the list provided by OEH may be out of date as the list relies on Aboriginal parties advising OEH when their details need changing. If you are aware of any incorrect contact details on the list please contact OEH. AHIP applicants should make a note of any group they are unable to contact as part of their consultation record.

If you wish to discuss any of the above matters further please contact Julia Maskell on 6229 7039 or Julia.Maskell@environment.nsw.gov.au.

Yours sincerely



For

Chris Page
Senior Team Leader, Planning – Illawarra
Regional Operations Group
Office of Environment and Heritage

Enclosure: Attachment 1: Shoalhaven LGA Stakeholder List



Office of Environment & Heritage

Attachment 1: Shoalhaven LGA Stakeholder List

Organisation/ Name	Contact Person	Postal Address	Phone number, email
" "	Pimmy Johnson Bell	67 Dickens Road, AMBERVALE NSW 2560	Mob: 0425 066 100 Email: gundungurrtribservices@gmail.com
" "	Peter Foster	4 Tuppal Way, AIRDS NSW 2560	Mob: 0432 590 289 Email: gundungurrtribservices@gmail.com
" "	Teangi Mereki Foster	1/6 Central Avenue, OEK FLATS NSW 2529	Mob: 0420 978 969 Email: gundungurrtribservices@gmail.com
" "	Larry Hoskins	2/3 Colville Place, ROSEMEADOW NSW 2560	Mob: 0478 009 879 Email: gundungurrtribservices@gmail.com
" "	Christopher Payne	9/15-22 Burns Road, LEUMEAH NSW 2560	Mob: 0466 975 437 Email: gundungurrtribservices@gmail.com
" "	Sam Wickman		Email: gundungurrtribservices@gmail.com
Badu (Murrin Clan/Peoples)	Karia Lea Bond	11 Jeffery Place, Monuya, NSW 2537	Mobile Phone: 0476381207; email: baduchts@gmail.com
Batemans Bay Local Aboriginal Land Council		PO Box 542, Batemans Bay NSW 2536	Ph: (02) 4472 7390 Fax: (02) 4472 8622
Biamanga (Murrin Clan/Peoples)	Seli Storer		Email: biamangachts@gmail.com
Bilinga (Murrin Clan/Peoples)	Simalene Carriage		Email: bilingachts@gmail.com
Bilinga Cultural Heritage Technical Services (Mirramajah)	Robert Brown		Email: bilinga@mirramajah.com
Cullendulla (Murrin Clan/Peoples)	Corey Smith		Email: cullendullachts@gmail.com
Darug Land Observations	Anna O'Hara	PO Box 2006 Bendelong NSW 2539	Email: daruglandobservations@gmail.com

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Organisation/Name	Contact Person	Postal Address	Phone number; email	
Dharug (Murrin Clan/Peoples)	Andrew Bond		Email: dharugchts@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Gadhu Dreaming	Gordon Campbell		Email: gordy2540@hotmail.com Mobile: 0401342364	
Goobah Development PTY LTD (Murrin Clan/Peoples)	Basil Smith	66 Grantham Road Batehaven NSW 2536	Mob: 0405995725; email: bunjilsmith@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Gundungurra Tribal Technical Services	David Bell	67 Dickens Road, AMBERVALE NSW 2560	Mob: 0450 124 891 Email: gundungurracontribservices@gmail.com	
Gunyuu (Murrin Clan/Peoples)	Kylie Ann Bell		Email: gunyuuu@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Gunyuu Cultural Heritage Technical Services (Mirramajah)	Darlene Hoskins- McKenzie		Email: gunyuu@mirramajah.com and management@mirramajah.com (management & administrative email address for the Mirramajah Group of RAPs).	This group is a member of the Mirramajah Group of RAPs
Guunamaa Dreamin Sites and Surveying	Richard Campbell	2 Minda Crescent Oakflats NSW 2529	Mob: 0499 688 663; email: richardcampbell123@outlook.com	
Individual	Darryl Caines	11/17-19 Grove Circuit Lake Illawarra 2528	Mobile Phone: 0413 822 804 Email: darrylcaines8@gmail.com	
Individual	Gary Caines	28 Gowan Brae Avenue, Mt Ousley, NSW 2519	Ph: (02) 4227 2690; Email: grc04@live.com.au and garycaines87@gmail.com	
Individual	Noel Butler		Mobile Phone: 0405 646 911 Email: nuragunyu@gmail.com	
Individual	Ronald Carberry	13 Roseby Park ORIENT POINT NSW	Mobile Phone: 0421 822 443	
Individual	Noel Webster	20 Peacehaven Way, Sussex Inlet, NSW, 2540	Email: noeliwebster2@bigpond.com	
Individual	Leanne Tungai		Email: leannecaroltungai@gmail.com Mobile Phone: 0478157604	
Individual	Gayle Watts		Email: gayle.w@hotmail.com Mobile: 0403 172 694	
Jerrigong (Murrin Clan/Peoples)	Jodi Anne Stewart	2/10 Burnett Avenue Garrigong NSW 2534	Mob: 0422 800 484; Email: jerrigong@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Jerrinja Local Aboriginal Land Council	CEO: Alfred Wellington	PO Box 167 CULBURRA BEACH NSW 2540	Ph: 4447 4355 Email: jalac@bigpond.com and jalac17@gmail.com	
Karrial (Murrin Clan/Peoples)	Karrial Johnson		Email: karrialchts@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River

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Organisation/ Name	Contact Person	Postal Address	Phone number; email	
Minnamanning	Aaron Broad	1 Waratah Avenue ALBION PARK RAIL NSW 2527	Mob: 0402 526 888 (do not publish)	
Munyunga (Murrin Clan/Peoples)	Kaya Dawn Bell		Email: munyungachts@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River This group is a member of the Mirramajah Group of RAPs
Munyunga Cultural Heritage Technical Services (Mirramajah)	Suzannah McKenzie		Email: munyunga@mirramajah.com	
Murramarang (Murrin Clan/Peoples)	Roxanne Smith		Email: murramarangchts@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Murri Bidgee Mullangari Aboriginal Corporation	Ryan Johnson and Darleen Johnson		Mobile (Ryan): 0475 565 517 Mobile murribidgeemullangari@yahoo.com.au	0490 051 102 Email:
Murrumbul (Murrin Clan/Peoples)	Mark Henry		Email: murrumbul@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River This group is a member of the Mirramajah Group of RAPs
Murrumbul Cultural Heritage Technical Services (Mirramajah)	Levi McKenzie-Kirkbright		Email: murrumbul@mirramajah.com	
Nowra Local Aboriginal Land Council		PO Box 528 Nowra NSW 2541 59 Belinda St Bomaderry NSW 2542	Ph: 02 44233163 Email: nowralalc@bigpond.com and nlab@westnet.com.au	
Nundagurri (Murrin Clan/Peoples)	Newton Carriage		Email: nundagurri@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Pemulwuy (Murrin Clan/Peoples)	Pemulwuy Johnson		Email: pemulwuyd@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Shoalhaven Elders and Friends Organisation	Chairperson: Gordon Wellington	1 Roma Close, Bomaderry, NSW 2541	Ph: (02) 44233182	
South West Rocks Corporation	Edward Moran (Director)	4 Crystal Place South West Rocks NSW 2431	Mobile 0499 281 456	
Three Ducks Dreaming Surveying and Consulting	Leonard Wright	40 Tuggerah Circuit FLINDERS 2529	Ph: 0422 382 950 Email: lbjwright1977@hotmail.com	
Tungai Tonghi	Troy Tungai	10 Paterson Place Barrack Heights 2528	Email: troylungai72@outlook.com Mobile Phone: 0423 350 430	
Ulladulla Local Aboriginal Land Council		66 Deering Street, P.O. Box 520 ULLADULLA NSW 2539	Ph: 4455 5883 Fax: 4454 0440 Email: admin@ulladullalc.com.au and ulladulla@internode.on.net.au	
Walbunja (Murrin Clan/Peoples)	Hika Te Kowhai	15 Renee Crescent Moruya Heads NSW 2537	Mob: 0475 352 499; email: Walbunja@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River

Page 4

Organisation/ Name	Contact Person	Postal Address	Phone number, email	
Walgali (Murrin Clan/Peoples)	Ronald Stewart		Email: walgaluchts@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.
Warra Bingi Nunda Gurri	Nathanial Kennedy		Mobile Phone: 0406 924 258 Email: warrabingi@gmail.com	
Wingikara (Murrin Clan/Peoples)	Hayley Bell		Email: wingikarachs@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.
Wingikara Cultural Heritage Technical Services (Mirramajah)	Wandai Kirkbright		Email: wingikara@mirramajah.com	This group is a member of the Mirramajah Group of RACs
Wullung (Murrin Clan/Peoples)	Lee-Roy James Boota	54 Blackwood Street Gerrington NSW 2534	Mob: 0403 703 942; Email: wullunglb@gmail.com	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.
Yerramurra (Murrin Clan/Peoples)	Blaan Davis	C/O Murrin Administrative Services 15 Renee Crescent Moruya Heads NSW 2537	Email: yerramurra@gmail.com Mobile Phone: 0432 010 442	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.

Correspondence with Aboriginal Parties



Barraby Cultural Services
ABN: 65 112 720 796
6 Macgibbon Pde,
Old Erowal Bay NSW 2540
T: 0455 326 485
E: barrabyculturalservices@gmail.com

04/04/2018

ATT: Chris Langeluddecke
AMBS Ecology & Heritage,
Level 1, 33 Booth Street,
ANNANDALE NSW 2038

**Re: Register Interest in Aboriginal Cultural Heritage Assessment:
510 Beach Road, Berry NSW
(Lot 4 DP 834254)**

Barraby Cultural Services would like to submit an Expression of interest for Aboriginal consultation and an field work for this project.

We have experience in Cultural & Heritage works.
All staff take pride in their work and are able to undertake all aspects of the work.

Attached are our Insurances.

Looking forward to working with you.

Yours Truly,

Lee Field



YULAY CULTURAL SERVICES
ABN: 20 192 216 560
15 Rowley place, Airds NSW 2560
Phone: 0411 048 794 Email: yulayculturalservices@gmail.com

04/04/2018

ATT: Chris Langeluddecke
AMBS Ecology & Heritage
Level 1, 33 Booth Street,
ANNANDALE NSW 2038

Re: Aboriginal Cultural Heritage Project -
510 Beach Road, Berry NSW - (Lot 4 DP 834254)

Yulay Cultural Services would like to express an interest to register for Aboriginal consultation and an field work for this project.

