

Catherine McAuley Catholic College, Medowie
Aboriginal Cultural Heritage Assessment
Report

REPORT

Prepared for Webber Architects

23 August 2018

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Glossary

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
DA	Determining Authority
DECCW	Department of Environment, Climate Change and Water (now OEH)
DP	Deposited Plan
EPA	Environment Planning and Assessment
GDA	Geocentric Datum of Australia
GPS	Global Positioning System
GSV	Ground Surface Visibility
ICOMOS	International Council on Monuments and Sites
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NPW Act	National Parks and Wildlife Act
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NTSCORP	Native Title Services Corporation
OEH	NSW Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
REF	Review of Environmental Factors
REP	Regional Environmental Plan
SEPP	State Environmental Planning Policy
Study area	507 Medowie Road, Medowie, New South Wales (NSW) (Lot 412 & 413, DP 1063902)
NNTT	National Native Title Tribunal
ICOMOS	International Council on Monuments and Sites

Summary

Biosis Pty Ltd has been commissioned by Webber Architects on behalf of the Diocese of Maitland-Newcastle, to undertake an Aboriginal Cultural Heritage Assessment (ACHA) (this report) and Archaeological Report (AR) (see Appendix 6) to support an Environmental Impact Statement (EIS) for the proposed development of the Catherine McAuley Catholic College, at 507 Medowie Road, Medowie, New South Wales (NSW) (Lot 412 & 413, DP 1063902) (the project).

The proposed development will be assessed as a State Significant Development (SSD) under Section 89(c) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 (SSD 8989). The project will be assessed by the Planning Assessment Commission (PAC) under delegation from the Minister of Planning. In accordance with requirement 10 of the Secretary's Environmental Assessment Requirements (SEARs) issued for this development (18 January 2018); an assessment of Aboriginal cultural heritage is required in order to assess any potential impacts to Aboriginal cultural heritage the project may have.

This Aboriginal cultural heritage assessment has been conducted in accordance with the EP&A Act and the *National Parks and Wildlife Act 1974* (NPW Act). The Aboriginal cultural heritage assessment has been undertaken in accordance with 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* (DECCW 2010a) (the code) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b) (consultation requirements).

Consultation

The Aboriginal community was consulted regarding the heritage management of the project throughout its lifespan. Consultation has been undertaken as per the process outlined in the DECCW (2010b) consultation requirements. Details regarding the consultation process are outlined in Section 4 below and are included in Appendix 1-5.

The appropriate government bodies were notified and advertisements placed in The Port Stephens Examiner (22/03/2018) and The Newcastle Herald (22/03/2018) newspapers, which resulted in the following Aboriginal organisations registering their interest (Table 1).

Table 1 List of registered Aboriginal parties

Organisation	Contact person
Didge Ngunawal Clan	Lilly Carroll
Nur-run-gee Pty Ltd	Lennie Anderson
Murrooma Inc.	Anthony Anderson
Divine Diggers Aboriginal Cultural Consultants	Deidre Perkins
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson
Yulay Cultural Services	Arika Jalomaki

Organisation	Contact person
Karuah Indigenous Corporation	David Feeney
Muragadi	Jesse Carroll-Johnson
Merrigan	Shaun Carroll
Barraby Cultural Services	Lee Field
Yurrandaali Cultural Services	Bo Field
Worimi Local Aboriginal Land Council (LALC)	Jamie Merrick

A search conducted by the Office of the Registrar, *Aboriginal Land Rights Act 1983* (NSW) did not identify any Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983* with claims over the study area. Therefore there are no Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the study area.

A search conducted by the National Native Title Tribunal listed one Registered Native Title Claim within the Port Stephens LGA. The study area is located approximately 30 kilometres to the south of this native title claim and therefore is not covered by this claim. Native Title Services Corporation Limited (NTSCorp) was contacted on 9 March 2018 in order to identify any native title claimants with an interest in the project. NTSCorp notified Biosis that they were not able to provide contact details for any potentially interested stakeholders as part of their privacy policy. NTSCorp confirmed that they had notified any potentially interested native title claimants regarding the project on the 12 March 2018. They did not receive any responses or registrations of interest.

Upon registration, the registered Aboriginal parties (RAPs) were invited to provide their knowledge on the study area and on comment on the project information and assessment methodology provided in the project methodology document sent on 18 April 2018. Responses from the RAPs are included in Appendix 3.

Representatives from the RAP groups participated in the field investigation and test excavations and provided comment on the study area with regard to the proposal, noting the high density of artefacts as evidence of occupation and high cultural significance. The results of the consultation process are included in this document.

The recommendations that resulted from the consultation process are provided below.

Results

The ACHA assessment undertook background research for the proposed study area. Key considerations arising from the background research include:

- Aboriginal sites frequently occur on the margins of wetlands or estuaries, within dune systems, and within creek flat and alluvial terrace landforms.
- Predicative modelling conducted for the region indicates that artefact sites are most likely to occur on level, well drained grounds, adjacent to fresh water sources, or on relatively level ground upon crests and ridgelines.
- Previous archaeological testing within the study area conducted by Umwelt in 2013 confirmed that subsurface archaeological deposits are present within the study area.

A search of the Aboriginal heritage information management system (AHIMS) database conducted on 13 February 2018 identified four AHIMS sites within the study area (client service ID: 327732). Background research conducted by Biosis found that the four AHIMS sites within the study area are in fact two AHIMS sites which each have been recorded twice on the AHIMS database.

Biosis undertook a field investigation and subsurface test excavations which identified six new Aboriginal heritage sites within the study area. Prior recorded and new sites have been listed below (Table 2).

Table 2 Site details

AHIMS #	Site name	Site type	Significance	Type of harm before mitigation	Consequence of unmitigated harm	Consequence of mitigated harm	Site specific recommendations
38-4-1618/38-4-1628	TP4 and TP5 Aboriginal Site 1	Artefacts	Low	Direct	Total	Total loss of value	Impact
38-4-1619/38-4-1627	TP7, TP9, TP10 – Medowie Power Aboriginal Site 2	Artefacts	Low	Direct	Partial	Partial loss of value	Partial conservation
38-4-1970	Medowie PAD 01	Artefacts	Moderate	Direct	Total	Total loss of value	Archaeological salvage
38-4-1971	Medowie PAD 02	Artefacts	Low	Direct	Total	Total loss of value	Impact
38-4-1973	Medowie PAD 03	Artefacts	Low	Direct	Total	Total loss of value	Impact
38-4-1972	Medowie PAD 04	Artefacts	Low	Direct	Total	Total loss of value	Impact
38-4-1974	Medowie PAD 05	Artefacts	Low	Direct	Total	Total loss of value	Impact
38-4-1975	Medowie PAD 06	Artefacts	Low	Direct	Total	Total loss of value	Impact

Management recommendations

The following management recommendations have been developed relevant to the study area and influenced by:

- predicted impacts to Aboriginal cultural heritage
- the planning approvals framework
- current best conservation practise, widely considered to include:
 - ethos of the Australia ICOMOS Burra Charter (2013)

- the code.

Prior to any development impacts occurring within the study area, the following recommendations have been made.

Recommendation 1: Archaeological Salvage works

Archaeological salvage of AHIMS 38-4-1970 / Medowie PAD 01

Medowie PAD 01 has been identified as having moderate archaeological significance. The archaeological test excavations have identified a moderate to high density intact subsurface archaeological deposit (Medowie PAD 01) within a flat landform on the edge of a dune system.

If impacts on this site cannot be avoided this site should be salvaged through salvage excavations under an approved CHMP. Salvage excavations should focus on the areas of highest density along transect 1 (see Figure 10).

The boundary of Medowie PAD 01 should be fenced in order to ensure the site is not impacted on prior to the site being salvaged under an approved CHMP. Vehicle and pedestrian movement across this site should also be excluded.

No further archaeological works outside of AHIMS 38-4-1970 / Medowie PAD 01 salvage area

No further archaeological works are required within the development footprint outside of the area proposed for salvage in Figure 10. Works may proceed with caution in these areas in line with the approved CHMP.

Partial conservation of AHIMS site 38-4-1619/ 38-4-1627

The western portion of AHIMS site 38-4-1619/ 38-4-1627 is located within the study area. The first 400 millimetres of deposit within this site is expected to be impacted on by the proposed works. It is recommended the deposits below 400 millimetres in depth be conserved in order to preserve the archaeological value of this site.

Should impacts to the deposits below 400 millimetres be unavoidable, further archaeological works in the form of salvage excavations are not required.

The boundary of site 38-4-1619/ 38-4-1627 should be fenced in order to ensure the site is not impacted on prior to development approval. Vehicle and pedestrian movement across this site should also be excluded.

Recommendation 2: Development of a Cultural Heritage Management Plan (CHMP)

It is recommended that a CHMP be developed in consultation with the RAP's, DPE and OEH. The CHMP will outline Aboriginal site management requirements including the management of unexpected finds, and further works required prior to development, such as archaeological salvage works. The CHMP should also outline areas of low archaeological potential where development works are able to be undertaken without further archaeological works required.

Development of salvage methodology for AHIMS 38-4-1970 / Medowie PAD 01

The CHMP should outline a salvage methodology for Medowie PAD 01. The salvage methodology should be developed in consultation with the RAP's, DPE, and OEH.

Stop works provision – previously unidentified sites or objects

The CHMP should include a stop work provision for any potential heritage sites identified during construction, not identified as part of this assessment or the CHMP

All Aboriginal places and objects are protected under the NPW Act. This protection extends to Aboriginal objects and places that have not been identified but might be unearthed during construction. If construction proceeds, work must cease if Aboriginal objects or places are identified which have not previously been identified as part of this assessment or have not been approved for harm under a CHMP. OEH and the archaeologist must be notified to make an assessment of the find and advise on subsequent management.

Historical archaeological sites are protected under the relics provisions (s139 – 146) of the NSW *Heritage Act 1977*. Should any historical archaeological sites be identified during any phase of the proposed development, all works must cease in the vicinity of the find and the project archaeologist and OEH notified. Should the archaeological nature of the find be confirmed the Heritage Branch of the NSW Department of Planning, will require notification.

Stop works provision – Discovery of Aboriginal Ancestral Remains

The CHMP should also include a provision for the discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity the Diocese must:

- immediately cease all work at that location and not further move or disturb the remains
- notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location
- not recommence work at that location unless authorised in writing by OEH.

Heritage training and induction

The CHMP should develop a training and heritage induction for all employees, contractors and associated subcontractors working on site. The induction training should address elements related to:

- relevant legislation
- CHMP conditions
- location of identified heritage sites
- basic identification skills for Aboriginal and non-Aboriginal artefacts and human remains
- procedure to follow in the event of an unexpected heritage item find during construction works
- procedure to follow in the event of discovery of human remains during construction works
- penalties and non-compliance.

Long term care and control agreement

As part of the CHMP, a long term care agreement of artefacts should be developed for all Aboriginal artefacts identified during the test excavations and salvage works. This should be undertaken in consultation with the RAPs.

Recommendation 3: Continued consultation with the registered Aboriginal stakeholders

As per the consultation requirements, a copy of this report should be provided to the RAPs for their review and comment. The proponent must allow the registered Aboriginal parties **28 days** to provide any comments

on this report. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project.

A copy of the final report will be sent to:

- Registered Aboriginal Parties
- OEH
- AHIMS register.

1 Introduction

1.1 Project background

Biosis Pty Ltd has been commissioned by Webber Architects on behalf of the Diocese of Maitland-Newcastle, to undertake an ACHA to support an EIS for the proposed development of the Catherine McAuley Catholic College, at 507 Medowie Road, Medowie, New South Wales (NSW) (Lot 412 & 413, DP 1063902).

This investigation has been carried out under Part 6 of the NPW Act. It has been undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a) (the code). The code has been developed to support the process of investigating and assessing Aboriginal cultural heritage by specifying the minimum standards for archaeological investigation undertaken in NSW under the NPW Act. The archaeological investigation must be undertaken in accordance with the requirements of the code.

The EP&A Act includes provisions for local government authorities to consider environmental impacts in land-use planning and decision making. Each Local Government Area (LGA) is required to create and maintain a Local Environmental Plan (LEP) that includes Aboriginal and historical heritage items. Local Councils identify items that are of significance within their LGA, and these items are listed on heritage schedules in the local LEP and are protected under the EP&A Act and *Heritage Act 1977*.