We have been involved in All Archaeological Works and hold cultural knowledge.

We have current insurances and experienced staff.
We look forward to working with you.

Kind Regards

Arika Jalomaki

Yulay Cultural Services

Yurrandaali
Cultural Services

ABN: 52 618 794 088

AMBS Ecology & Heritage,
Level 1, 33 Booth Street,
ANNANDALE NSW 2038

Wednesday, 4th April 2018

Att: Chris Langeluddecke,

**Re: Registration of interest Aboriginal cultural heritage project for:
510 Beach Rd, BERRY (Lot 4 DP 834254)**

Yurrandaali Cultural Services (YCS) would like register for consultation and an field work for this project.

We have experience in cultural & heritage maintenance and identification.
Our site officers are fit and able to do cultural site surveys.

I have enclosed copies of my public liability and workers comp policies for your records.

We look forward to working with you.

Kind Regards

Bo Field

Manager

Yurrandaali Cultural Services
ABN: 52 618 794 088
6 Macgibbon Pde,
Old Errol Bay NSW 2540
0457 546 643
yurrandaali_cs@hotmail.com

Ryan Johnson <murrabidgeemullangari@yahoo.com.au>
To: Chris Langeluddecke <chris@ambs.com.au>

18 April 2018 at 16:10

Hi Chris

Can you please register our corporation for the above project.

Kind regards

Ryan Johnson | Murra Bidgee Mullangari



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147

E: murrabidgeemullangari@yahoo.com.au

ICN: 8112

Troy Tungai <troytungai72@outlook.com>
To: Chris Langeluddecke <chris@ambs.com.au>

18 April 2018 at 19:12

I Chris

Thanks for your email yes I would like to put my expression of interest in for the upcoming work at 510 beach road berry . as I have done a lot of work in that era and also have

A lot of cultural knowledge.

Please, Don't hesitate to call me

On 0423350430.

Troy tungai/tonghi

Nathanial Kennedy <warabingi@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

18 April 2018 at 16:31

Hi Chris,

Can you please register Warra Bingi Nunda Gurri's interest for the ACHA for 510 Beach Rd, Berry. Please include me in any further correspondence for this project.

Regards,

Nathanial

[Quoted text hidden]

--

Nathanial Kennedy
Senior Sites Officer

M: 0406 924 258

E: warabingi@gmail.com



Warra Bingi Nunda Gurri
Indigenous Sites Conservation
45 Rosemont St, West Wollongong
NSW 2500



DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453

Email: daruglandobservations@gmail.com
PO BOX 2006 BENDALONG NSW 2761
Mobile: 0413 687 279

18th April, 2018

Chris Langeluddecke
AMBS Ecology & Heritage
Level 1, 33 Booth Street
ANNANDALE NSW 2038

Email: chris@ambs.com.au

Notification and Registration of ALL Aboriginal Interests

RE: LOT 4 DP 834254 – 510 BEACH ROAD, BERRY, NSW

Aboriginal Archaeological & Cultural Heritage Assessment

Dear Chris,

Please be advised that Darug Land Observations Pty Ltd is seeking to be involved in any and all consultation meetings and fieldwork.

This office specialises in Aboriginal and community consultations, and has a membership that comprises of Traditional owners from the area in question. Those retain strong story, song lines, oral history and continued contact.

Please also be advised that this Aboriginal organisation does not do volunteer work or attend unpaid meetings. I hope that you advise your client of this so that, 'This Group', will not be discriminated against and refused paid fieldwork. DLO's rate is \$440 half day (less than 4 hours) and \$880 per day (flat rate), including GST.

All correspondence should be emailed to: daruglandobservations@gmail.com and any further consultation during this project can be directed to Anna O'Hara on mobile 0413 687 279.

Yours sincerely,

Anna O'Hara
Darug Land Observations Pty Ltd

Jamie Workman

Leanne Tungai <leanneacarolltungai@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

19 April 2018 at 11:55

Could you please register me for up coming work on this project please
[Quoted text hidden]

Leanne Tungai <leanneacarolltungai@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

19 April 2018 at 08:39

I am interested.

Richard Campbell <richardcampbell123@outlook.com>
To: Chris Langeluddecke <chris@ambs.com.au>

19 April 2018 at 07:01

Hi thankyou for the email yes I would like to register for this project as I have significant knowledge of this area as Campbells run is named after my family who live in the area for years n is known for aboriginal occupation...

Kind regards
Richard Campbell

leonard b j wright <lbjwright1977@hotmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

19 April 2018 at 07:54

Hi Chris,

Just like to thank you for the email an i would be more the happy to register my expressionof interest in for the work at 510 Beach Road, Berry for the aboriginal cultural components of this project thanks again an look forwardto hearing from you soon..

Kind regards Leonard wright
Three Ducks Dreaming Survey

Biamanga <biamangachts@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

1 May 2018 at 11:03

Hi Chris

This is Biamangas expression of interest to register for the above project.

We wish to be kept informed of any further developments thankyou.

On Wed, Apr 18, 2018 at 3:19 PM, Chris Langeluddecke <chris@ambs.com.au> wrote:
[Quoted text hidden]

--
Kind Regards
Seli Storer
Chief Executive Officer
Biamanga

Cullendulla <cullendullachts@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

1 May 2018 at 11:03

Hi Chris

This is Cullendullas expression of interest to register for the above project.

We wish to be kept informed of any further developments thankyou.

On Wed, Apr 18, 2018 at 3:19 PM, Chris Langeluddecke <chris@ambs.com.au> wrote:
[Quoted text hidden]

--
Kind Regards
Corey Smith
Cultural Heritage Officer
Cullendulla

Goobah <goobehchts@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

1 May 2018 at 11:06

Hi Chris

This is Goobahs expression of interest to register for the above project.

We wish to be kept informed of any further developments and all correspondence should be sent to this email address thankyou.

--
Regards Basil Smith
Chief Executive Officer
Goobah PH 0405995725

Gulaga <gulagachts@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

1 May 2018 at 11:06

Hi Chris

This is Gulagas expression of interest to register for the above project.

We wish to be kept informed of any further developments thankyou.

Kind Regards
Wendy Smith
Cultural Heritage Officer
Gulaga
0401 808 988

Murramarang <murramarangchts@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

1 May 2018 at 11:02

Hi Chris

This is Murramarangs expression of interest to register for the above project.

We wish to be kept informed of any further developments thankyou.

[Quoted text hidden]
--
Kind Regards
Roxanne Smith
Cultural Heritage Officer
Murramarang

Thoorga Thoorga <thoorganura@gmail.com>
To: chris@ambs.com.au

1 May 2018 at 11:07

Hi Chris

This is Thoorga Nuras expression of interest to register for the above project.

We wish to be kept informed of any further developments thankyou.

--

Yarma Walaawarnie

Yours Truly

John Carriage
Chief Executive Officer
THOORGA NURA.

BADU <baduchts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:07

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at 510 Beach Road, Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Yarma Walaawarnie

Karia Bond
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
BADU,
Murrin Stakeholder

Wirambie Wirambie <wirambie@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 15:55

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at 510 Beach Road, Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Yarma Walaawarnie

Jemma Smith
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
WIRAMBIE,
Murrin Stakeholder

Boonunga Boonunga <boonunga@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 15:56

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at 510 Beach Road, Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Yarma Walaawarnie

Paul Caple
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
BOONUNGA,
Murrin Stakeholder

Bullawaya Bullawaya <bullawaya@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 15:58

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at 510 Beach Road, Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Yarma Walaawarnie

Fay Campbell
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
BULLAWAYA,
Murrin Stakeholder

Andrew Bond <dharugchts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:17

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at 510 Beach Road, Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Yarma Walaawarnie

Regards
Mitchell McCourt
Chairperson
Dharug
Murrin Stakeholder

DJIRINGANJ <djiringanjchts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:11

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--

Regards
Keith Nye
Chairperson
Djiringanj
Murrin Stakeholder

ELOUERA <elouerachts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:02

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Lenard Nye
Chairperson
Elouera
Murrin Stakeholder

EORA <eorachts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:14

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Yarma Walaawarnie

Regards
Kahu Brennan
Chairperson
and Murrin Cultural
Heritage Knowledge
Holder of EORA.
Murrin Stakeholder

Criage Wellington <gadungelders@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:10

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Criage Wellington
Chairperson
Gadung
Murrin Stakeholder

Adreian Connelly <golangayaelders@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:12

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Adreian Connelly
Chairperson
Golangaya
Murrin Stakeholder

Toni Brierley <kuringgaichs@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:09

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Toni Brierley
Chairperson
Kuringgai
Murrin Stakeholder

Aaron Michael Broad <minnamunnung@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:19

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Aaron Michael Broad
Chief Cultural Heritage Officer
Minnamunnung

Tarlarra Te Kowhai <murrinchts@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:21

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Tarlarra Te Kowhai
Chairperson
MURRIN
Murrin Stakeholder

MURRUMBUL <murrumbul@gmail.com>
To: "chris@ambs.com.au" <chris@ambs.com.au>

2 May 2018 at 16:15

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Kind regards Levi McKenzie-Kirkbright Chairperson Murrumbul MURRIN STAKEHOLDER

John Carriage <tharawalchts@gmail.com> 2 May 2018 at 16:03
To: "chris@ambs.com.au" <chris@ambs.com.au>

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
John Carriage
Chairperson
Tharawal
Murrin Stakeholder

WALBUNJA <walbunja@gmail.com> 2 May 2018 at 12:16
To: Chris Langeluddecke <chris@ambs.com.au>

Walbunja Registers an interest in this project.

On Wed, 18 Apr 2018 at 3:20 pm, Chris Langeluddecke <chris@ambs.com.au> wrote:
[Quoted text hidden]

--
Yarma Walaawarnie
Regards
Hika Tekowhai
Chairperson
and Murrin Cultural
Heritage Knowledge
Holder of WALBUNJA.
Murrin Stakeholder

Ronald Stewart <walgaluchts@gmail.com> 2 May 2018 at 16:20
To: "chris@ambs.com.au" <chris@ambs.com.au>

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Regards
Ronald Stewart
Chairperson
Walgalu
Murrin Stakeholder

Wirambie Wirambie <wirambie@gmail.com> 2 May 2018 at 15:55
To: "chris@ambs.com.au" <chris@ambs.com.au>

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Yarma Walaawarnie
Jemma Smith
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
WIRAMBIE.
Murrin Stakeholder

Yaxa Burra Yaxa Burra <yaxaburra@gmail.com> 2 May 2018 at 16:00
To: "chris@ambs.com.au" <chris@ambs.com.au>

We register an interest in this project for the preparation of an Aboriginal Cultural Heritage Assessment at [510 Beach Road](#), Berry (Lot 4 DP 834254) in accordance with the NSW Aboriginal Cultural Heritage Consultation requirements for proponents 2010.

--
Yarma Walaawarnie
Rodney Wellington
Chairperson and
Murrin Cultural
Heritage Knowledge
Holder of
YAXA BURRA.
Murrin Stakeholder

Stage 2 Presentation of Information about the Project and Stage 3 Gathering information about Cultural Significance

Proposed Methodology

Chris Langeluddecke <chris@ambs.com.au>
Bcc: Alfred Wellington <jalco@bigpond.com>, yurandaall_cs@hotmail.com, yulayculturalservices@gmail.com, barrabyculturalservices@gmail.com, Ryan Johnson <murrabidgeemullangan@yahoo.com.au>, warrabingi@gmail.com, troytungai72@outlook.com, daruglandobservations@gmail.com, richardcampbell123@outlook.com, Leanne Tungai <jeaniscarollungai@gmail.com>, leonard wright <lbjwright1977@hotmail.com>, Roxanne Smith <murransaranghts@gmail.com>, Seli Storer <blamangachts@gmail.com>, Casey Smith <cullenullachts@gmail.com>, hika te kowhai <walbunja@gmail.com>, Basil Smith <gobahchts@gmail.com>, Wendy Smith <gulgachts@gmail.com>, thorganura@gmail.com, wiramblie@gmail.com, boonunga@gmail.com, bullawaya@gmail.com, yakaburra@gmail.com, elouerachts@gmail.com, tharawalchts@gmail.com, baduchts@gmail.com, kuringaichts@gmail.com, gadungelders@gmail.com, djiringanjchts@gmail.com, golangayaelders@gmail.com, eorachts@gmail.com, murumbul@gmail.com, Newton Bond <dharugchts@gmail.com>, minnamunnung@gmail.com, walgaluchts@gmail.com, murrinchts@gmail.com

7 May 2018 at 14:46

As you are aware, AMBS Ecology & Heritage has been commissioned by Shoalhaven City Council on behalf of Allen Price and Scarratts (consultants@allenprice.com.au) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) incorporating archaeological test excavations as per the Office of Environment and Heritage (OEH) Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) for 510 Beach Road, Berry (Lot 4 DP 834254). Thank you for registering your interest in being involved in the assessment as a Registered Aboriginal Stakeholder as per the OEH community consultation requirements.

The aim of the assessment is to identify any Aboriginal objects or places within an area that has potential to be impacted by possible future development in the study area, assess their heritage significance, and provide recommendations regarding future management of archaeological resources.

Preliminary assessment of the study area has determined that archaeological test excavations as per the OEH Code of Practice are required in order to ascertain if Aboriginal heritage objects were present within the proposed project impact area. AMBS has prepared a test excavation sampling strategy as per OEH requirements and is providing it here for your review and comment prior to undertaking the excavation.

Project Information & Assessment Methodology

The assessment is required to assess to inform and assist the preparation of a Planning Proposal (PP) over the study area. The PP is being prepared to amend the Shoalhaven Local Environmental Plan (LEP) 2014 over the subject land area, to permit rural residential subdivision and development, environmental protection, and facilitate the transfer of Coomonderry Swamp lands to the NSW National Parks and Wildlife Service (NPWS). No development concepts or designs have yet been developed for future development of the area following the PP. Figures identifying the study area are included in the attached sampling strategy.

The study area is currently grazed by cattle, and visibility throughout is limited by pasture. As such it is not possible to accurately assess the area for the presence of Aboriginal artefacts through archaeological survey, and a program of archaeological testing is required to confirm the presence and extent of Aboriginal archaeological material, and allow the development of accurate impact assessment and management recommendations.

AMBS propose to undertake archaeological test excavations as per the attached excavation sampling strategy. Following the test excavation, registered Aboriginal parties will be consulted to inform an understanding of the context and values of any Aboriginal sites, objects and places that are located on the proposed project site, to assess their cultural significance, and to develop management options for recommendation in the Aboriginal Cultural Heritage Assessment.

Feedback on Methodology

This letter provides your organisation with information regarding the proposed project and methodology for this assessment. If you have any cultural concerns, perspectives or comments regarding the proposed project and assessment methodology, or if you would like to provide any information about the cultural significance of Aboriginal objects or places that may be present in the study area, please contact AMBS within 28 days, by 4 June 2018.

Please find attached a form that you may choose to fill out after having read this methodology. The form is intended to make it easier for you to provide feedback and is not obligatory. If you would like to use this form, please fill out the relevant sections, sign it and return the form to AMBS. Alternatively, if you would like to provide feedback concerning the proposed project in another form, you can respond by email to chris@ambs.com.au or by post to: Attn: Chris Langeluddecke, AMBS Ecology & Heritage, Level 1, 33 Booth Street, Annandale NSW 2038.

At this time, we would appreciate it if you could identify any protocols that your organisation wishes to be adopted into the information gathering process and assessment methodology, or any matters such as issues or areas of cultural significance that might affect, inform or refine the assessment methodology. Should there be any sensitive cultural information on the proposed project area, which may require restricted public access, appropriate protocols for sourcing and holding such cultural information will be developed and implemented through this consultation process.

Should you require any additional information or if I can be of assistance in any way please contact me on the details below.

Chris Langeluddecke
Director Aboriginal Heritage

ambs ecology & heritage
Level 1 33 Booth Street Annandale NSW 2038 - <http://ambs.com.au>
chris@ambs.com.au - 0421 613 149 - 02 9518 4489

Written feedback provided by Aboriginal Parties

Bo Field <yurundaali_cs@hotmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

7 May 2018 at 19:26

Chris,

Yurundaali Cultural Services supports the methodology for this project.
We look forward to working with you.

Regards
Bo YCS

Ryan Johnson <murrabidgeemullangari@yahoo.com.au>
To: Chris Langeluddecke <chris@ambs.com.au>

8 May 2018 at 09:44

Dear Chris,

I have read the project details and test excavation sampling strategy methodology for the above project, I endorse the recommendations made by AMBS.

If you require further details please feel free to contact me either by mobile 0475565517 or email, I look forward to hearing from you.

Kind regards



Ryan Johnson | Murra Bidgee Mullangari



Aboriginal Corporation Cultural Heritage

lee field <barrabyculturalheritageservices@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

8 May 2018 at 11:08

Attn: Chris Langeluddecke, AMBS Ecology & Heritage, Level 1, 33 Booth Street, Annandale NSW 2038.

Barraby Cultural Services supports the methodology for this project.

We look forward to working with you.

Kind regards
Lee

arika jalomaki <yulayculturalheritageservices@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

8 May 2018 at 14:09

Dear Chris Langeluddecke,

Yulay Cultural Services supports the methodology for this project.

Thankyou

Arika

[Quoted text hidden]

Goobah <goobahchits@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>

4 June 2018 at 15:01

Hi Chris

Goobah agree with the proposed test excavation sampling strategy for the 510 Beach Road, Berry ACHA.

We wish to be kept informed of any further developments. Thankyou.

On Mon, May 7, 2018 at 2:46 PM, Chris Langeluddecke <chris@ambs.com.au> wrote:
[Quoted text hidden]

--
Regards Basil Smith
Chief Executive Officer
Goobah PH 0405995725

This email may contain privileged information. Privilege is not waived if it has been sent to you in error, or if you are not the intended recipient. Please immediately notify me and delete the email if you have received this in error.

Gulaga <gulagachs@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Hi Chris Gulaga agree with the proposed test excavation sampling strategy for the 510 Beach Road, Berry ACHA. We wish to be kept informed of any further developments. Thankyou. Kind Regards Wendy Smith Cultural Heritage Officer Gulaga 0401 808 988	4 June 2018 at 15:02
Cullendulla <cullendullachs@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Hi Chris Cullendulla agree with the proposed test excavation sampling strategy for the 510 Beach Road, Berry ACHA. We wish to be kept informed of any further developments. Thankyou. On Mon, May 7, 2018 at 2:46 PM, Chris Langeluddecke <chris@ambs.com.au> wrote: [Quoted text hidden] -- Kind Regards Corey Smith Cultural Heritage Officer Cullendulla	4 June 2018 at 15:03
Biamanga <biamangachs@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Hi Chris Biamanga agree with the proposed test excavation sampling strategy for the 510 Beach Road, Berry ACHA. We wish to be kept informed of any further developments. Thankyou. On Mon, May 7, 2018 at 2:46 PM, Chris Langeluddecke <chris@ambs.com.au> wrote: [Quoted text hidden] -- Kind Regards Selai Storer Chief Executive Officer Biamanga	4 June 2018 at 15:04
Murramarang <murramarangchs@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Hi Chris Murramarang agree with the proposed test excavation sampling strategy for the 510 Beach Road, Berry ACHA. We wish to be kept informed of any further developments. Thankyou. On Mon, May 7, 2018 at 2:46 PM, Chris Langeluddecke <chris@ambs.com.au> wrote: [Quoted text hidden] -- Kind Regards Roxanne Smith Cultural Heritage Officer Murramarang	4 June 2018 at 15:04
Thoorga Thoorga <thoorganura@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Thank you for the information. On Mon, 7 May 2018 at 2:47 pm, Chris Langeluddecke <chris@ambs.com.au> wrote: [Quoted text hidden] -- Yarma Walaawarnie Yours Truly John Carriage Chief Executive Officer THOORGA NURA.	5 June 2018 at 10:17
Thoorga Thoorga <thoorganura@gmail.com> To: Chris Langeluddecke <chris@ambs.com.au> Thoorga Nura support the methodology. Please keep us informed of any future developments. Kind regards Thoorga Nura [Quoted text hidden]	7 June 2018 at 18:54



DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453

Email: daruglandobservations@gmail.com
PO BOX 2006 BENDALONG NSW 2761
Mobile: 0413 687 279

18th May, 2017

Chris Langeluddecke
AMBS Ecology & Heritage
Level 1, 33 Booth Street
ANNANDALE NSW 2038

Email: chris@ambs.com.au

Dear Chris,

RE: 510 BEACH ROAD, BERRY

Aboriginal Cultural Heritage Assessment - Test Excavation Sampling Strategy

Darug Land Observations Pty Ltd has reviewed the Test Excavation Sampling Strategy, and supports the methodology for the proposed archaeological test excavations of Lot 4 DP 834254, located at 510 Beach Road, in Berry.