1.2 Study area

The study area is located within the Port Stephens Local Government Area (LGA), Parish of Stowell, County of Gloucester (Figure 1). The study area incorporates Lot 412 DP 1063902 and Lot 413 DP1063902. It is bounded by Medowie Road to the east, Campvale Swamp to the west, and private property to the north and south (Figure 2).

1.3 Planning approvals

The project will be assessed as a SSD under Section 89(c) of the EP&A Act and Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011. The project will be assessed by the Planning Assessment Commission (PAC) under delegation from the Minister of Planning.

Other relevant legislation and planning instruments that will inform the assessment include:

- *National Parks and Wildlife Act 1974* (NSW) (NPW Act)
- *National Parks and Wildlife Amendment Act 2010* (NSW)
- Port Stephens Local Environmental Plan 2013 (LEP)
- Port Stephens Development Control Plan 2014 (DCP).

1.4 Proposed development

The proposed development involves the construction of the Catherine McAuley Catholic College at 507 Medowie Road, Medowie NSW. The proposed works will include the following (Figure 3):

- demolition of existing dwelling, shed and out buildings

- construction of three stream primary school, seven stream high school, a place of worship, and child care centre
- associated works including car park, retaining walls, landscaping, footpaths, access roads, etc.
- establishment and ongoing maintenance of Asset Protection Zones (APZs) necessary to meet bushfire protection requirements.

1.5 Restricted and confidential information

No information in this report is restricted due to cultural sensitivities.

1.6 Aboriginal cultural heritage

1.6.1 General description

According to Allen and O'Connell (2003), Aboriginal people have inhabited the Australian continent for the last 50,000 years. New evidence out of the Northern Territory has pushed this date back to around 60,000 years with the Malakanunja II rock shelter dated at 61,000 +9000/-13,000 BP (Clarkson *et al* 2015).

In NSW, according to Bowler *et al* (2003), Aboriginal people have occupied the land for over 42,000 years. However, preliminary evidence presented by Biosis (2016) from a subsurface testing program in south-western NSW suggests Aboriginal people may have occupied the semi-arid zone of the region for 50,000 years.

Without being part of the Aboriginal culture and the productions of this culture, it is not possible for non-Aboriginal people to fully understand the meaning of site, objects and places to Aboriginal people; only to move closer towards understanding this meaning with the help of the Aboriginal community. Similarly, definitions of Aboriginal culture and cultural heritage without this involvement constitute outsider interpretations.

With this preface, Aboriginal cultural heritage broadly refers to things that relate to Aboriginal culture and hold cultural meaning and significance to Aboriginal people (DECCW 2010b, p. 3). There is an understanding in Aboriginal culture that everything is interconnected. In essence Aboriginal cultural heritage can be viewed as potentially encompassing any part of the physical and/or mental landscape, that is, 'Country' (DECCW 2010b, p. iii).

Aboriginal people's interpretation of cultural value is based on their 'traditions, observance, lore, customs, beliefs and history' (DECCW 2010b, p.3). The things associated with Aboriginal cultural heritage are continually and actively being defined by Aboriginal people (DECCW 2010b, p. 3). These things can be associated with traditional, historical or contemporary Aboriginal culture (DECCW 2010b, p. 3).

1.6.2 Tangible Aboriginal cultural heritage

Three categories of tangible Aboriginal cultural heritage may be defined:

- Things that have been observably modified by Aboriginal people.
- Things that may have been modified by Aboriginal people but no discernible traces of that activity remain.
- Things never physically modified by Aboriginal people (but associated with Dreamtime Ancestors who shaped those things).

1.6.3 Intangible Aboriginal cultural heritage

Examples of intangible Aboriginal cultural heritage would include memories of stories and 'ways of doing', which would include language and ceremonies (DECCW 2010b, p. 3).

1.6.4 Statutory

Currently Aboriginal cultural heritage, as statutorily defined by the NPW Act, consists of objects and places which are protected under Part 6 of the Act.

Aboriginal objects are defined as:

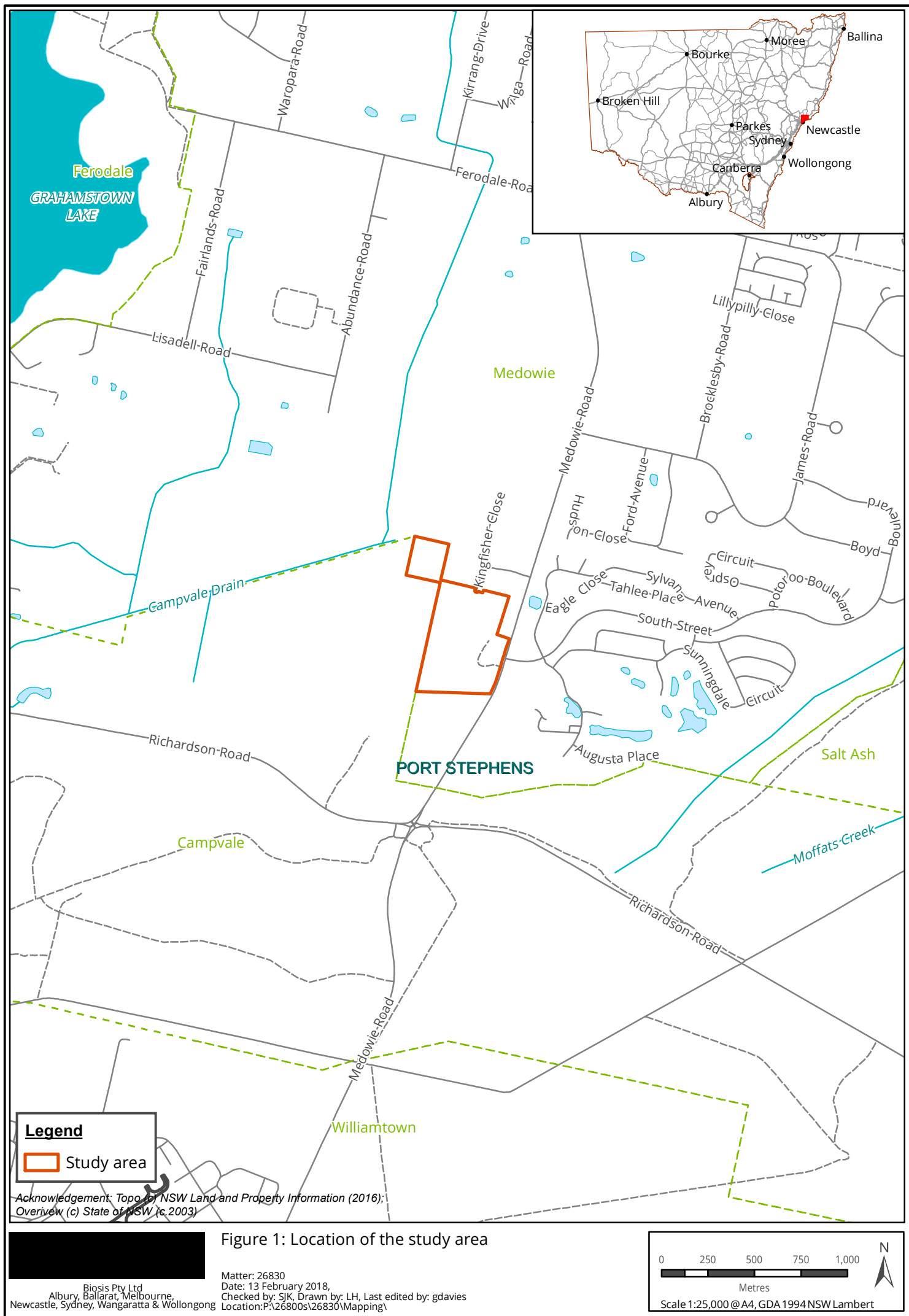
'...any deposit, object or material evidence...relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.'

Aboriginal places are defined as a place that is or was of special Aboriginal cultural significance. Places are declared under section 84 of the NPW Act.

1.6.5 Values

Aboriginal cultural heritage is valued by Aboriginal people as it is used to define their identity as both individuals and as part of a group (DECCW 2010b, p. iii). More specifically it is used:

- To provide a:
 - 'connection and sense of belonging to Country' (DECCW 2010b, p. iii)
 - link between the present and the past (DECCW 2010b, p. iii).
- As a learning tool to teach Aboriginal culture to younger Aboriginal generations and the general public (DECCW 2010b, p. 3).
- As further evidence of Aboriginal occupation prior to European settlement for people who do not understand the magnitude to which Aboriginal people occupied the continent (DECCW 2010b, p. 3).

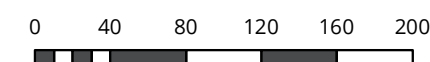




Legend

Study area

Figure 2: Study area detail

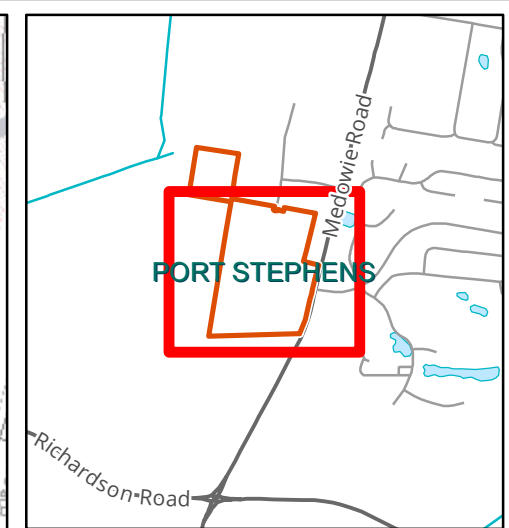


Metres
Scale: 1:4,000 @ A3
Coordinate System: GDA 1994 NSW Lambert



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Legend

Study area

Figure 3: Proposed Development

0 25 50 75 100 125
Metres
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2 Study area context

This section discusses the study area in regards to its landscape, environmental and Aboriginal cultural heritage context. This section should be read in conjunction with the Archaeological Report attached in Appendix 6. The background research has been undertaken in accordance with the Code (DECCW 2010a).

2.1 Landscape context

It is important to consider the local environment of the study area any heritage assessment. The local environmental characteristics can influence human occupation and associated land use and consequently the distribution and character of cultural material. Environmental characteristics and geomorphological processes can affect the preservation of cultural heritage materials to varying degrees or even destroy them completely. Lastly, landscape features can contribute to the cultural significance that places can have for people.

2.2 Landforms, geology, and landforms

The study area is a semi vegetated residential lot located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp and is approximately 1.4 kilometres to the west of Moffats Swamp. Landforms present within the study area include a crest landform in the north-eastern portion of the study area which slopes gently to the western and southern boundaries of the study area towards Campvale Swamp. The construction of Grahamstown Dam has modified the surrounding water courses in the area indicating that stream order is not an effective predictive modelling tool in this instance, and the linear nature of the creekline running through the southern portion of the study area suggests it has been modified.

The study area is located within several geological units. The Tomago Coal Measures (*Pto*) dominates a large portion within the eastern half of the study area, and consists of siltstone, sandstone, coal, tuff, claystone, conglomerate and minor clay (Fairbridge 1953). The western portion of the study area is situated upon alluvial floodplains deposits of swamp facies (*Q_afs*), and a small portion of the southern portion of the study area is set upon coastal deposits of dune facies (*QP_bd*).

The study area is located at the northern edge of a large transgressive dune field of Pleistocene age (Umwelt 2011, p. 2.1). The transgressive dune barrier forms part of inner barrier of the Stockton Bight formation; a large dual barrier formation that encompasses much of the Port Stephens LGA. The inner barrier formed as a result of raised sea levels associated within the last interglacial phase (120,000 years ago). During the last glacial period (116,000 – 10,000 years ago) sea levels dropped resulting the recession of the coastline by approximately 30 kilometres from the current sea level (Umwelt 2011, p. 2.1; Geological Survey of New South Wales 2014). During this period the former beach sands present within the inner barrier were subject to aeolian processes which resulted in windblown sand dunes forming throughout the inner barrier (Umwelt 2011, p. 2.1). The period between 10,000 and 6,500 years ago saw an increase in temperature and precipitation resulting in an increase in sea levels to approximately 1.5 metres above the current sea levels. The sea level remained at 1.5 metres above the current sea level until approximately 2,000 years ago when sea levels started to recede toward current sea levels (Umwelt 2011, p. 2.1).

Soil landscapes have distinct morphological and topological characteristics that result in specific archaeological potential. Because they are defined by a combination of soils, topography, vegetation and

weathering conditions, soil landscapes are essentially terrain units that provide a useful way to summarise archaeological potential and exposure.