In relation to the long-term storage of recovered artefacts, we agree that any recovered artefacts should be re-buried on Country (the study area).

Furthermore, Darug Land Observations Pty Ltd would be involved in the test excavations and all other form of works to be carried out on the site.

Look forward to working with you on this project.

Yours sincerely,

Anna O'Hara
Darug Land Observations Pty Ltd

Jamie Workman

Stage 4 Review of draft cultural heritage assessment report

Correspondence with Aboriginal parties

510 Beach Road, Berry ACHA draft

Chris Langeluddecke <chris@ambs.com.au>
Cc: Samantha Fidge <sam@ambs.com.au>
Bcc: Alfred Wellington <jlalc@bigpond.com>, jllalc17 <jllalc17@gmail.com>, yurrandaali_cs@hotmail.com, yulayculturalsservices@gmail.com, barrabyculturalsservices@gmail.com, Ryan Johnson <murrabidgeemullangan@yahoo.com.au>, Nathaniel Kennedy <warabingi@gmail.com>, troytungai72@outlook.com, daruglandobservations@gmail.com, richardcampbell123@outlook.com, Leanne Tungai <leanneecaroltungai@gmail.com>, leonard wright <lbwright1977@hotmail.com>, Roxanne Smith <murramaranghts@gmail.com>, Seli Storer <biamangachts@gmail.com>, Casey Smith <cullendullachts@gmail.com>, Basil Smith <goobahchts@gmail.com>, Wendy Smith <gulagachts@gmail.com>, murrumbul@gmail.com, thoorganura@gmail.com, hika Tekowhai <walbunja@gmail.com>, wirambie@gmail.com, boonunga@gmail.com, bullawaya@gmail.com, yakaburra@gmail.com, baduchts@gmail.com, djiringanchts@gmail.com, eorachts@gmail.com, minnamunnung@gmail.com, kuringgaichts@gmail.com, gadungelders@gmail.com, golangayelders@gmail.com, Newton Bond <dharugchts@gmail.com>, John Stewart <tharawalchts@gmail.com>, Ronald Stewart <walgaluchts@gmail.com>, Tarlana Tekowhai <murrinchts@gmail.com>

27 August 2018 at 13:21

Thank you for your ongoing involvement in the assessment of Aboriginal heritage at 510 Beach Road, Berry, being undertaken by AMBS Ecology & Heritage on behalf of Shoalhaven City Council.

Attached is the draft ACHA for the property outlining the results of archaeological survey and test excavations undertaken. The report is provided for your review and comment, as well as an optional feedback form you may choose to use to provide any input you may have.

As per OEH requirements, if you have any feedback you wish to provide could you forward it within 28 days, **by 25 September 2018**. You can respond by email to chris@ambs.com.au or by post to Attn: Chris Langeluddecke, AMBS Ecology & Heritage, Level 1, 33 Booth Street, Annandale NSW 2038.

If you would like to discuss the assessment, or have any questions about the project, please feel free to contact me.

Regards,

Chris Langeluddecke
Director Aboriginal Heritage

ambs ecology & heritage
Level 1 33 Booth Street Annandale NSW 2038 - <http://ambs.com.au>
chris@ambs.com.au - 0421 613 149 - 02 9518 4489



2 attachments

-  **17334 ACHA v2.pdf**
9475K
-  **Aboriginal Community Feedback Form.docx**
40K

Draft report feedback provided by Aboriginal parties

510 Beach Road, Berry ACHA draft

Leanne Tungai <leanneecaroltungai@gmail.com>
To: Chris Langeluddecke <chris@ambs.com.au>
Cc: Samantha Fidge <sam@ambs.com.au>

27 August 2018 at 13:58

Looks good, please proceed.

Aboriginal Community Consultation Log

Date	Sender	Organisation	Recipient	Organisation	Method	Comment
29/03/2018	C. Langeluddecke	AMBS	George Tonna	NTS Corp	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS		Local Land Services South East	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS	Megan Mebberson	ORALRA	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS		National Native Title Tribunal	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS	Yvette Andrews	Shoalhaven Council	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS		Jerrinja Local Aboriginal Land Council	email	Stage 1 initial consultation request
29/03/2018	C. Langeluddecke	AMBS		OEH	post	Stage 1 initial consultation request
29/03/2018		Shoalhaven City Council.	C. Langeluddecke	AMBS	email	acknowledgement of email
29/03/2018		Local Land Services South East	C. Langeluddecke	AMBS	email	acknowledgement of email
29/03/2018		National Native Title Tribunal	C. Langeluddecke	AMBS	email	confirmed no known stakeholders for study area
5/04/2018	Julia Maskell	OEH	C. Langeluddecke	AMBS	email	request to confirm study area LGA
4/04/2018	Alfred Wellington	Jerrinja LALC	C. Langeluddecke	AMBS	email	registration of interest
4/04/2018				South Coast Register	publication	Stage 1 advertisement submitted for publication on 4/04/18
4/04/2018	Lee Field	Barraby Cultural Services	C. Langeluddecke	AMBS	email	registration of interest
4/04/2018	Arika Jalomaki	Yulay Cultural Services	C. Langeluddecke	AMBS	email	registration of interest
4/04/2018	Bo Field	Yurraandaali Cultural Services	C. Langeluddecke	AMBS	email	registration of interest
5/04/2018	C. Langeluddecke	AMBS	Julia Maskell	OEH	email	confirmed study area is within the Shoalhaven LGA.
5/04/2018	Julia Maskell	OEH	C. Langeluddecke	AMBS	email	provision of potential stakeholder list
18/04/2018	C. Langeluddecke	AMBS		to all potential RAPs with email	email	invitation to register
18/04/2018	C. Langeluddecke	AMBS		to potential RAPs with only postal addresses	post	invitation to register
18/04/2018	Ryan Johnson	Murra Bidgee Mullangari	C. Langeluddecke	AMBS	email	registration of interest
18/04/2018	Nathanial Kennedy	Warra Bingi Nunda Gurri	C. Langeluddecke	AMBS	email	registration of interest
18/04/2018	Troy Tungai		C. Langeluddecke	AMBS	email	registration of interest
19/04/2018	Anna O'Hara	DLO	C. Langeluddecke	AMBS	email	registration of interest
19/04/2018	Richard Campbell		C. Langeluddecke	AMBS	email	registration of interest
19/04/2018	Leonard Wright	Three Ducks Dreaming Survey	C. Langeluddecke	AMBS	email	registration of interest
19/04/2018	Leanne Tungai		C. Langeluddecke	AMBS	email	registration of interest
19/04/2018	Leanne Tungai		C. Langeluddecke	AMBS	email	request to register her for upcoming work
1/05/2018	Roxanne Smith	Murramarang	C. Langeluddecke	AMBS	email	registration of interest, wishes to be kept informed of any further developments
1/05/2018	Seli Storer	Biamanga	C.	AMBS	email	registration of interest,

			Langeluddecke			wishes to be kept informed of any further developments
1/05/2018	Corey Smith	Cullendulla	C. Langeluddecke	AMBS	email	registration of interest, wishes to be kept informed of any further developments
1/05/2018	Hika Tekowhai	Walbunja	C. Langeluddecke	AMBS	email	registration of interest
1/05/2018	Basil Smith	Goobah	C. Langeluddecke	AMBS	email	registration of interest, wishes to be kept informed of any further developments
1/05/2018	Wendy Smith	Gulaga	C. Langeluddecke	AMBS	email	registration of interest, wishes to be kept informed of any further developments
1/05/2018	John Carriage	Thoorga Nuras	C. Langeluddecke	AMBS	email	registration of interest, wishes to be kept informed of any further developments
2/05/2018	Jemma Smith	Wirambie	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Paul Caple	Boonunga	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Fay Campbell	Bullawaya	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Rodney Wellington	Yaxa Burra	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Lenard Nye	Elouera	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	John Carriage	Tharawal	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Karia Bond	Badu	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Toni Brierley	Kuringgai	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Criage Wellington	Gadung	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Keith Nye	Djiringanj	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Adreian Connelly	Golangaya	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Kahu Brennan	Eora	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Levi McKenzie-Kirkbright	Murrumbul	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Mitchell McCourt	Dharug	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Aaron Michael Broad	Minnamunning	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Ronald Stewart	Walgalu	C. Langeluddecke	AMBS	email	registration of interest
2/05/2018	Tarlarra Te Kowhai	Murrin	C. Langeluddecke	AMBS	email	registration of interest
7/05/2018	to all RAPs	to all RAPs	C. Langeluddecke	AMBS	email	project details and excavation sampling strategy for comment and feedback.
7/05/2018	Nathanial Kennedy	Warra Bingi Nunda Gurri	C. Langeluddecke	AMBS	phone	left message to call back
7/05/2018	C. Langeluddecke	AMBS	Nathanial Kennedy	Warra Bingi Nunda Gurri	phone	returned call. Discussed implications of surface sites exposed to livestock, and clarified that the property had been grazed since c.1960s, and that the archaeological works would comprise test excavations.
7/05/2018	Bo Field	Yurrandaali Cultural Services	C. Langeluddecke	AMBS	email	supports methodology

8/05/2018	Leanne Tungai		C. Langeluddecke	AMBS	email	thanking for information
8/05/2018	Ryan Johnson	Murra Bidgee Mullangari	C. Langeluddecke	AMBS	email	endorsement of AMBS' methodology
8/05/2018	Lee Field	Barraby Cultural Services	C. Langeluddecke	AMBS	email	supports methodology
8/05/2018	Arika Jalomaki	Yulay Cultural Services	C. Langeluddecke	AMBS	email	supports methodology
18/05/2018	Anna	DLO	C. Langeluddecke	AMBS	email	supports methodology
23/05/2018	Hika Tekowhai	Walbunja	C. Langeluddecke	AMBS	phone	called to enquire if there was scope to increase number of pits in methodology, and to mention presence of a cemetery on Agars Lane, Berry, where Aboriginal people may have been buried. Mentioned that there was possibility of ancestral remains buried along beach road, and that the area was associated with pipipi gathering on 7 mile beach. Explained that there was scope to add pits to investigate areas found to have artefacts where it was necessary to further understand the site, but that the excavation could not expand to the point where it was salvage. Explained that the excavation would immediately stop if suspected human remains were found, and the OEH protocols would be followed. Hika stated that he supported the methodology and would send through an email stating so.
4/06/2018	Basil Smith	Goobah	C. Langeluddecke	AMBS	email	agrees with methodology
4/06/2018	Wendy Smith	Gulaga	C. Langeluddecke	AMBS	email	agrees with methodology
4/06/2018	Corey Smith	Cullendulla	C. Langeluddecke	AMBS	email	agrees with methodology
4/06/2018	Roxanne Smith	Murramarang	C. Langeluddecke	AMBS	email	agrees with methodology
4/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	phone	no answer
4/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	mobile	no answer
5/06/2018	John Carriage	Thoorga Nura	C. Langeluddecke	AMBS	email	thanking for the information
5/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	phone	no answer
5/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	mobile	no answer
5/06/2018	Alfred Wellington	Jerrinja Local Aboriginal Land Council	C. Langeluddecke	AMBS	mobile	returned call, noted that there had been some issues with RAPs from outside the local area working on projects, and requested that a list of all RAPs be

						provided to the LALC
5/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	email	Provided a list of all RAPs for the project, as per the requirements of the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
6/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	phone	called to discuss, was told that consultation would be disused with the committee that day, and that Alfred would get back to me late that day or early tomorrow
7/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	phone	no answer, left message
7/06/2018	Alfred Wellington	Jerrinja Local Aboriginal Land Council	C. Langeluddecke	AMBS	phone	Identified that the LALC did not believe that any other groups should be operating within the LALC's lands. However, as long as the LALC was involved in fieldwork at an appropriate level, they understood that additional personnel would be drawn from the other RAPs. Confirmed that the LALC would be able to provide two sites officers for the length of the fieldwork
7/06/2018	C. Langeluddecke	AMBS	Hika Tekowhai	Walbunja	phone	Confirmed that group would be able to provide one site officer for the first week
7/06/2018	C. Langeluddecke	AMBS	Aaron Broad	Minnamunnung	phone	confirmed that the group would be able to provide one site officer of the second week
7/06/2018	C. Langeluddecke	AMBS	Lee field	Barraby Cultural Services	phone	no answer, could not leave a message
7/06/2018	C. Langeluddecke	AMBS	Bo Field	Yurrandaali Cultural Services	phone	no answer
7/06/2018	C. Langeluddecke	AMBS	Nathanial Kennedy	Warra Bingi Nunda Gurri	phone	confirmed that he would have someone available for the first two days of next week for fieldwork
7/06/2018	C. Langeluddecke	AMBS	Darleen Johnson	Murra Bidgee Mullangari	phone	confirmed that they could provide a sites officer for 3 days - 18-20 June
7/06/2018	C. Langeluddecke	AMBS		Three Ducks Dreaming Surveying and Consulting	phone	no one available from 3 ducks dreaming, should try again later
7/06/2018	C. Langeluddecke	AMBS		DLO	phone	no answer
7/06/2018	C. Langeluddecke	AMBS	Troy Tungai		phone	no one available from 3 ducks dreaming, should try again later
7/06/2018	C. Langeluddecke	AMBS	Alfred Wellington	Jerrinja Local Aboriginal Land Council	email	invitation to fieldwork
7/06/2018	C. Langeluddecke	AMBS	Hika Tekowhai	Walbunja	email	invitation to fieldwork
7/06/2018	C. Langeluddecke	AMBS	Aaron Broad	Minnamunnung	email	invitation to fieldwork
7/06/2018	C. Langeluddecke	AMBS	Nathanial Kennedy	Warra Bingi Nunda Gurri	email	invitation to fieldwork
7/06/2018	Ronald Stewart	Walgalu	C. Langeluddecke	AMBS	email	emailed to enquire about fieldwork
7/06/2018	C.	AMBS	Darleen	Murra Bidgee	email	invitation to fieldwork

	Langeluddecke		Johnson	Mullangari		
7/06/2018	C. Langeluddecke	AMBS	Ronald Stewart	Walgalu	email	invitation to fieldwork
7/06/2018		Thoorga Nura	C. Langeluddecke	AMBS	email	email supporting methodology
8/06/2018	Alfred Wellington	Jerrinja Local Aboriginal Land Council	C. Langeluddecke	AMBS	email	confirmation of availability for fieldwork
8/06/2018	Hika Tekowhai	Walbunja	C. Langeluddecke	AMBS	email	confirmation of availability for fieldwork
8/06/2018	Aaron Michael Broad	Minnamunnung	C. Langeluddecke	AMBS	email	confirmation of availability for fieldwork
8/06/2018	Leonard Wright	Three Ducks Dreaming Survey	C. Langeluddecke	AMBS	email	confirmation of availability for fieldwork
8/06/2018	C. Langeluddecke	AMBS	Leonard Wright	Three Ducks Dreaming Survey	email	confirmed date and site location for fieldwork
8/06/2018	Ryan Johnson	Murra Bidgee Mullangari	C. Langeluddecke	AMBS	email	confirmation of availability for fieldwork
12/06/2018	Hika Tekowhai	Walbunja	C. Langeluddecke	AMBS	email	providing insurance certificates of currency for Walbunja, Walgalu and Minnamunnung
12/06/2018	Leonard Wright	Three Ducks Dreaming Survey	C. Langeluddecke	AMBS	email	providing insurance certificates etc
27/08/2018	C. Langeluddecke	AMBS		to all RAPs	email	draft ACHA for review and comment
27/08/2018	Leanne Tungai		C. Langeluddecke	AMBS	email	"looks good, please proceed"

Appendix B: AHIMS Data



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-5-0261	Gerroa; Cleary Bros Sand Mine;	AGD	56	296300	6148300	Open site	Valid	Artefact : - Shell : -	Midden, Open Camp Site	1510,1730,102506
Contact	Farmstead;	Recorders	Mr. Doug Williams, Doctor Sue Feary	56 290700	6146000	Open site	Valid	Permits		
52-5-0135		AGD	56	290700	6146000	Open site	Valid	Modified Tree (Carved or Scarred) : - Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial, Carved Tree	98121,102506
Contact		Recorders	Ms. Tessa Corkill	56 291500	6147100	Open site	Valid	Permits		
52-5-0191	Moeyan -13 Grinding Groves; Moeyan Hill;	AGD	56	291500	6147100	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98121,102506, 103568
Contact		Recorders	Ms. Tessa Corkill	56 291100	6147000	Closed site	Valid	Permits		
52-5-0192	Moeyan-A Rock Shelter; Moeyan Hill;	AGD	56	291100	6147000	Closed site	Valid	Artefact : -	Shelter with Deposit	98121,102506, 103568
Contact		Recorders	Ms. Tessa Corkill	56 298700	6150000	Open site	Valid	Permits		
52-5-0206	Gerrington; Crooked River;	AGD	56	298700	6150000	Open site	Valid	Artefact : -	Open Camp Site	98623
Contact		Recorders	John Walker	56 296012	6146926	Open site	Valid	Permits		
52-5-0063	Seven Mile Beach;	AGD	56	296012	6146926	Open site	Valid	Shell : - Artefact : -	Midden	1730
Contact		Recorders	O.B Pryor	56 296182	6147570	Open site	Valid	Permits		
52-5-0064	Seven Mile Beach;	AGD	56	296182	6147570	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Cedric Rutledge	56 292250	6150550	Open site	Valid	Permits		
52-5-0395	DUKE 8	AGD	56	292250	6150550	Open site	Valid	Artefact : 8		102301,102506
Contact		Recorders	Stuart Huys	56 295070	6150800	Open site	Valid	Permits		
52-5-0399	TEST PITTING AREA 9	AGD	56	295070	6150800	Open site	Valid	Artefact : -		102301
Contact		Recorders	Stuart Huys	56 296600	6148650	Open site	Valid	Permits		
52-5-0415	CB2	AGD	56	296600	6148650	Open site	Valid	Artefact : - Shell : -		98875
Contact		Recorders	Mr. Matthew Barber	56 297051	6152280	Open site	Valid	Permits		
52-5-0624	PASA31 (G2B A12)	GDA	56	297051	6152280	Open site	Valid	Artefact : 16, Potential Archaeological Deposit (PAD) : 1	1497,1498,1765,1766	102301,10230 2,102303,1026 40
Contact		Recorders	Mr. Kelvin Officer, Navin Officer Heritage Consultants Pty Ltd	56 294012	6151637	Open site	Valid	Permits		
52-5-0677	G2B A29	GDA	56	294012	6151637	Open site	Valid	Artefact : 7, Potential Archaeological Deposit (PAD) : 1	3233,3397	103060
Contact		Recorders	Mr. Kelvin Officer	56 290438	6150148	Open site	Valid	Permits		
52-5-0678	G2B A23	GDA	56	290438	6150148	Open site	Valid	Artefact : 4, Potential Archaeological Deposit (PAD) : 1	3594	

Report generated by AHIMS Web Service on 17/04/2018 for Chris Langeleducke for the following area at Datum :GDA, Zone : 56, Eastings : 290000 - 299000, Northings : 6143000 - 6153000 with a Buffer of 0 meters. Additional Info : commercial ACHA preparation. Number of Aboriginal sites and Aboriginal objects found is 67