There are several soil landscapes present within the study area. The dominant soil landscape within the study area is the Meadowie soil landscape (*me*). The Meadowie soil landscape is characterised by gentle, undulating low hills on relict sediments, and broad, flat crests with low incline slopes. The slope gradient ranges from 2-15%, with landscape elevation varying from 30-70 metre. Local relief is up to 30 metre.

Soils within this landscape consist of deep (<150 centimetre), well-drained red and yellow structured loams, upon deeply weathered clay deposits and moderately deep to deep (60-200 centimetre), well drained podzolic soils, with shallow well-drained lithosoils on sandy/pebbly deposits with clay lenses. Soil changes across the landscape are a direct result of the extensive clearing of native vegetation (Matthei 1995, p. 41).

Other soil landscapes present within the study area include the Tea Gardens soil landscape (*tn*), the Tea Gardens variant 'a' soil landscape (*tna*), and the Tea gardens variant 'b' soil landscape (*tnb*). The Tea Gardens Soil landscape is characterized by Pleistocene beach ridges and uncleared dry and wet heath vegetation upon the Tomago Coastal Plain. Local relief is generally less than 1 metre and elevation less than 5%. Elevation ranges between 5- 8 metres, above sea level, however near the interbarrier, depressions can be as low as 2 metres above sea level. Ridges lines within this soil landscape are well drained, however the swales of these landform units become seasonally waterlogged. The water table in this soil landscape is situated less than 100 centimetres below the ground surface.

Variant 'a' and Variant 'b' are resultant from Aeolian reworking of the sand plains of the Tea Gardens soil landscape. Variant 'a' of the Tea Gardens soil landscape consists of Pleistocene sand sheets with wet heath forest, and is made up of low rises, broad deflations, basins and swales. Variant 'b' is also made up of Pleistocene sand and is very similar to variant 'a', however, it possesses wet heath and sledge land vegetation, and is more susceptible to fire.

Soil throughout the Tea Gardens soil landscape and its variants vary from deep (<200 centimetre) well-drained deposits of humic podzols upon ridgelines, and deep (<200 centimetre) poorly drained peaty humic podzols in swales, and deep (<200 centimetre) very poorly drained acidic peats in swampland (Matthei 1995, p. 212).

For further detail regarding landforms, geology, and soils present within the study area refer to the archaeological report attached in Appendix 6.

2.3 Landscape resources

The study area and wider region contains geology, flora and fauna that would have provided useful resources to the Worimi people who inhabited the area. Sokoloffnov (1977, p. 230) notes that the exploitation of land resources by the Worimi people would have been directly relatable to the seasonal availability and relative abundance of certain food sources. Terrestrial resources would have been utilised in the winter months by Worimi tribes, whilst coastal resources would have been more readily available in the warmer seasons.

A range of flora species have been recorded in the Meadowie soil landscape. Species known to occur include the *Angophora costata* Smooth-barked Apple, *Eucalyptus gummifera* Red Bloodwood, *E. moluccana* Grey Box, *E. piperita* Sydney Peppermint, *E. globoidea* White Stringybark and *Allocasuarina littoralis* Black She-oak). Understorey species include the *Xanthorrhoea* spp. Grass trees, *Lambertia formosa* Mountain Devil, *Pteridium esculentum* Bracken and *Imperata cylindrica* Blady Grass. Occasional *Eucalyptus pilularis* Blackbutt and *E. signata* Scribbly Gum) (Matthei 1995, p. 41).

The Tea Gardens soil landscape is generally vegetated by uncleared low woodland and dry heath on rises and ridges with wet heath, sedge (*tnb*) and wet heath forest (*tna*) in poorly drained areas. The dry heath

community includes low forms of Red Bloodwood), *Banksia aemula* Wallum Banksia, *Persoonia* spp. Geebung and *Pteridium esculentum* Bracken (Matthei 1995, p. 212).

Poorly drained swales and deflation basins contain wet heath or wet heath forest community. Common species of the wet heath include *Banksia oblongifolia*, *Melaleuca nodosa*, *Melaleuca linariifolia* ssp. *linariifolia*, *Melaleuca styphelioides* Prickly-leaved Paperbark, *Xanthorrhoea fulva* Grass Tree, *Callistemon citrinus* Red Bottlebrush, *Hakea teretifolia* Dagger Hakea, *Leptospermum polygalifolium* Yellow Tea-tree, *Bauera rubioides* Dog Rose, *Woolsia pungens* Woolsia, Geebung, *Petrophile sessilis* Prickly Conesticks, *Isopogon anemonifolius* Broad-leaf Drumsticks, *Melaleuca thymifolia* Thyme Honey-myrtle, *Boronia parviflora* Swamp Boronia and *Epacris* spp. (heath) (Matthei 1995, p. 212).

Plant resources were used in a variety of ways. Fibres were twisted into string, which was used for many purposes, including the weaving of nets, baskets and fishing lines. String was also used for personal adornment. Bark was used in the provision of shelter; a large sheet of bark being propped against a stick to form a gunyah (Attenbrow 2002, p. 113-114).

Robert Dawson, an agent of the Australian Agricultural company in 1825, notes the grass tree was used for a variety of purposes. The stalks of the grass tree were used in the manufacturing of spears, and a wax-like gum could be extracted from the grass tree and used as a glue for various implements. When flowering the grass tree also acted as a sweet food source (Dawson in Haslam 1984, p. 18). The grass tree was also used in the making of fire sticks. Fire sticks were an important tool that would be carried from place to place and used in daily life and sacred ceremonies (Scott in Haslam 1984, p. 19). Sokoloffnov (1977, p. 31) notes that the “firing” of vegetation at periodic intervals, also allowed the Worimi to influence the environment and available resources.

Various types of eucalypts were used by Aboriginal people and were a valuable resource. Stringybark in particular, was used in the construction of canoes by the Worimi. A single sheet of its bark would form the hull of a single canoe according to Scott (in Haslam 1984, p. 30). The bark from eucalypts could also be used in the construction of shelters (*gunyers*), and in the fashioning other objects used in everyday life. The fragrant oil-bearing leaves were further used for medicinal purposes, whilst the seeds, barks, nectar, galls, sap, water and manna of certain species could be eaten (Percival & Stewart 1997, p. 22).

Kangaroo, wallaby, possum, flying-fox, koala, kangaroo-rat and the echidna were also abundant traditional terrestrial food sources for the Worimi and would have been valuable sources of fat and protein during the colder months. As well as being important food sources, animal products were also used for tool making and fashioning a myriad of utilitarian and ceremonial items. For example, tail sinews are known to have been used to make fastening cord, while ‘bone points’, which would have functioned as awls or piercers, are often an abundant part of the archaeological record (Attenbrow 2002, p. 117).

2.4 European land use history

In February 1839, a land grant of 865 acres (350 hectares) was initially applied for by W. Hervey. This land grant covered the study area but was later sold to Richard Windeyer, a journalist and barrister from London whose family had already migrated to Australia in 1828. He arrived in Sydney with his wife Maria Camfield and son William Charles on 28 November 1835, establishing a law practice. In an attempt to improve his lands near Grahamstown, Windeyer arranged for the swamps to be drained (Biosis 2018, p.15).

In 1847, the mortgage and the property were transferred to three individuals, including Maria Cobb and Ralph Mansfield (third name is William [illegible]). The property and mortgage were later acquired from George Allen Mansfield, Charles Shelly Mansfield and Ralph Paul Mansfield by John Kenneth Markey in January 1886, who a year later conveyed the property to George Henry Pepper, a grazer. It appears that Pepper had an ongoing connection with the Markey family, as he was later named as an executor in the will

of Peter Markey in 1911 (Probate Jurisdiction 1919). Considering the occupation of Pepper, it is possible that the land was utilised for sheep or cattle grazing. The certificate of title for the property was officially passed to Pepper in June 1889. However, in the same month, Pepper transferred ownership to Robert Beeston, a mining agent from Melbourne. This suggests that the land could have been investigated for minerals, yet no mining leases are recorded on the 1921 Stowell Parish map (Biosis 2018, p. 16).

Beeston returned the land to Pepper in September 1903, when it began to be sold off in parts. This suggests that Beeston did not locate any mineral deposits during his tenure as property owner. The land containing most of the study area was transferred to Daniel James in December 1903, with title officially in James' name by May 1904. The small north-western portion was acquired by William West, a farmer of Fullerton Cove near Stockton, in December 1903. To the west of the study area, The Grahamstown and Campville Swamp Drainage Trust Area was proclaimed in January 1909. The north-western portion was transferred to Sarah Ann West, widow, in September 1909, who in turn sold to Closer Settlement Limited in 1914. The main eastern portion of the property was divided again in the same year, with part being sold to David Davies in 1914 and the remainder staying within the James family, with ownership transferring to Rees James, a farmer, in March 1931. Several road and bridge improvements were made by the James family during their tenure, including the installation of new piles beneath the bridge at Swanreach in 1912, and two wooden causeways and a drain on the Medowie Road in 1932 (Biosis 2018, p. 18).

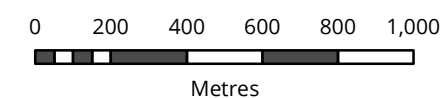
Part of James' property was acquired by the Hunter District Water Board in November 1947. The ownership of the north-western portion of the study area becomes unclear from the mid-1940s. Aerial photographs taken between 1954 and 1958 are difficult to interpret, but they show the district as consisting largely of bushland at this time, with some cleared areas. Robert James Allan, a teacher and [Say] Southern, a spinster, of Mayfield took ownership of the property as joint tenants in March 1957. The land was again subdivided several times from 1975 onwards until it reached its current formation in 2004 (Biosis 2018, p. 19). Aerial photographs from 1993 show that the eastern and a portion of the western parts of the study area have been cleared; the north-eastern corner may have been ploughed (Figure 4 – Figure 6).



Legend

 Study area

Figure 4: 1961 historical aerial imagery in the vicinity of the study area

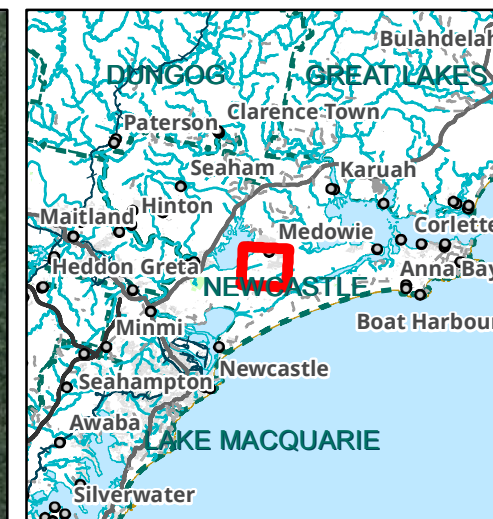


Scale: 1:20,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Albury, Ballarat, Melbourne,
Newcastle, Sydney, Wangaratta & Wollongong

Matter: 26830
Date: 17 April 2018
Checked by: AKE, Drawn by: LW, Last edited by: lwilson
Location: \\bio-data-01\matters\26800s\26830\Mapping\26830_AR_HistAerial



Legend

Study area

Figure 5: 1979 historical aerial imagery in the vicinity of the study area

0 200 400 600 800 1,000
Metres

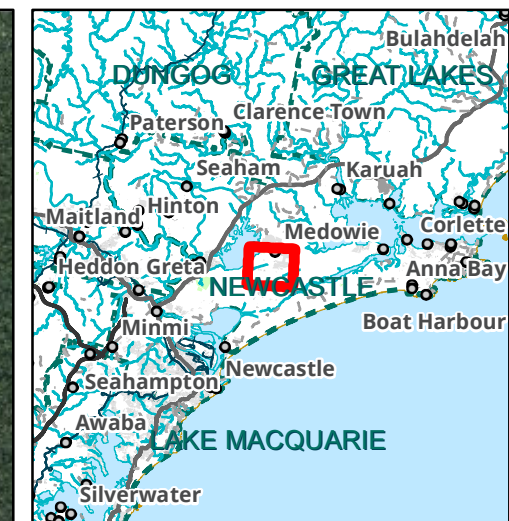
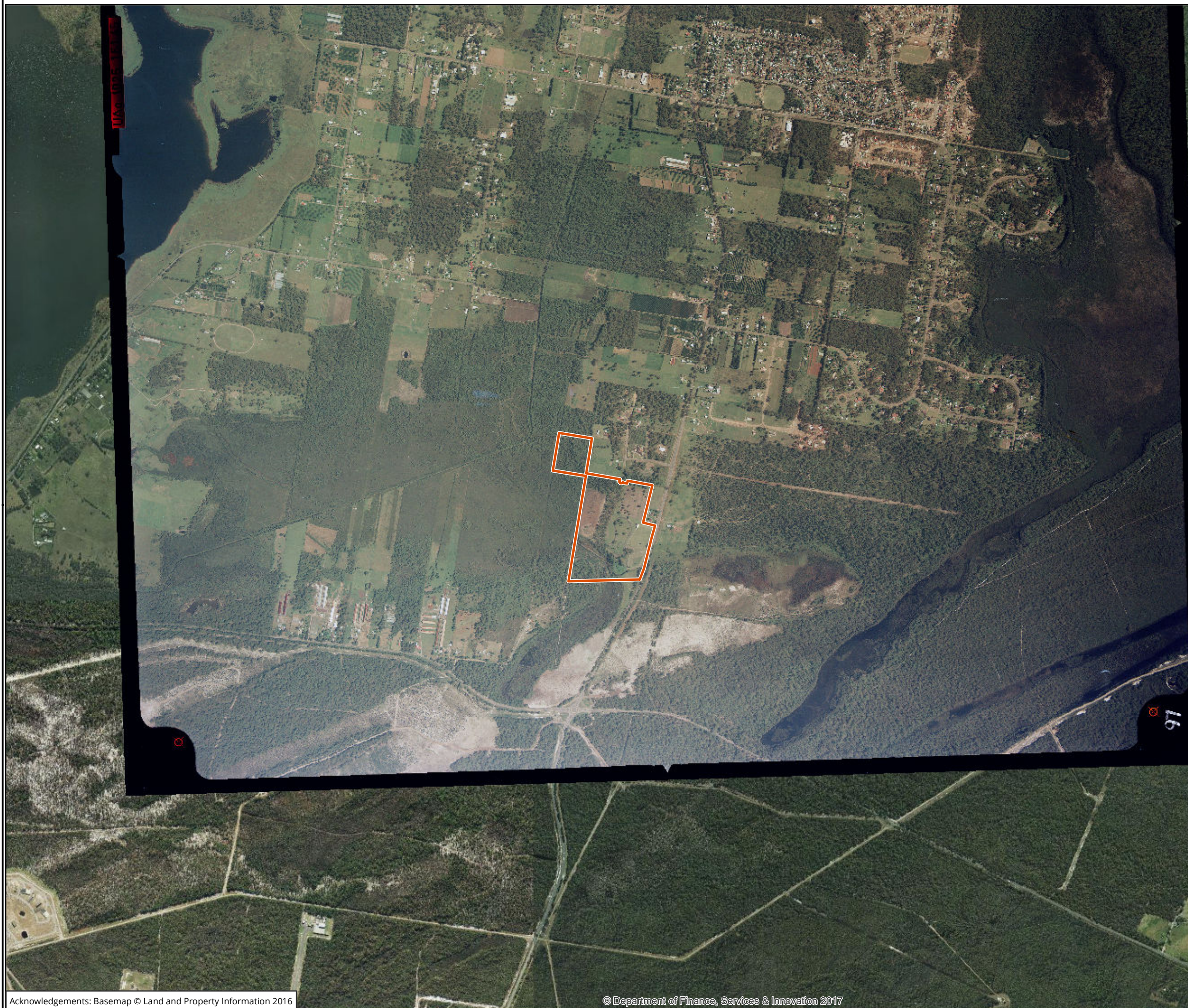
Scale: 1:20,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



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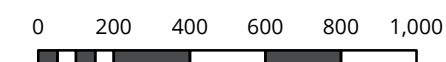
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Legend

 Study area

Figure 6: 1993 historical aerial imagery in the vicinity of the study area



Metres
Scale: 1:20,000 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Albury, Ballarat, Melbourne,
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3 Aboriginal cultural heritage context

3.1 Ethnohistory and contact history

Aboriginal people have occupied the Hunter Valley for at least 20,000 years (Koetigg 1987). Medowie is part of the Port Stephens area, and was traditionally inhabited by the Worimi people. Worimi territory extended from north of the Hunter River to Forster near Cape Hawke, along the coastline, encompassing Port Stephens and stretching inland close to Gresford, and as far south as Maitland (Tindale 1974, p. 201).

The Worimi were considered to be hunter-gatherers and Sokoloff (1977, p. 16) argues that the territories of the Worimi were established to include a variety of habitats rich in raw materials and food resources. Trade, intermarriage, and the sharing of ceremonial places were central to the Worimi nation's interaction with neighbouring tribal groups, such as the Awabakal, Kamilaroi, Gringai, Wanaruah, and other tribes of the region.

Little is known about the size of the population of the Worimi tribe within Port Stephens before white settlement, however it is agreed that numbers declined rapidly after contact (Dean-Jones 1990, p. 68). Sources from the early 1800s to the 1840s vary in their estimates, from 120 at a single, to 500 Worimi individuals within the Port Stephens Area in 1837 (in Dean-Jones, 1990, p. 68). Threlkeld even reports that by 1839, the population of the Awabakal People around the Lake Macquarie area, to the south of Worimi territory had declined to as low as 20 (in Dean-Jones 1990, p. 68). Exposure to diseases brought by white settlers, the destruction of food resources, and instances of hostile relations between white settlers/Europeans and the Worimi people would have contributed significantly to this decline.

The earliest account of contact between Europeans and the Worimi is recorded by David Collins. It was reported that five convicts who had escaped from Parramatta in 1790 were shipwrecked at Port Stephens. The convicts lived among the Worimi for 5 years until they were recaptured (Bramble 1981). Following this, a small garrison of soldiers was established in the 1820's at a place now known as Soldiers Point to aid in the recapture of convicts who had escaped from Port Macquarie.

According to Bramble, relations between escaped convicts and local tribes were good natured, and signified the introduction of products of European civilisation. Colonel Paterson upon exploring the Hunter region in 1801 commented upon the possible use of European axes by Aboriginal tribes, and perhaps convicts who lived among them, to cut down trees (in Bramble 1981). This introduction to European resources would have led to the establishment of more fruitful relations between the Aboriginal people of the Hunter region and European penal authorities, in aiding in the recapture of escaped convicts.

Hostile relations between Europeans and the Worimi tribes of Port Stephens seemed to have originated from early interactions with timber-getters exploiting good quality cedar along the coastal regions of NSW. Accounts of hostilities between timber-getters and the Aboriginal people in the region are recorded from as early as 1804.

Dawson, having arrived in Newcastle in 1825 after free-settlement was made available in the Hunter region in 1820, comments upon the hostile relations which existed between European timber-getters and the Worimi Tribe of Port Stephens. This consequently set a precursor to relations between Europeans or white settlers and local tribes within the Port Stephens Area (Dawson 1831, in Bramble 1981):

The timber-cutting parties... were the first people who came in contact with the natives in the neighbourhood of the sea; and as they were composed of convicts and other people not remarkable either for humanity or honesty, the communication was not at all to the advantage of the poor natives, or subsequently to the settlers who succeeded those parties. The consequence of the behaviour of the cedar getters was, that the natives inflicted

vengeance upon almost every white man they came in contact with, and as convicts were frequently running away from the penal settlement of Port Macquarie to Port Stephens ...numbers of them were intercepted by the natives and sometimes detained whilst those who fell into their hands and escaped with life, were uniformly stripped of their clothes.

The non-Indigenous cultural heritage of this area is defined mostly by the Hunter Regions economic development in terms of pastoral, agriculture and mining industries. In 1804 a penal settlement had been established in Newcastle, and its primary source of industry was coal production. Natural coal deposits of the Newcastle and Tomago were exploited, disturbing Worimi and Awabakal territories.

3.2 Aboriginal heritage located in the study area

A search of the AHIMS database conducted on 13 February 2018 identified four AHIMS sites within the study area (client service ID: 327732). Background research conducted by Biosis found that the four AHIMS sites within the study area are in fact two AHIMS sites which each have been recorded twice on the AHIMS database (Table 2).

AHIMS site 38-4-1618/38-4-1628 (TP4 and TP5 Aboriginal Site 1) is located within the hill crest landform unit, and AHIMS site 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2) is located on the flat landform unit (Figure 7). Test excavations conducted by Umwelt in 2013 determined that these sites contained low density subsurface deposits.

A total of six additional PAD sites were located during the test excavation program conducted as part of this assessment (Figure 8). Individual site results are included below.

- AHIMS 38-4-1618/38-4-1628 Aboriginal Site 1
- AHIMS 38-4-1619/38-4-1627 Aboriginal Site 2
- AHIMS 38-4-1970 / Medowie PAD 01
- AHIMS 38-4-1971 / Medowie PAD 02
- AHIMS 38-4-1973 / Medowie PAD 03
- AHIMS 38-4-1972 / Medowie PAD 04
- AHIMS 38-4-1974 / Medowie PAD 05
- AHIMS 38-4-1975 / Medowie PAD 06

The archaeological report attached in Appendix 6 provides details for Aboriginal sites identified during the archaeological assessment and shown on Figure 8. A brief description of each site is provided below.

AHIMS 38-4-1618/38-4-1628 (TP4 and TP5) Aboriginal Site 1

Site 38-4-1618 is an open artefact site located on a crest landform unit approximately 170 metres east of a drainage line associated with permanent swampland. The site is located approximately 1,200 metres north-east of the Medowie Road and Richardson Road intersection, on the west side of Medowie Road. The site is located adjacent to the residential dwelling within the study area and an electrical substation located immediately to the north east of the study area (Plate 1).

Site 38-4-1618 was identified during archaeological test excavations undertaken as part of an archaeological assessment for electricity supply upgrade works conducted by Ausgrid (Umwelt 2013). Two 1x1 metre test pits spaced 75 metres apart were excavated at the proposed sites of electricity transmission poles. Two flakes and one broken flake were recovered and considered to be in-situ. Raw materials include ignimbrite,

mudstone and silcrete. The assessment concluded that it is likely this site extends beyond the areas tested during the test excavations.

A review of site cards obtained from the AHIMS database, and the Umwelt (2013) ACHA indicates that site 38-4-1628 is a duplicate recording of site 38-4-1618.



Plate 1 AHIMS 38-4-1618/38-4-1628 (TP4 and TP5) Aboriginal Site 1 facing south east

AHIMS 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2)

Site 38-4-1627 is an open artefact site identified within the lower slopes of a dune landform (Plate 2). This site was also identified during archaeological test excavations undertaken as part of an archaeological assessment for electricity supply upgrade works conducted by Ausgrid (Umwelt 2013). The site is located approximately 550 metres north-east of the Medowie Road and Richardson Road intersection. Two of the test pits are located on the west side of Medowie Road, and the third is located on the east, within an electricity easement. The two test pits conducted on the western side of Medowie Road are located within the study area.

Three 1x1 metre test pits were excavated at the proposed sites of electricity transmission poles. These test pits are located approximately 20 metres from a modified drainage line associated with permanent swampland. All artefacts identified during the excavation came from within the A2 sand horizons of the Tea Gardens soil landscape. The artefacts recovered were of tuff, silcrete and mudstone. Tool types varied from broken flakes, flakes, flaked pieces, and a single core. Manuports and retouched flakes were also recorded. The assessment concluded that it is likely this site extends beyond the areas tested during the test excavations.

A review of site cards obtained from the AHIMS database, and the Umwelt (2013) ACHA indicates that site 38-4-1619 is a duplicate recording of site 38-4-1627.

Biosis conducted a series of test excavation units in the immediate vicinity of AHIMS site 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2), in order to determine the nature and extent of the

archaeological deposit identified by Umwelt (2013). A total of 10 artefacts from three test excavation units were identified within this site. The test excavations conducted as part of the current study confirmed a low density subsurface archaeological deposit along the southern bank of the modified creek line that is present in the southern portion of the study area. This site is located within the same landform unit as Medowie PAD 01 and likely marks the southern boundary of Medowie PAD 01. Soil deposits within this site reached maximum depths of 1020 millimetres.