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



Your Ref/PO Number : 17334 Beach Road Berry v2
Client Service ID : 339459

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	Permits	SiteTypes	Reports
Recorders											
	Contact										
52-5-0668	G2B A30		56	294368	6152225	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	103057
Recorders											
	Contact										
52-5-0670	G2B A27		56	294012	6151637	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	103060
Recorders											
	Contact										
52-5-0673	G2B A28		56	294012	6151637	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	103060
Recorders											
	Contact										
52-5-0675	G2B A22		56	290246	6149576	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	103060
Recorders											
	Contact										
52-5-0676	G2B A34		56	295010	6152904	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	103060
Recorders											
	Contact										
52-5-0656	G2B A38		56	296691	6152111	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	Permits	3594	
Recorders											
	Contact										
52-5-0657	G2B 40 (PASA 50)		56	298290	6152506	Open site	Valid	Potential Archaeological Deposit (PAD) : 1	Permits		102640,10307 1,103135
Recorders											
	Contact										
52-5-0695	G2BA13		56	294393	6152325	Open site	Partially Destroyed	Conflict : 1	Permits	3539,3632	103057
Recorders											
	Contact										
52-5-0696	G2BA14		56	294156	6151800	Open site	Partially Destroyed	Aboriginal Resource and Gathering : 1	Permits	3594	103057,10306 0
Recorders											
	Contact										
52-5-0682	PASA 42		56	295484	6152983	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : -	Permits	3594	103060,10306 8
Recorders											
	Contact										
			Miss.Deirdre Lewis-Cook								

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-5-0708	PASA 55	GDA	56	298068	6152596	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits	3397	103060
52-5-0704	PASA 17 (Foxground to Berry)	GDA	56	291624	6150877	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits	3594	
52-5-0705	PASA 18 (Foxground to Berry)	GDA	56	292228	6150839	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits	3594	
52-5-0706	PASA 23 (Foxground to Berry)	GDA	56	294368	6152225	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits	3594	
52-5-0713	PASA 14	GDA	56	290292	6149998	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0714	PASA 15	GDA	56	290433	6150147	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits		
52-5-0715	PASA 16	GDA	56	291384	6150744	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0716	PASA 19	GDA	56	292793	6151065	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0717	PASA 20	GDA	56	294012	6151637	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0718	PASA 21	GDA	56	294156	6151800	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		

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Your Ref/PO Number : 17334 Beach Road Berry v2
Client Service ID : 339459

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-5-0719	PASA 22	GDA	56	294306	6152065	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0720	PASA 24	GDA	56	294393	6152325	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits		
52-5-0721	PASA 25	GDA	56	294799	6152771	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0722	PASA 26	GDA	56	294870	6152818	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0723	PASA 27	GDA	56	295010	6152904	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0724	PASA 28	GDA	56	296042	6152861	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0725	PASA 29	GDA	56	296506	6152573	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0727	PASA 44	GDA	56	290397	6150241	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits		
52-5-0659	G2B A26	GDA	56	294012	6151637	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103060
	Contact							Permits		
52-5-0660	G2B A25	GDA	56	292228	6150839	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	Contact							Permits		
	Contact							Permits		

Report generated by AHIMS Web Service on 17/04/2018 for Chris Langeluddecke for the following area at Datum :GDA, Zone : 56, Eastings : 290000 - 299000, Northings : 6143000 - 6153000
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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-5-0661	G2B A24	GDA	56	291624	6150877	Open site	Partially Destroyed	Art (Pigment or Engraved) : 1, Potential Archaeological Deposit (PAD) : 1	3594	103057,103060
Contact										
52-5-0662	G2B A36	GDA	56	296951	6152936	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	103057
Contact										
52-5-0663	G2B A35	GDA	56	296035	6152845	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	103060
Contact										
52-5-0664	G2B A33	GDA	56	294870	6152818	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	103057,103060
Contact										
52-5-0665	G2B A32	GDA	56	294799	6152771	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	103057,103060
Contact										
52-5-0666	G2B A31	GDA	56	294393	6152325	Open site	Partially Destroyed	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	103057
Contact										
52-5-0667	G2B A37	GDA	56	290397	6150241	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1	3594	
Contact										
52-5-0697	G2B A13	GDA	56	294393	6152325	Open site	Valid	Conflict :-		103057
Contact										
52-5-0698	G2B A14	GDA	56	294156	6151800	Open site	Valid	Aboriginal Resource and Gathering :-		103057,103060
Contact										
52-5-0699	G2B A40	GDA	56	298290	6152506	Open site	Valid	Artefact : 28, Potential Archaeological Deposit (PAD) :-		
Contact										
Recorders Mr.Adrian Cressey										

Report generated by AHIMS Web Service on 17/04/2018 for Chris Langeluddecke for the following area at Datum :GDA, Zone : 56, Eastings : 290000 - 299000, Northings : 6143000 - 6153000 with a Buffer of 0 meters. Additional Info : commercial ACHA preparation. Number of Aboriginal sites and Aboriginal objects found is 67

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



Your Ref/PO Number : 17334 Beach Road Berry v2
Client Service ID : 339459

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-5-0781	FBB 1	GDA	56	294256	6151190	Open site	Valid	Artefact : -		
	Contact								Permits	
52-5-0783	Campbells Run axe	GDA	56	294100	6148430	Open site	Valid	Artefact : 1		
	Contact								Permits	
52-5-0785	G2B A10	GDA	56	297932	6152535	Open site	Valid	Artefact : - Potential Archaeological Deposit (PAD) : -		
	Contact								Permits	
52-5-0786	G2B A11	GDA	56	297370	6152389	Open site	Valid	Artefact : - Potential Archaeological Deposit (PAD) : -		
	Contact								Permits	
52-5-0380	Woodside Park 1	AGD	56	290700	6148200	Open site	Valid	Artefact : -		98646,102301, 102506
	Contact								Permits	
52-5-0410	test pitting area 6	AGD	56	290650	6151130	Open site	Valid	Artefact : -		102506
	Contact								Permits	
52-5-0385	Cleary Bros	AGD	56	296830	6148500	Open site	Valid	Shell : -		
	Contact								Permits	
52-5-0426	Artefact scatter site, test pitting area 9 northern section	AGD	56	295370	6150800	Open site	Valid	Artefact : 6		102301
	Contact								Permits	
52-5-0452	Cleary Bros 3	AGD	56	296830	6148500	Open site	Valid	Shell : -, Artefact : -		
	Contact								Permits	
52-5-0567	T Russell	GDA	56	296210	6152060	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact								Permits	
52-5-0568	G2BA5	GDA	56	297820	6152480	Open site	Valid	Artefact : 2, Potential Archaeological Deposit (PAD) : 1		102301,10230 2,102640
	Contact								Permits	
52-5-0571	PASA 32	GDA	56	297568	6152400	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102301,10230 2,102640
	Contact								Permits	
52-5-0572	PASA 33	GDA	56	297131	6152335	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102301,10230 2,102640,1030 60
	Contact								Permits	

Report generated by AHIMS Web Service on 17/04/2018 for Chris Langeluddecke for the following area at Datum :GDA, Zone : 56, Eastings : 290000 - 299000, Northings : 6143000 - 6153000 with a Buffer of 0 meters. Additional Info : commercial ACHA preparation. Number of Aboriginal sites and Aboriginal objects found is 67

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 17334 Beach Road Berry v2
Client Service ID : 339459

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Eastng</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>Site Types</u>	<u>Reports</u>
	Contact	Recorders	Mr. Kelvin Officer					Permits	3233,3397	
52-5-0831	Gerrington Upgrade Return Location 2	GDA	56	298346	6152503	Open site	Valid	Artefact :-		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd, Mrs. Nicola Hayes					Permits		

Report generated by AHIMS Web Service on 17/04/2018 for Chris Langeladdecke for the following area at Datum :GDA, Zone :56, Eastings : 290000 - 299000, Northings : 6143000 - 6153000 with a Buffer of 0 meters. Additional Info : commercial ACHA preparation. Number of Aboriginal sites and Aboriginal objects found is 67

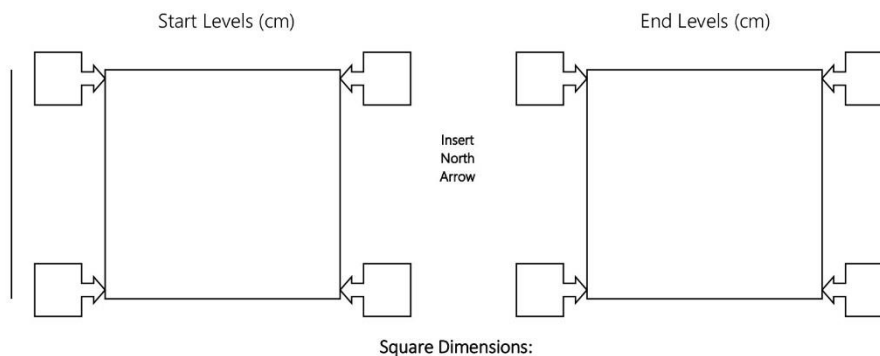
This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Appendix C: Unit Recording Form Example

**510 Beach Road Berry Aboriginal Excavation
AMBS project #17334**

Transcribed:

Square #:		Excavation Unit #:		Date:
Recorded By:			Photos:	
Munsell:	pH:			
Soil Sample Bags #:			Artefact Bags#:	
Square Coordinates (taken from NW corner of the square)	Easting:		Northing:	



Soil Description:

Disturbances:

Comments/Other:

Is this the final excavation unit for this square?	Yes/No
--	--------

AMBS Ecology & Heritage

www.ambs.com.au contact@ambs.com.au 02 9518 4489

Plan for Square / Unit Level (Note: insert grid coordinates and plan with a North arrow.)

Insert North Arrow

Scale:

Section Drawing of Features, Stratigraphic Units (Grid coordinates at each end of the section should be inserted and the direction in which the section faces should be clearly noted.)