Plate 2 AHIMS 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power) Aboriginal Site 2 facing north west

AHIMS 38-4-1970 / Medowie PAD 01

Medowie PAD 01 consists of a high density sub-surface artefact deposit located on a flat landform unit at the base of a slope in proximity to a modified creekline (Plate 3). A total of 306 artefacts were recovered from 19 test excavation units excavated within this site. Medowie PAD 01 is located within the same landform unit as AHIMS site 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2) and is likely a continuation of this site. The low density archaeological deposits identified within AHIMS site 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2) likely represent the boundary of Medowie PAD 01. The site contains a large number of materials including a range of tool types such as complete flakes, cores, and flake fragments made using different raw material types and largely intact stratified deposits.



Plate 3 Medowie PAD 01 facing south

AHIMS 38-4-1971 / Medowie PAD 02

Medowie PAD 02 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of 14 artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location (Plate 4). Surrounding test pits conducted did not identify any further archaeological deposits.



Plate 4 Medowie PAD 02 (Transect 4 Pit 1)

AHIMS 38-4-1973 / Medowie PAD 03

Medowie PAD 03 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of three artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location (Plate 5). Surrounding test pits conducted did not identify any further archaeological deposits.



Plate 5 Medowie PAD 03 (Transect 3 Pit 2)

AHIMS 38-4-1972 / Medowie PAD 04

Medowie PAD 04 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of three artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location (Plate 6). Surrounding test pits conducted did not identify any further archaeological deposits.



Plate 6 Medowie PAD 04 (Transect 3 Pit 4)

AHIMS 38-4-1974 / Medowie PAD 05

Medowie PAD 05 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. One artefact was recovered from a 50 centimetre by 50 centimetre test pit conducted at this location (Plate 7). Surrounding test pits conducted did not identify any further archaeological deposits.



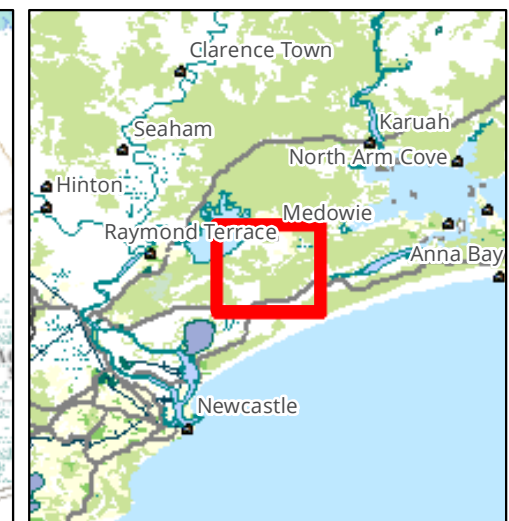
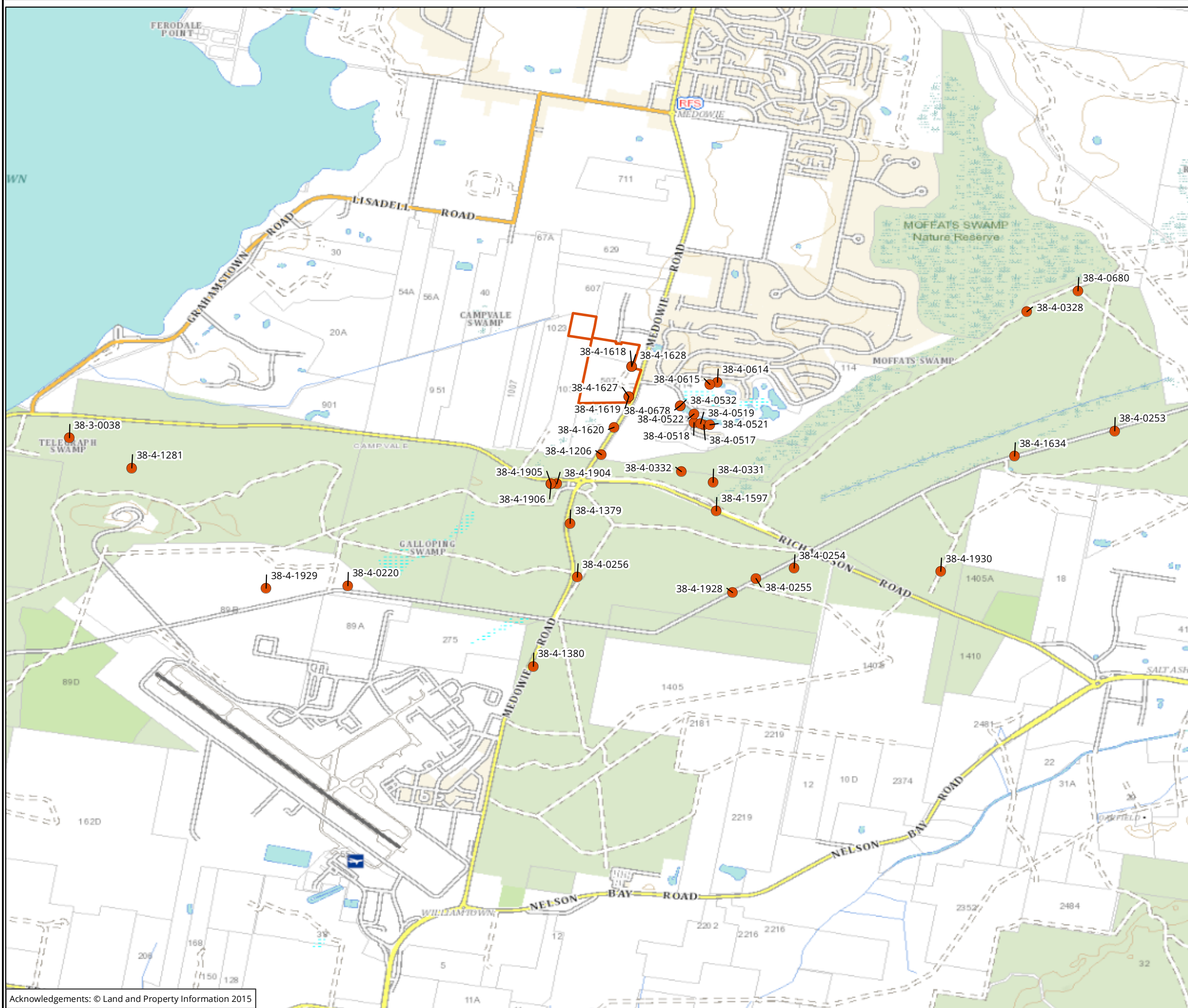
Plate 7 Medowie PAD 05 (Transect 4 Pit 4)

AHIMS 38-4-1975 / Medowie PAD 06

Medowie PAD 06 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. One artefact was recovered from a 50 centimetre by 50 centimetre test pit conducted at this location (Plate 8). Surrounding test pits conducted did not identify any further archaeological deposits.



Plate 8 **Medowie PAD 06 (Transect 5 Pit 2)**



Legend

- AHIMS Records
- Study area

Figure 7: AHIMS records in the vicinity of the study area

NOT TO BE MADE PUBLIC

0 260 520 780 1,040 1,300

Metres

Scale: 1:33,000 @ A3

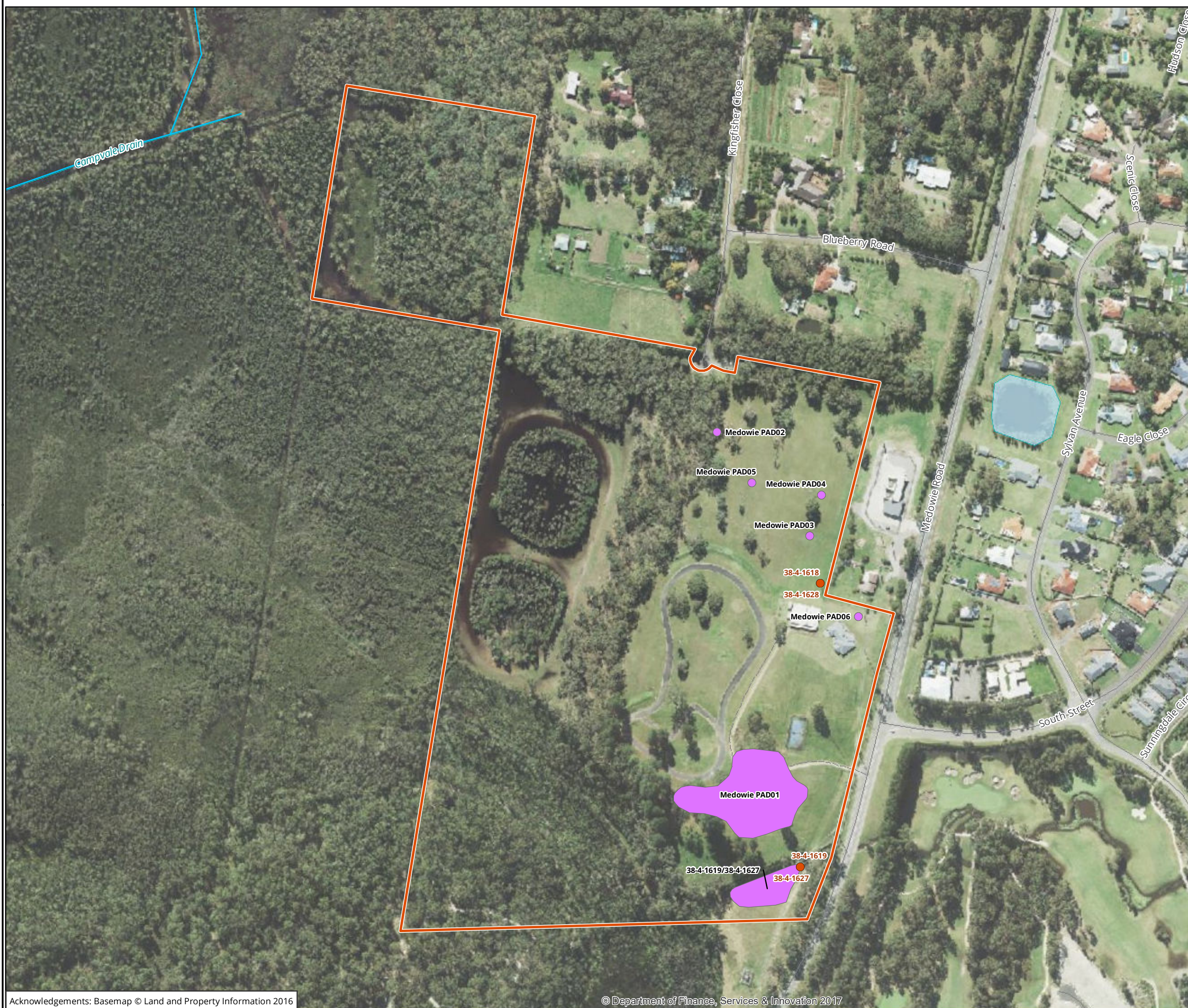
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Matter: 26830
Date: 13 February 2018,
Checked by: gdavies, Generated by: gdavies
Location: P:\26800s\26830\Mapping\26830_F5_AHIMS.mxd



Legend

- Study area
- AHIMS record
- Site extent

Figure 8: Aboriginal sites within the study area

0 30 60 90 120 150
Metres
Scale: 1:3,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56
biosis
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Newcastle, Sydney, Wangaratta & Wollongong

Matter: 26830
Date: 05 July 2018
Checked by: CIA, Drawn by: LW, Last edited by: lwilson
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3.3 Interpretation of past Aboriginal land use

The study area is located at the northern edge of a large transgressive dune field of Pleistocene age (Umwelt 2011, p. 2.1). It consists of a semi vegetated residential lot which is bounded by Campvale Swamp and is approximately 1.4 kilometres to the west of Moffats Swamp. Landforms present within the study area include a crest landform in the north eastern portion of the study area which slopes gently to the western and southern boundaries of the study area towards Campvale Swamp and an unnamed, modified tributary creek.

Previous archaeological assessments identified that regionally, Aboriginal sites frequently occur on the margins of wetlands or estuaries, within dune systems, and within creek flat and alluvial terrace landforms (AMBS 2005; Dean Jones 1990; Umwelt 2011). The site type, and site density within any given area will depend on the landforms present (AMBS 2005). Middens are a common site type identified within the Stockton Bight formation; however, they are most frequently found along coastal and estuarine margins (Dean Jones 1990). Open campsites or artefact scatters are also frequently identified within the Stockton Bight formation, and are the most frequently recorded site type within a 10 kilometre radius of the study area. Previous predictive modelling conducted for the region indicates that artefact sites are most likely to occur on level, well drained grounds, adjacent to fresh water sources, or on relatively level ground upon crests and ridgelines (Dean Jones 1990). Both of these landform features are present within the current study area. Scarred trees are most frequently identified in areas of remnant, old growth vegetation. Large portions of the study area have been cleared of vegetation; however remnant vegetation is present within the western sections of the study area. Burials are generally found in areas characterised by deep profiles of soft sediments and aeolian sand and alluvium, or within midden sites (Dean Jones 1990). Midden sites have not previously been located within the study area however are known to occur in the local area, frequently in association with estuarine environments. Deep, sandy and aeolian soils are characteristic of the Tea Gardens soil landscape which occurs within the study area.

Previous archaeological testing within the study area conducted by Umwelt in 2013 confirmed that subsurface archaeological deposits are present within the study area. The testing program conducted by Umwelt was restricted to four 1 x 1 metre test pits within the eastern margins of the current study area. This area had been disturbed by the construction of Medowie Road, the residential dwelling located in the study area, and the installation of services. Umwelt determined that the archaeological deposits identified within the study area likely extend beyond the areas tested during their archaeological test excavation program into portions of the study area which have been subject to lower levels of previous disturbance.

Test excavations conducted within areas of moderate and high archaeological potential as part of this assessment identified a total of 338 artefacts. Almost all artefacts recorded were obtained from Medowie PAD 01 (93.5%, n=306). Medowie PAD 01 is located on a flat landform bounded by a modified creek line and Campvale Swamp. The test excavations and subsequent artefact analysis have determined that this area was the most intensively occupied location within the study area. This area has been identified as a camp site exhibiting evidence of continuous long term Aboriginal occupation of the landform. This camp site has been defined as Medowie PAD 01; site boundaries for this camp site are shown in Figure 8.

Artefacts were also recorded in much lower densities in the northern section of the study area on a hillcrest and slope landform (6.5%, n=22). T4 P1 contained 14 Artefacts, while T3 P2, T3 P4, T4 P4, and T5 P2 all contained less than five artefacts each. These test pit locations contain low density subsurface deposits, and have been classified as Medowie PAD 02, Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06 respectively. The presence of scattered, low density archaeological deposits throughout these landforms indicates that the entirety of the study area was utilised by Aboriginal people in the past; however, the slope and crest landform units within the study area were not the preferred location for campsites.

The soil profiles recorded during the archaeological test excavations are consistent with those described in the Tea Gardens and Medowie soil landscapes. Very few instances of observable disturbances through man

made agents were noted within the test excavation units. Those that were observed were restricted to the first 100-200 millimetres of deposit. Some natural disturbances such as bioturbation, and tree root activity were noted in test pits, however an analysis of artefact size sorting across spits (see Section 6.1.1 of the AR), indicates there is little to no post depositional movement occurring upwards or downwards in the soil profile. This suggests that the archaeological deposits identified have been subject to low levels of post depositional disturbance.

Artefact types found in the assemblage predominately consist of unretouched flaked artefacts, including angular fragments, complete flakes, and assorted flake fragments (distal, medial, proximal and longitudinal). In addition to the flaked artefacts, five cores were identified in the study area, consisting of two multiplatform cores and three single platform cores. None of the cores displayed any cortex and were representative of later stage reduction. One tool was also identified, consisting of a backed artefact fragment.

The flaked assemblage was dominated by angular fragments (42%), followed by complete flakes (25.1%). Flaked artefacts were dominated by flaked platforms (83.8%) and feather terminations (63.9%). The high frequency of feather terminations indicates that the knappers had some idea of the reduction process and were able to consistently apply the correct amount of force and striking precision required to produce feather terminations. Sizes of flaked artefacts in the assemblage also indicate that the primary stage of reduction utilised at the site consisted of late stage reduction. This was evident in the lack of cortex and the general size of artefacts, most of which had length and widths less than 20 millimetres.

Raw materials used in the study area were dominated by silcrete (43.5%) and tuff (35.8%); although chert, quartzite, chalcedony and mudstone were also recorded, albeit in much smaller quantities. The levels of cortex present on artefacts and the type of cortex present showed that raw material was being transported to site after having undergone primary reduction and that river pebbles were being targeted for raw material. This was evident in the general lack of cortex on recovered artefacts with 94.4% of the assemblage having less than 25% cortex remaining, and the presence of incipient cones on cortex surfaces which is common to river cobbles.

The distribution of artefacts across the study area displayed continuous concentrations throughout the soil profile. While the majority of artefacts were located between 700 and 800 millimetres within Medowie PAD 01, artefacts were found in all depths between 0 and 900 millimetres. The distribution of artefacts throughout the soil profile is unlikely to be the result of post-depositional processes. The amount of artefacts per spit decreased above and below the highest concentration of artefacts in the 700-800 millimetres depth range; however mean axial lengths of flakes by depth, which can indicate the degree of post-depositional disturbances (Richardson 1992) were very similar and did not display clear trends in size sorting. This lack of post depositional disturbance combined with the extensive distribution of artefacts through the soil profile suggest that occupation of the site was continuous, with the highest period of occupation occurring during the deposition of soils present at a depth of 700-800 millimetres.

A comparative analysis of Aboriginal archaeological test excavations conducted in the Medowie area was conducted as part of this assessment. Umwelt (2011 & 2013) conducted test excavations along Medowie Road for proposed electricity supply upgrade works. The 2011 excavations were conducted in close proximity to the study area within similar landform units. The 2013 excavations were conducted both in the study area and in close proximity to the study area within similar landform units. The artefact assemblage from the Umwelt (2011) excavations is comparable to the current test excavations with a total of 370 artefacts being identified within 15 excavation areas. The Umwelt (2013) excavations identified 90 artefacts from 10 test excavation units.

The Umwelt (2011) artefact assemblage was dominated by broken flakes (63%, n=234), which are assumed to be an all-encompassing classification for angular, distal, proximal, longitudinal and medial flake fragments, this was followed by flakes (25%, n=93). The Umwelt (2013) artefact assemblage was also dominated by

broken flakes (43.3% n=39) and flakes (40% n=36). Flaked pieces and heat shatter made up 10% (n=9) of the artefact assemblage, while retouched flakes including geometric microliths (n=1), bondi points (n=1), and amorphous retouched flakes (n=2) made up 4.4% of the assemblage. One manuport was also identified within the assemblage.

The Biosis assemblage contained 237 (70%) broken flakes and 85 flakes (25%) which is roughly congruent with the Umwelt 2011 excavations. The flake to broken flake ratio for the Umwelt 2013 artefact assemblage was roughly 1:1. This differs from both the Umwelt 2011, and Biosis artefact assemblages which were roughly 2:1, and 3:1 respectively. It is likely this discrepancy is a result of a much smaller sample size present within the Umwelt 2013 artefact assemblage.

Unlike the Biosis assemblage, the Umwelt (2011) excavations identified 4 geometric microliths as well as two retouched broken flakes and six broken retouched flakes that also featured backing. This suggests geometric microlith manufacture was occurring in the Umwelt (2011) assemblage. The Umwelt (2013) assemblage also contained four retouched artefacts.

Silcrete was the dominant raw material type recorded by Umwelt (2011) by a considerable margin, accounting for 93% (n=343); this was significantly higher than the Biosis excavations, although silcrete was also the most recorded by Biosis (43.5%). Silcrete was the second most recorded material type within the Umwelt (2013) assemblage at 26.7% (n=24). Tuff was the most recorded material within the Umwelt (2013) assemblage at 68.8% (n=62); while it was the second most common raw material identified by Umwelt (2011) (7%, n=26), and Biosis (35.8%).

The dominant raw material types present within the three assemblages were silcrete and tuff however, the distributions between each assemblage differed greatly. The range of raw material identified in the Biosis excavations was wider than the Umwelt excavations, with chert, mudstone and quartzite also identified by Biosis; although chert, quartzite, chalcedony and mudstone were also recorded in the Umwelt (2011) assemblage albeit in much smaller quantities. The Umwelt (2011) excavations were limited to the tea gardens soil landscape in the dune formations to the south of the current study area, while the Umwelt (2013), and Biosis excavations were conducted in both the tea gardens soil landscape and Medowie soil landscape, across the junction of the plains and lower slopes of the dune formation to the north of the Umwelt (2011) excavations. The differences between the raw material distributions between the three assemblages indicates that Aboriginal people were utilising different raw materials between camp sites. The differences in raw materials could indicate certain areas of the landscape were being utilised at different times of the year based on seasonal resources. The occupation of the landforms tested in the Umwelt (2011) excavations, may have coincided with resource gathering activities in areas where silcrete was readily available, while the occupation of the landforms tested in the Umwelt (2013), and Biosis excavations may have coincided with resource gathering activities in areas where tuff was more readily available.

The levels of cortex present on artefacts were similar in the Umwelt (2011 and 2013) and Biosis assemblages, with a generally low level of cortex present. Only six of the artefacts identified by Umwelt (2011) contained any form of cortex, while only five of the artefacts identified by Umwelt (2013) contained cortex. This is similar to the Biosis assemblage which featured eight artefacts with cortex; additionally, all three assemblages featured cortex reminiscent of river pebbles. This indicates that river pebbles were being selected by Aboriginal people for reduction and that later stage reduction was occurring most predominately within all three assemblages.

No datable materials were identified during the test excavations. The presence of a backed artefact indicates that the deposits from 0-300 millimetres in depth are likely Holocene in age. Geometric microliths are generally considered to belong to the Australian small tool tradition and are commonly featured in mid-Holocene (7,000 - 4,000 BP) sites in the southern portions of Australia (Holdaway and Stern 2004, p. 17; Flood 2004, p. 224; Hiscock 1994). Attempts to further refine the date of appearance and disappearance of backed

artefacts in the archaeological record in Australia have been made (Hiscock 1994). Hiscock (1994) however states that the only surety relating to the occurrence of backed artefacts is that they are early or mid-Holocene in age, and that they are widespread by 4,000 BP. Further detail regarding the possible age of the deposits is not possible at this stage.

For further detail regarding the archaeological survey and test excavation results see the archaeological report supplied in Appendix 6.

4 Aboriginal community consultation

Consultation with the Aboriginal community has been undertaken in compliance with the consultation requirements as detailed below. A consultation log of all communications with RAPs is provided in Appendix 1.

4.1 Stage 1: Notification of project proposal and registration of interest

4.1.1 Identification of relevant Aboriginal stakeholders

In accordance with the consultation requirements, Biosis Pty Ltd notified the following bodies regarding the project:

- Port Stephens Council
- NSW Office of Environment and Heritage
- NSW Native Title Services Corporation Limited (NTSCORP Limited)
- Office of the Registrar, *Aboriginal Land Rights Act 1983* of Aboriginal Owners
- National Native Title Tribunal (NNTT)
- Worimi Local Aboriginal Land Council (LALC).

A list of known Aboriginal stakeholders in the Hunter region was provided by OEH (a copy of this response is provided in Appendix 2) and includes:

- | | |
|--|--|
| • AGA Services | • Lakkari NTCG |
| • Cacatua Culture Consultants | • Lower Hunter Aboriginal Incorporated |
| • Crimson-Rosie | • Lower Hunter Wonnarua Cultural Services |
| • Divine Diggers Aboriginal Cultural Consultants | • Murra Bidgee Mullangari Aboriginal Corporation |
| • Hunters and Collectors | • Didge Ngunawal Clan |
| • Karuah Indigenous Corporation | • Kawul Pty Ltd trading as Wonn1 Sites. |

Worimi Local Aboriginal Land Council provided the following Aboriginal people and organisations who may have an interest in the project

- | | |
|---|---|
| • Anthony Anderson (Murooma Inc) | • Lennie Anderson (Nur-run-gee Pty Ltd) |
| • Dave Feeny (Karuah Indigenous Corporation). | |

A search conducted by the National Native Title Tribunal listed one Registered Native Title Claim within the Port Stephens LGA. The study area is located approximately 30 kilometres to the south of this native title claim and therefore is not covered by this claim. Native Title Services Corporation Limited (NTSCorp) was contacted on 9 March 2018 in order to identify any native title claimants with an interest in the project.

NTSCorp notified Biosis that they were not able to provide contact details for any potentially interested stakeholders as part of their privacy policy. NTSCorp confirmed that they had notified any potentially interested native title claimants regarding the project on the 12 March 2018. They did not receive any responses or registrations of interest. For details regarding Stage 1 of the consultation process refer to Appendix 1 and Appendix 3.