Section faces:
(e.g. NE)

Scale:

Appendix D: Excavation Data

Square	Unit	Start levels (cm)	End levels (cm)	Artefacts (#)	Munsell	pH	Soil Description	Disturbances	Easting	Northing	Comments
1	1	0	10	1			Mostly grass A horizon bottom 2 - 3 cm brown	Glass	0294500	6148215	1 Silcrete artefact found broken flake
1	2	10	15				Dark brown organic soil with shale pebbles increasing with depth		0294500	6148215	
1	3	15	20		5YR 2.5/2		Dark red/black organic loam with remnants of dark topsoil, shale pebbles increasing and red/orange/white pale rocks.		0294500	6148215	
1	4	20	28				Predominately shale with black top soil matrix, red organic loam present throughout same colour as unit above		0294500	6148215	Difficult to get unit level at 25cm due to large shale cobbles
1	5	28	38				Predominately stone shale with large easily broken stones soil matrix around is clay loam brown/black/red		0294500	6148215	last unit
2	1	0	10				Dark brown organic rich, loamy top soil. No humic layer. Surface had grass coverage, thick green grass, well sorted with no inclusions.	Cattle have been occupying area. No other disturbances in spit 1	294523	6148171	Photos: Surface photo #0461 - 0462
2	2	10	20				Continuation of loose, dark brown loamy topsoil at beginning of spit. Transitioning to very poorly sorted disturbed dark brown loam with a lot of gravel. No other inclusions	Gravel and rubble in the last half of spit 2. Rubble is shale.	294523	6148171	
2	3	20	30				Continuation of very poorly sorted, light brown loam with gravel and shale. No other inclusions		294523	6148171	
2	4	30	53				Transitioning to a brown light clay. Very poorly sorted with large shale pieces.		294523	6148171	Last spit dug for test pit 2
3	1	0	10				Dark brown light clay. No humic layer. Grass coverage on surface. Very well sorted soil with no inclusions. No artefacts found.		294562	6148140	
3	2	10	20				Continuation of dark brown, light clay. Well sorted with some shale fragments and quartz fragments. No other inclusions		294562	6148140	
3	3	20	30				Continuation of dark brown, light clay. Very poorly sorted with large fragments of shale. Shale lining the base of test pit 3. No other inclusions.		294562	6148140	Last spit dug
4	1	0	15				Dark, loamy, black organic topsoil - A horizon and B Horizon high clay content, very difficult to get through sieves. Balls up when sieving not many stones or pebbles present	Pit is within cattle run within 10m of concrete tank and location of metal tank (since removed) footings for a trough are approx. 5m north of pit (since removed)	294598	6148102	Pit located on approximate top of ridgeline
4	2	15	20				Black clay loam as above, some clay inclusions coming through and shale. Pit finished at 30cm on Stoney shale		294598	6148102	
4	3	20	30		7.5YR 2.5/3		Black organic loamy clay onto shale. Pit finished at 30cm on Stoney shale		294598	6148102	
5	1	0	10				Dark brown, light clay. Grass roots on surface. No humic layer under grass. Well sorted with some gravel. No other inclusions		294633	6148060	
5	2	10	20				Continuation of dark brown, light clay. Very poorly sorted with decomposing		294633	6148060	

						sandstone (shale) throughout. No other inclusions.				
5	3	20	38			Continuation of dark brown, light clay. Very poorly sorted with increased shale. No other inclusions. Last spit dug		294633	6148060	
6	1	0	10			Dark brown light clay. Moist and forms small balls when sieved. No humic layer. Thick grass coverage on surface, no inclusions. Well sorted soil with no rocks or pebbles		294671	6148028	
6	2	10	20			Continuation of dark brown, light clay. Moist and forming small balls when sieved. Poorly sorted with shale fragments coming through. Minimal small charcoal fragments. No other inclusions		294671	6148028	
6	3	20	30			continuation of dark brown, light/medium clay. Very poorly sorted with shale fragments throughout. No other inclusions. Last unit dug. Shale on the base		294671	6148028	
7	1	0	10			Grass, A horizon, Black organic soil	Grass roots	294756	6147977	
7	2	10	20			Brown/black loam. Some clay content, balling slightly in sieve. Some soft red and white shale stones present.		294756	6147977	
7	3	20	30			Black organic loam, with shale at base, pit ended on shale		294756	6147977	
8	1	0	10	1		Organic A horizon, grasses black loam		294709	6148002	1 Artefact Found
8	2	10	20			Black organic loam onto increasing amounts of shale throughout unit. Shale consists of 21-3cm wide pebbles easily broken		294709	6148002	
8	3	20	30		5YR 2.5/2	Black organic loam onto shale, soil decreases with depth until unit is predominately shale.	burnt tree root/branch at upper level of unit. Approximately 2 cm thick	294709	6148002	
9	1	0	10			Surface covered in thick green kikuyu grass. No humic layer. Dark brown light clay moist and forming balls when sieved. Very well sorted soil with no inclusions		294805	6147969	
9	2	10	20			Continuation of dark brown light clay. Continuing to form into small moist clay balls when sieved. Well sorted with some shale fragments. One faunal bone fragment. No other inclusions		294805	6147969	
9	3	20	30	1		Continuation of dark brown, light clay. Very poorly sorted with large shale fragments. 1 chert flake. No other inclusions.		294805	6147969	Note: Section and Base photos taken, although continuing excavation in pit 9 due to finding a flake
9	4	30	40			Continuation of dark brown, light/medium clay. Very poorly sorted with mainly large shale fragments compared to soil. No other inclusions, last unit excavated		294805	6147969	
10	1	0	10			Grass and A horizon. Dark organic loam. Some shale present at base of unit		294851	6147959	
10	2	10	20			Dark red/brown organic loam with increasing shale with depth. Pit ends on shale at approx. 20cm deep		294851	6147959	
11	1	0	10			Black organic loam, grasses, A horizon. Some shale pebbles present at base of pit.		294887	6148001	Pit adjacent to fence line approx. 2 cm east of fence
11	2	10	20			Red/Black organic loam, increasing shale		294887	6148001	
11	3	20	30			Red/Black organic loam, onto shale. Pit ends at shale		294887	6148001	
12	1	0	10			Grasses, A horizon, red/brown loam quite dry		294918	6148029	Photo board, incorrectly numbered as unit 3 should be unit 1 within 10m of regrowth trees

12	2	10	20			Red/brown loam. Some small shale like stones		294918	6148029	
12	3	20	30			Red/brown loam onto shale. Large shale rocks present (<20cm wide) soil is noticeably drier than earlier pits, not balling in sieve		294918	6148029	
13	1	0	10			Medium brown, silty clay. No humic layer. Thick green kikuyu grass coverage on surface. Well sorted with some small rocks throughout unit 1. no other inclusions		294960	6148063	
13	2	10	20			Medium/dark brown silty clay. Poorly sorted with small rocks throughout unit. No other inclusions besides grass roots		294960	6148063	
13	3	20	30			Continuation of medium/dark brown silty clay. Very poorly sorted with the majority of the unit filled with rocks. No other inclusions		294960	6148063	Note: Not base continuing another unit although a base photo (0509) was taken
13	4	30	40			Continuation of medium/dark brown, compacted silty clay. Very poorly sorted with rocks. No other inclusions. Last unit dug		294960	6148063	
14	1	0	10			Dark brown silty clay. No humic layer. Thick green kikuyu grass coverage on surface. Well sorted soil with no inclusions. Organic rich with worms and other small organisms		294965	6148117	
14	2	10	20			Transition to a dark brown/black light clay. Moist and forming small balls when sieved. Poorly sorted with small rocks. No other inclusions		294965	6148117	
14	3	20	30			Transitioning to a more compact medium clay. No colour change- still dark brown/black. Poorly sorted with small rocks throughout unit. No other inclusions		294965	6148117	
14	4	30	40			Continuation of compacted medium clay. Dark brown/black. Very poorly sorted with a lot of rocks. Shale at the base and coming through the profile. Last unit excavated		294965	6148117	
15	1	0	10			Grass A horizon. Dark red/black organic loam with large amounts of grass roots		294969	6148163	
15	2	10	20			Red/Black dark loam, with increasing small shale pebbles		294969	6148163	
15	3	20	30			As above black/red loam with some small fragments of shale <10cm.	Some small <1cm fragments of charcoal present. 1 larger shale stone found 7cm wide	294969	6148163	
15	4	30	40			As above red/brown dark organic loam. Increasing shale content becoming much more prevalent at base of unit		294969	6148163	
15	5	40	43			Red/black loam onto solid shale - unable to excavate more than a cm or two before unit ends		294969	6148163	
16	1	0	10		10YR 4/2	Grey silty soil with small red inclusions (<1mm) quite compacted		294972	6148212	Located within cattle run, approx. 5m east of tapped spring. Area has likely been trampled by stuck movement through cattle run and around spring
16	2	10	20			Fine, silty grey soil with small, red inclusions of shale. Pit is drier on northern half, and soil is much harder to excavate there		294972	6148212	
16	3	20	30			Very hard, consolidated grey silt. A large number of pebbles/stones in unit. Increasing in number towards the base. All are small <2mm and are yellow or red in colour. Possible disintegrated shale as they break up easily		294972	6148212	
16	4	30	40			As above grey silt with stones increasing to shale base. Very dry, very hard		294972	6148212	