4.1.2 Public notice

In accordance with the consultation guidelines, a public notification was placed in the following newspapers:

- The Port Stephens Examiner (22/03/2018)
- The Newcastle Herald (22/03/2018).

The advertisement invited Aboriginal people who hold cultural knowledge to register their interest in a process of community consultation to provide assistance in determining the significance of Aboriginal object(s) and/or places in the vicinity of the study area. A copy of the public notice is provided in Appendix 2.

4.1.3 Registration of Aboriginal parties

Aboriginal groups identified in Section 4.1.1 were sent a letter inviting them to register their interest in a process of community consultation to provide assistance in determining the significance of Aboriginal object(s) and/or places in the vicinity of the study area. In response to the letters and public notice, the following groups registered their interest in the project. Responses to registration from Aboriginal parties are provided in Appendix 3. A full list of Aboriginal parties who registered for consultation is provided below:

- | | |
|--|---------------------------------|
| • Didge Ngunawal Clan | • Merrigan |
| • Nur-run-gee Pty Ltd | • Murra Bidgee Mullangari |
| • Divine Diggers Aboriginal Cultural Consultants | • Barraby Cultural Services |
| • Murooma Inc | • Yulay Cultural Services |
| • Karuah Indigenous Corporation | • Yurrandaali Cultural Services |
| • Muragadi | • Worimi LALC. |

4.2 Stage 2: Presentation of information about the proposed project

On 18 April 2018 and 14 May 2018 Biosis provided RAPs with details about the proposed development works (project information pack). A copy of the project information pack is provided in Appendix 3. Responses regarding stage 2 are detailed in Section 4.3 below. Responses to the project information pack are included in Appendix 3.

4.3 Stage 3: Gathering information about cultural significance

4.3.1 Archaeological assessment methodology information pack

On 18 April 2018 and 14 May 2018 Biosis provided each RAP group with a copy of the project methodology pack outlining the proposed Aboriginal cultural heritage assessment process and methodology for this project. RAPs were given 28 days to review and prepare feedback on the proposed methodology. A copy of the project methodology pack is provided in Appendix 4.

Responses were received from nine of the registered groups. Responses from Barraby, Yurrandaali, Yulay, Divine Diggers Aboriginal Cultural Consultants, Merrigan, Murra Bidgee Mulangari and Murrooma Inc all expressed approval of the proposed methodology. Didge Ngunawal Clan also agreed with the methodology and indicated they would like artefacts reburied on site. Worimi LALC also supported the methodology and asked if excavations could be extended beyond 3x3 metres in the event of significant finds. One other response was received from Karuah Indigenous Corporation who stated they had read the methodology and that all registered Aboriginal parties should have accompanied archaeologists during the survey of the study area.

Responses to the methodology are included in Appendix 4.

4.3.2 Information gathered during fieldwork

An archaeological survey was undertaken by Biosis archaeologist Taryn Gooley and Worimi LALC sites officer Jamie Merrick on 13 February 2018. No site specific cultural values were identified during the survey, however areas of high and moderate archaeological potential were identified.

Archaeological test excavations were undertaken from 21 May 2018 to 30 May 2018. The test excavation program was undertaken by Taryn Gooley (Biosis), Neil Finley (Biosis), Mathew Smith (Biosis), Ashleigh Keevers-Eastman (Biosis), Rebecca Young (Murrooma Inc.) Dave Feeney (Karuah Indigenous Corporation), Lennie Anderson (Nur-run-gee Pty Ltd), and Brendan Lilley (Worimi LALC).

During the excavations of the study area general comments received from participating RAPs were that the site contained high cultural value evidenced by the high densities of artefacts that were being uncovered at the time. They also indicated that large scatters had been identified previously to the south of the current study area.

4.4 Stage 4: Review of draft Aboriginal cultural heritage assessment report

A copy of the draft ACHAR and AR was sent to all RAPs on Monday 23 July 2018. A follow up email was sent on 13 August 2018 to all RAPs notifying them that the close of review period date supplied with the draft ACHAR and AR (13 August 2018) was incorrect. The correct close of review period date of 20 August 2018 was given in this email.

Seven responses to the draft ACHAR and AR were received and are summarised in Table 3 below. All responses to the draft ACHAR and AR are included in Appendix 5.

The outcomes of the consultation process identified that the study area is highly significant to the Aboriginal community as it provides evidence of long term continuous occupation of the area by Aboriginal people and provides a link between the past and present Aboriginal community.

Feedback from the RAPs indicate they were happy with the consultation undertaken as part of this assessment and supported the results and recommendations made as part of the ACHAR.

Lennie Anderson from Nur-run-gee Pty Ltd responded to the ACHA and AR requesting information regarding the salvage methodology proposed, and the impacts proposed in the south eastern portion of the study area. Lennie also stated that the draft report was a 'concise and a true register of the 'onsite' Preliminary Exploration Methodologies and Recommendations'. Lennie's comments and Biosis' response is detailed in the table below.

Bec Young from Murrooma and Brenden Lilly from Worimi LALC indicated that they would like to ensure any topsoils are not removed from site during the construction process, and that Aboriginal objects identified during the test and salvage excavations be buried on site in an area which will not be disturbed. They also

indicated they would be open to having some of the artefacts on display in the school once it is complete provided it is done in a culturally sensitive manner, in consultation with the RAPs for this project.

Table 3 Stage 4 review responses

Date	Organisation	Comment	Biosis response
23/07/2018	Divine Diggers Aboriginal Cultural Consultants	All good to go ahead Taryn , Deidre	20/08/2018 - Hi Deirdre, Thanks for sending through your comments for this project. I will include them in or final report. Kind regards, Taryn
26/07/2018	Nur-run-gee Pty Ltd	Hi Taryn I've reviewed the Draft and follows my Points of Note: What is the allowable extent of investigation of Medowie PAD 01 (If finding Artefacts etc in sidewalls what is the Parameters of the Surface area we can dig) in other words how far can we take the Sides out to if 'Finding Artefacts intrusive of the side walls? I firmly believe all Shovel Probes' that yielded more than 10 Material Objects should warrant further investigation within the adjacent areas of Medowie PAD01 as it was demonstrated 'Severe water shift' (sub surface) influenced that given area! and was adjacent to 'Campvale Swamp'. To give the Proponent 'Card Blanche' Approval within the 400 mm is a bit 'Cavalier' and quite risky as the Subsurface pressure did yield some Artefacts/Heritage Material at 250 mm. especially in the South West corner of the Project (maybe a further onsite discussion would clarify the points). Other tan these points I found the Draft Report to be quite concise and a true register of the 'onsite' Preliminary Exploration Methodologies and Recommendations. Lennie Anderson OAM Nur-Run-Gee Pty Ltd (Director) Indigenous Archaeologist Worimi Traditional Custodian	10/08/2018 - Hi Lennie, Thanks for getting back to me with comments for this ACHA, my apologies for the delayed response. I have responded to your questions in order below. We are developing a salvage methodology as part of the CHMP and will be sending it out to all RAPs for review shortly. We are proposing to begin with four 4m x 4m open areas surrounding the test excavation units with the highest densities in the Medowie PAD 01 area. The expansion of these areas (if required) will be decided based upon the archaeological material being recovered (ie archaeological features such as hearths, knapping floors, high artefact densities etc) and discussions with RAP's in the field. There is one test excavation unit outside of the Medowie PAD 01 area which contained more than 10 artefacts (Medowie PAD 02 – 14 artefacts total). This test excavation unit was located on the edge of the impact area. The test excavation units surrounding this excavation unit located within the impact area did not contain any Aboriginal artefacts. Based on the results of the test excavations within the remainder of the study area and test excavations in the local region, further archaeological investigation at this test excavation unit will not contribute to our understanding of Aboriginal land use in the region. We have therefore not recommended this area for archaeological

Date	Organisation	Comment	Biosis response
			salvage. The test excavation units conducted within AHIMS site 38-4-1619/38-4-1627 (TP7, TP9, TP10 – Medowie Power Aboriginal Site 2) located in the southern portion of the study area identified a total of 10 artefacts within this site. One test excavation unit at this site contained 5 artefacts, one test excavation unit contained 4 artefacts, and one test excavation unit contained 1 artefact. This site was therefore confirmed as having low density subsurface archaeological deposits. Biosis therefore has not recommended archaeological salvage of this site. The diocese as informed us that they will be to using this area as an overflow car park at a later date. No ground disturbance works are proposed, it will be a 'paddock car park'. Biosis has recommended that any works within this site should be kept at a minimum (i.e ground disturbances no deeper than 400mm) in order to conserve as much of the site as possible. Should the Diocese at a later date propose to develop within this area they will not be required to do further archaeological assessment or works within the area assessed as part of this ACHA; however we have recommended that they consult with and notify all RAPs for this project. Please let me know if you need any further information or would like to discuss these points further. As mentioned above we will be sending out a draft CHMP and Salvage methodology shortly for your review and comment. Kind regards, Taryn
9/08/2018	Murra Bidgee Mullangari	Hi Taryn I have read the draft ACHA and archaeological test excavation report for the above project and endorse the recommendations made by Biosis. Thanks Ryan Johnson Murra Bidgee Mullangari	10/08/2018- Hi Ryan, Thanks you for your feedback on the ACHA. I will include your response in the final report. Please give me a call if you have any further questions. Kind regards, Taryn

Date	Organisation	Comment	Biosis response
		Aboriginal Corporation Cultural Heritage	
12/08/2018	Murrooma	Hi Taryn, Murrooma have read and fully understand the draft report for works completed at Medowie for Catholic College. We agree with the recommendations as outlined in the ACHA and believe that the test excavation report reflects our findings in the field. Murrooma are happy with the consultation from Taryn and Biosis as to date and we believe our cultural heritage within this area of Medowie is being respected and protected as much as possible. Thanks Bec Young	20/08/2018 - Hi Bec, Thanks for sending through your comments on the ACHA and AR, we will be finalising the reports over the next few days and will be incorporating your comments in the report. I will forward through a final version once it is complete. Thanks, Taryn
17/08/2018	Worimi LALC	Hi Taryn we agree with the recommendations but would have liked to have seen a dig in the N\E corner cheers Brenden Kind Regards, Jamie Merrick	20/08/2018 - Hi Brenden, Thanks for taking the time to respond. I'll include your comments in the final report. Can I also get your last name so I can put in the report? Thanks, Taryn 21/08/2018 – Taryn Gooley called Brenden Lilly to discuss his comments. Brenden was concerned about what would happen to the artefacts/ sites not recommended for salvage. Taryn let him know that they haven't been recommended for salvage as they would not contribute to our scientific knowledge of Aboriginal archaeology in the region, however we can recommend in the CHMP that no top soils be removed from the study area to ensure any artefacts present within the study area are not removed. Taryn also asked Brenden what he would like to happen to the artefacts once the salvage is completed. He said he would like them reburied on site in an area which won't be disturbed. He also said that he would be open to having a sample of the artefacts on display at the school provided it was done in a culturally sensitive manner and the other RAPs were happy with them being on display.

Date	Organisation	Comment	Biosis response
21/08/2018	Murrooma	Bec Young called Taryn Gooley regarding what would happen with the artefacts once salvaged and what would be happening to the artefacts/ sites not recommended for salvage.	Taryn let her know that they haven't been recommended for salvage as they would not contribute to our scientific knowledge of Aboriginal archaeology in the region, however we can recommend in the CHMP that no top soils be removed from the study area to ensure any artefacts present within the study area are not removed. Taryn also asked Bec what she would like to happen to the artefacts once the salvage is completed. Bec said she would like them reburied on site in an area which won't be disturbed. Bec also said that she would be open to having a sample of the artefacts on display at the school provided it was done in a culturally sensitive manner and was done in consultation with the RAPs for the project.

5 Aboriginal cultural significance assessment

The two main values addressed when assessing the significance of Aboriginal sites are cultural values to the Aboriginal community and archaeological (scientific) values. This report will assess the cultural values of Aboriginal sites in the study area. Details of the scientific significance assessment of Aboriginal sites in the study area are provided in Appendix 6.