						and consolidated				
17	1	0	10			Dark brown/black, medium clay. Nutrient rich with biota in unit 1. surface coverage of kikuyu grass with roots throughout unit 1. no other inclusions. Very well sorted with no rocks		294971	6148263	
17	2	10	20			Continuation of dark brown/black medium clay. Clay forming small balls when sieved. Very well sorted soil with no inclusions		294971	6148263	
17	3	20	30			Continuation of dark brown/black medium clay. Although the majority of unit 3 contains natural gravel/compacted to soil. No other inclusions		294971	6148263	
17	4	30	37			Continuing dark/black medium clay. Continued almost 95% gravel. Very poorly sorted soil. Transition to hard clay, orange/red in colour. No inclusions in this unit. End levels varied due to the hard clay formation. Last unit excavated		294971	6148263	
18	1	0	12			Medium/dark brown silty clay. Kikuyu grass coverage on surface. No humic layer. Very well sorted with no inclusions		294971	6148313	
18	2	12	20			Continuation of medium/dark brown silty clay. Moist and forming some small balls when sieved. Very well sorted with no inclusions		294971	6148313	
18	3	20	30		10YR 2/2	Continuation of brown/black clay transitioned to a medium clay. At approximately 25cm clay changed to a light brown, hard clay. No other inclusions. Last unit excavated		294971	6148313	
19	1	0	10			medium brown, silty clay. Grass roots throughout poorly sorted with some gravels. No other inclusions		294976	6148362	
19	2	10	20			Transition to a light brown, medium clay mottled with orange clay. Poorly sorted with gravels. No other inclusions		294976	6148362	
19	3	20	30			Transition to a hard clay, still light brown mottled with orange clay. Very poorly sorted with gravels. No other inclusions. Last unit excavated		294976	6148362	
20	1	0	10			Grass, A horizon, Red/Brown organic soil	Very long grass in area, with deep root systems throughout pit	295009	6148072	Pit located a top of ridgeline in last paddock to properties post, paddock is adjacent to scarred tree paddock
20	2	10	20			Red/Black organic loam fairly dry. Small to medium shale rocks 1-5cm appearing with increasing frequency with depth	Grass roots throughout	295009	6148072	
20	3	20	30			Red/brown loam as above. Increasing shale both in quality and a rick size. Pit ends on shale		295009	6148072	
21	1	0	10			Grass, A horizon. Red/brown loam with shale rocks present from approx. 5cm. Upper shale rocks are very degraded and crumble easily. Rocks are red/brown		295062	6148080	
21	2	10	20			Red/brown organic loam as above. Increasing shale throughout		295062	6148080	
21	3	20	30		7.5YR 2.5/2	As above, red/brown loam with increasing quantities of stone, ending on shale at approx. 30cm deep	Some grass roots	295062	6148080	
22	1	0	10			Dark brown loam. Nutrient rich. Thick kikuyu grass coverage with grass roots throughout unit 1, very well sorted soil with no inclusions		295110	6148075	
22	2	10	20			Dark brown loam. Very poorly sorted soil with shale fragments throughout the last half of unit 2. no other inclusions		295110	6148075	
22	3	20	30			Continuation of dark brown loam. Very poorly sorted with shale fragments throughout the unit. Solid shale base. No other inclusions. Last unit		295110	6148075	

							excavated.					
23	1	0	10				Red/brown dark organic loam, some shale present A horizon grasses	Grass roots in upper 5cm (approx.)	295160	6148063		
23	2	10	20				Red/brown organic loam. Increasing shale rock with depth, consistent with pits 20,21,22 etc..	Some grass roots decreasing with depths	295160	6148063		
23	3	20	30				Red/brown dark loam matrix with increasingly large amounts of shale rock with depth	Thin root (dead) through trench. Easily broken	295160	6148063		
23	4	30	40				As above, dark red/brown soil 10cm with increasing amounts of shale stones. Pit ends on solid shale (shale is cream/red colour and grey within broken)		295160	6148063		
24	1	0	10				Red/brown loam. Grasses on surface. A horizon. Some shale stones present in small quantities	Grass roots to 5-8cm	294478	6148167		
24	2	10	20		7.5YR 2.5/2	5	Red/brown loam onto solid shale. Shale pebbles increase in size and frequency through unit until shale cover base of pit		294478	6148167		
25	1	0	13				Dark brown/black, silty clay. Thick grass coverage on surface no humic layer. Very well sorted with no inclusions.		294461	8148124		
25	2	13	20				Transition to a hard sticky, light brown clay. Very poorly sorted with gravel, no other inclusions. Last unit excavated.		294461	8148124		
26	1	0	10	1			Grass and A horizon. Red/brown organic loam.	Grass roots in top 5cm of unit	294440	6148079	1 Artefact Found	
26	2	10	20	1			Red/Brown loam with increasing clay context. Red/orange clay visible at base of unit.		294440	6148079	Artefact found	
26	3	20	30		10YR 3/1		Grey/brown loam, onto degraded orange/grey shale stone. Shale increasing with depths		294440	6148079		
26	4	30	40				Grey loamy clay with increasing shale stones. Pit ends on shale.		294440	6148079	Pit began on 19/6/18, excavation ceased due to rain, unit 4 completed on 20/6/18. sieving for units 2-4 completed 20/6/18.	
27	1	0	10				Grasses, A horizon, red/brown loam	Grass roots 1st 5cm approx.	294418	6148037	Note: Photo board accidentally written as unit 10 instead of unit 1	
27	2	10	20		7.5YR 3/1		Dark grey loam, as above. Some small clay inclusions	Some small charcoal fragments	294418	6148037		
27	3	20	28	1	7.5YR 3/1		Grey silty loam onto red/orange clay. Some small gravels in 5-4cm above clay layer. Pit finished on clay	Some charcoal pieces throughout	294418	6148037	1 Possible quartz artefact bagged	
28	1	0	10				Dark brown silty and sandy organic rich sediment. Balls up but crumbles apart again, possibly some small clay content.	Grass roots. Bugs, worms, and grubs present in significant quantities. Lots of bioturbation	294389	6147996		
28	2	10	20				Still dark brown but with some flecks of orange now coming in and very minimal amounts of charcoal. Sediment still friable but prone to balling up	Fine roots still present also hit an ant nest	294389	6147996		
28	3	20	30				Soil colour is lightening up to a medium brown with grey tone coming in and continued orange flecks. Still silty with fine sand and some possible clay content	Roots still present	294389	6147996		
28	4	30	40				Grey/brown with orange flecks, more clay content, some charcoal present.	Roots	294389	6147996	Awful moist balling clay with no artefacts	

29	1	0	10				Grasses and A horizon. Brown/grey silty loam. Very wet and sticky	Grasses and roots to 5cm approx.	294364	6147948	
29	2	10	20				Grey silty loam, very plastic, some clay inclusions		294364	6147948	
29	3	20	30		7.5YR 4/2	5	Brown silt, with increasing red/orange clay inclusions. Pit ends on orange clay		294364	6147948	
30	1	0	10		7.5YR 3/2		A horizon, clayey loam dark/brown colour. Shale stones present at base of unit		294484	6148060	
30	2	10	20				Brown clayey loam with increasing shale stones throughout. Pit ends on shale stones, shale is mostly lightly degraded and friable		294484	6148060	
31	1	0	10				Grass and A horizon, grey silty loam. Red/Orange shale visible at base of pit.	Grass roots throughout	294530	6148029	
31	2	10	20				As above, grey silty clay. Increasing shale with depth.		294530	6148029	
31	3	20	30				as above, grey/dark brown loam clay with increasing amounts of shale. Pit ends on shale		294530	6148029	
32	1	0	10		7.5YR 3/3	5.5	Dark brown grasses and A horizon clayey loam	Grass roots to approx. 5cm	294568	6148006	
32	2	10	20				Dark brown clayey loam as above, increasing shale stones		294568	6148006	
32	3	20	28				As above dark brown clayey loam onto shale, increasing shale stones with depth. Pit ends on shale		294568	6148006	
33	1	0	10				Grasses and A horizon, dark brown clayey loam. Shale stones present in small quantities at base of unit.	Grass roots throughout, lessening with depth	294611	6147982	
33	2	10	20				Dark brown clayey loam. Increasing shale with depth		294611	6147982	
33	3	20	37				As above brown loam with increasing shale with depth. Pit ends on shale		294611	6147982	
34	1	0	13				Dark brown silty loam	Grass, worms, grubs	294654	6147951	
34	2	13	20				Dark brown silty loam	Grass and worms	294654	6147951	
34	3	20	30				Silty clay medium brown going grey with orange flecks and charcoal present. Beginning to get to the shale water seeping in small amounts burnt feature present mostly likely a root (large <8cm)	Roots some grass	294654	6147951	
34	4	30	40	1			Silty clay with eroded shale (medium brown/grey with orange) water seeping in from uphill (N)	Grass roots	294654	6147951	Charcoal still present, some burnt root. Found one artefact under the burnt root.
34	5	40	41				Turned into thick clay/degraded shale right away. Grey mixed with orange. Wet	Grass roots	294654	6147951	
35	1	0	10				A horizon, grasses. Brown loam very wet	Very waterlogged on surface, grass roots to approx. 5cm	294725	6147882	Note: that original position of pit 35 was skipped as area was a drainage slope off adjacent ridges and was extended. Waterlogged. Current pit 35 is 100m east of pit 34 on some mid slope transect
35	2	10	20	1			Brown silty loam. Some small <1cm pebbles present.	Charcoal pieces present	294725	6147882	1 Artefact Found
35	3	20	30		10YR 3/2	5.5	Clayey silt dark grey ending on orange/grey clay. Small pebbles throughout silt <3mm		294725	6147882	
36	1	0	10				Grasses, A horizon grey silty loam. Very wet.		294759	6147849	Note: surface photo pit

											number incorrectly says 34 not 36
36	2	10	20	1			As above grey silty loam. Some small fragments of sandstone and shale present		294759	6147849	1 Artefact Found - Quartzite
36	3	20	30	1			Grey silty clay onto orange clay. Pit ends on orange clay		294759	6147849	
37	1	0	10				Grasses, A horizon. Dark brown loamy clay		294797	6147815	
37	2	10	20				As above brown loam with some clay content. Small pebbles <2mm throughout		294797	6147815	
37	3	20	30				Dark brown loam onto red/yellow shale rocks. Shale increases throughout unit with depth. Pit ends on shale. Some small clay content in loam		294797	6147815	
38	1	0	10				Dark brown silty loam with some clay present and small pebbles	Grass (lots of roots), worms and grubs	294829	6147778	
38	2	10	20		7.5YR 2.5/2		Dark brown silty loam with some clay and pebbles of the underlying shale increasing	Grass roots	294829	6147778	
38	3	20	30				Dark brown silty loam with increasing shale content. Some pebbles <2mm. Pit ends on shale rock. Shale present at northern end of pit at approx. 25cm then entire pit (sloping)		294829	6147778	
39	1	0	10	2			Brown loam grass A horizon	Grass roots	294804	6147736	Artefact found in unit in 2 pieces
39	2	10	20				Brown loamy silt, yellow clay inclusions towards base of unit. Clay present in western half of base of unit	Some grass roots present	294804	6147736	
39	3	20	30				Brown clayey loam ending on yellow clay at base of unit. Clay layer is undulating and is higher at western half of pit		294804	6147736	
40	1	0	10				Grass and A horizon. Red/brown loam throughout. Some shale stone pieces	Grass roots throughout	294852	6147823	
40	2	10	20				Brown loam onto shale at 20cm		294852	6147823	