5.1 Introduction to the assessment process

Heritage assessment criteria in NSW fall broadly within the significance values outlined in the Australia International Council on Monuments and Sites (ICOMOS) *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS 2013) (the Burra Charter). This approach to heritage has been adopted by cultural heritage managers and government agencies as the set of guidelines for best practice heritage management in Australia. These values are provided as background and include:

- **Historical significance** (evolution and association) refers to historic values and encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, a historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives *in situ*, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.
- **Aesthetic significance** (Scenic/architectural qualities, creative accomplishment) refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with social values and may include consideration of form, scale, colour, texture, and material of the fabric or landscape, and the smell and sounds associated with the place and its use.
- **Social significance** (contemporary community esteem) refers to the spiritual, traditional, historical or contemporary associations and attachment that the place or area has for the present-day community. Places of social significance have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods or events. Communities can experience a sense of loss should a place of social significance be damaged or destroyed. These aspects of heritage significance can only be determined through consultative processes with local communities.
- **Scientific significance** (Archaeological, industrial, educational, research potential and scientific significance values) refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects. Assessment of scientific value is often based on the likely research potential of the area, place or object and will consider the importance of the data involved, its rarity, quality or representativeness, and the degree to which it may contribute further substantial information.

The cultural and archaeological significance of Aboriginal and historic sites and places is assessed on the basis of the significance values outlined above. As well as the Burra Charter significance values guidelines, various government agencies have developed formal criteria and guidelines that have application when assessing the significance of heritage places within NSW. Of primary interest are guidelines prepared by the Australian

Government, the NSW OEH and the Heritage Branch, and the NSW Department of Planning and Environment. The relevant sections of these guidelines are presented below.

These guidelines state that an area may contain evidence and associations which demonstrate one or any combination of the Burra Charter significance values outlined above in reference to Aboriginal heritage. Reference to each of the values should be made when evaluating archaeological and cultural significance for Aboriginal sites and places.

In addition to the previously outlined heritage values, the OEH *Guidelines to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) also specify the importance of considering cultural landscapes when determining and assessing Aboriginal heritage values. The principle behind a cultural landscape is that 'the significance of individual features is derived from their inter-relatedness within the cultural landscape'. This means that sites or places cannot be 'assessed in isolation' but must be considered as parts of the wider cultural landscape. Hence the site or place will possibly have values derived from its association with other sites and places. By investigating the associations between sites, places, and (for example) natural resources in the cultural landscape the stories behind the features can be told. The context of the cultural landscape can unlock 'better understanding of the cultural meaning and importance' of sites and places.

Although other values may be considered – such as educational or tourism values – the two principal values that are likely to be addressed in consideration of Aboriginal sites and places are the cultural/social significance to Aboriginal people and their archaeological or scientific significance to archaeologists and the Aboriginal community. The determinations of archaeological and cultural significance for sites and places should then be expressed as statements of significance that preface a concise discussion of the contributing factors to Aboriginal cultural heritage significance.

5.2 Cultural (social significance) values

Cultural or social significance refers to the spiritual, traditional, historical and/or contemporary associations and values attached to a place or objects by Aboriginal people. Aboriginal cultural heritage is broadly valued by Aboriginal people as it is used to define their identity as both individuals and as part of a group (DECCW 2010b p.iii). More specifically it provides a:

- *Connection and sense of belonging to Country* (DECCW 2010b p.iii).
- Link between the present and the past (DECCW 2010b p.3).
- Learning tool to teach Aboriginal culture to younger Aboriginal generations and the general public (DECCW 2010b p.3).
- Further evidence of Aboriginal occupation prior to European settlement for people who do not understand the magnitude to which Aboriginal people occupied the continent (DECCW 2010b p.3).

It is acknowledged that Aboriginal people are the primary determiners of the cultural significance of Aboriginal cultural heritage. During consultation the following information was provided by RAPs in regards to the cultural values of the study area.

5.3 Historic values

Historic significance refers to associations a place or object may have with a historically important person, event, phase or activity to the Aboriginal and other communities. The study area is not known to have any historic associations.

5.4 Archaeological (scientific significance) values

An archaeological scientific assessment was undertaken for the study area and is presented in detail as part of the attached Archaeological Report (Appendix 6). One high density artefact deposit (Medowie PAD 01), and seven low density artefact deposits were identified within the study area during this assessment (Medowie PADs 02-06, AHIMS 38-4-1618/38-4-1628, and AHIMS 38-4-1619/38-4-1627).

Medowie PAD 01 has been assessed as having moderate archaeological significance due to the large number of artefacts recovered within the site and the intact nature of the archaeological deposits. This site type occurs frequently within the local area.

Medowie PADs 02-06, AHIMS 38-4-1618/38-4-1628, and AHIMS 38-4-1619/38-4-1627 have been assessed as having low archaeological significance due to the low numbers of artefacts identified within the PAD areas, along with the higher levels of disturbances noted in the soil profile. This site type occurs frequently within the local area.

5.5 Aesthetic values

The study area has been subject to vegetation clearance and land modification works associated with the construction of a domestic dwelling and associated out buildings, the construction of a go-cart track, drainage of Campvale Swamp, and modification of the creek line in southern portion of the study area. The surrounding land to the north and to the east have been developed for residential housing and recreational facilities such as golf courses. The development in and surrounding the study area has resulted in a loss of aesthetic value. The site therefore has low aesthetic values.

5.6 Statement of significance

The significance of sites was assessed in accordance with the following criteria:

- requirements of the Code
- the Burra Charter
- *Guide to Investigating and reporting on Aboriginal Heritage* (OEH 2011).

The combined use of these guidelines is widely considered to represent the best practice for assessments of Aboriginal cultural heritage. The identification and assessment of cultural heritage values includes the four values of the Burra Charter: social, historical, scientific and aesthetic values. The resultant statement of significance has been constructed for the study area based on the significance ranking criteria assessed in Table 4.

5.6.1 Statement of significance for AHIMS site 38-4-1618/38-4-1628

AHIMS site 38-4-1618/38-4-1628 is an open artefact site located on a crest landform unit approximately 170 metres east of a drainage line associated with permanent swampland. The site was identified during archaeological test excavations undertaken as part of an archaeological assessment for electricity supply upgrade works conducted by Ausgrid. Two 1x1 metre test pits spaced 75 metres apart were excavated at the proposed sites of electricity transmission poles. Two flakes and one broken flake were recovered and considered to be in-situ. Test excavation undertaken by Biosis in the same landform identified a similar low density deposit, finding less than five artefacts in a test pit placed in the vicinity of the site.

This site demonstrates sporadic occupation of the slope and crest landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as

having low archaeological significance. Discussions with RAP's on site indicate that this site has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.2 Statement of significance for AHIMS site 38-4-1619/ 38-4-1627

AHIMS site 38-4-1619/ 38-4-1627 is an open artefact site identified within the lower slopes of a dune landform. The site was identified during archaeological test excavations undertaken as part of an archaeological assessment for electricity supply upgrade works conducted by Ausgrid. Three 1x1 metre test pits were excavated at the proposed sites of electricity transmission poles. These test pits are located approximately 20 metres from a modified drainage line associated with permanent swampland and identified a low to moderate density artefact deposit. Excavations undertaken by Biosis identified similar results.

This site is located within the same landform unit as Medowie PAD 01 and likely marks the southern boundary of Medowie PAD 01. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this site has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.3 Statement of significance for AHIMS 38-4-1970 / Medowie PAD 01

Medowie PAD 01 consists of a high density sub-surface artefact deposit located on a flat landform unit at the base of a slope in proximity to a modified creek line. A total of 306 artefacts were recovered from 19 test pits in an area measuring approximately 60 metres by 40 metres. The site contains a large number of materials including a range of tool types such as complete flakes, cores, and flake fragments made using different raw material types and largely intact stratified deposits.

Medowie PAD 01 demonstrates ongoing long-term occupation of the study area by Aboriginal people. This site type has been identified frequently within the local region and has therefore been assessed as having moderate archaeological significance. Discussions with RAP's on site indicate that this site has high cultural significance to the Worimi community due to its ability to demonstrate long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.4 Statement of significance for AHIMS 38-4-1971 / Medowie PAD 02

Medowie PAD 02 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of 14 artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location. Surrounding test pits conducted did not identify any further archaeological deposits. This site type occurs frequently in the region. This site demonstrates sporadic occupation of the flat landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this sites has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.5 Statement of significance for AHIMS 38-4-1973 / Medowie PAD 03

Medowie PAD 03 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of three artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location. Surrounding test pits conducted did not identify any further archaeological deposits. This site demonstrates sporadic occupation of the slope and crest landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this sites has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.6 Statement of significance for AHIMS 38-4-1972 / Medowie PAD 04

Medowie PAD 04 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. A total of three artefacts were recovered from a 50 centimetre by 50 centimetre test pit conducted at this location. Surrounding test pits conducted did not identify any further archaeological deposits. This site demonstrates sporadic occupation of the slope and crest landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this sites has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.7 Statement of significance for AHIMS 38-4-1974 / Medowie PAD 05

Medowie PAD 05 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. One artefact was recovered from a 50 centimetre by 50 centimetre test pit conducted at this location. Surrounding test pits conducted did not identify any further archaeological deposits.

This site demonstrates sporadic occupation of the slope and crest landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this sites has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

5.6.8 Statement of significance for AHIMS 38-4-1975 / Medowie PAD 06

Medowie PAD 06 consists of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope. One artefact was recovered from a 50 centimetre by 50 centimetre test pit conducted at this location. Surrounding test pits conducted did not identify any further archaeological deposits.

This site demonstrates sporadic occupation of the slope and crest landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that this sites has high cultural significance to the Worimi community as it demonstrates long-term connections to the local area.

The site has been assessed as having low historical and aesthetical value.

Table 4 Significance assessment

Site name	Criteria	Ranking
AHIMS 38-4-1618/38-4-1628	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – the site consists of a low density artefact deposit that is common in the region and possesses low archaeological values	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house and recreational facilities such as go cart tracks.	Low
AHIMS 38-4-1619/ 38-4-1627	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – the site possesses low archaeological values.	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low
AHIMS 38-4-1970 / Medowie PAD 01	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – the site possesses moderate archaeological values as it contains a high density artefact deposit with an intact soil profile and range of artefact types. This sit type occurs frequently in the local area.	Moderate
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low
AHIMS 38-4-1971 / Medowie PAD 02	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – Site consist of a low density sub-surface artefact deposit located on a flat landform unit at the base of a slope and is of low scientific significance.	Low

Site name	Criteria	Ranking
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house power line infrastructure	Low
AHIMS 38-4-1973 / Medowie PAD 03	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – Site consist of a low density sub-surface artefact deposit located on a slope landform unit and is of low scientific significance.	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low
AHIMS 38-4-1972 / Medowie PAD 04	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – Scientific – Site consist of a low density sub-surface artefact deposit located on a crest landform unit and is of low scientific significance.	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low
AHIMS 38-4-1974 / Medowie PAD 05	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low
	Scientific – Scientific – Site consist of a low density sub-surface artefact deposit located on a slope landform unit and is of low scientific significance.	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low
AHIMS 38-4-1975 / Medowie PAD 06	Cultural – discussions with the local Aboriginal communities reflect that the site is high in value.	High
	Historical – the site is not connected to any historical event or personage.	Low

Site name	Criteria	Ranking
	Scientific – Site consist of a low density sub-surface artefact deposit located on a crest landform unit and is of low scientific significance.	Low
	Aesthetic – the site is located in the semi-rural suburb of Medowie, between Port Stephens and Raymond Terrace. The study area is bounded by Campvale Swamp. It has been impacted by construction of a house, and power line infrastructure	Low

6 Impact Assessment

As previously outlined, the proposed works involve the construction of the Catherine McAuley Catholic College at 507 Medowie Road, Medowie NSW. The proposed works will include the following:

- Demolition of existing dwelling, shed and out buildings.
- Construction of three stream primary school, seven stream high school, a place of worship, and child care centre.
- Associated works including car park, retaining walls, landscaping, footpaths, access roads, etc.
- Establishment and ongoing maintenance of Asset Protection Zones (APZs) necessary to meet bushfire protection requirements.

The following avoidance strategies have been examined as part of this assessment in order to mitigate harm to archaeological sites AHIMS 38-4-1618/38-4-1628, 38-4-1619/ 38-4-1627, Medowie PAD 01, Medowie PAD 02 Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06.

6.1 Complete or partial avoidance through redesign

The design plans and advice provided by Webber Architects indicate that impacts to the archaeological sites identified during this assessment cannot be avoided by the proposed development. The vast majority of the development footprint is contained to areas of low archaeological potential and previous disturbance. A number of ancillary structures and facilities such as tennis courts, access roads, and footpaths are proposed within the areas identified as containing subsurface archaeological deposits. The proponent has advised Biosis that a redesign in order to achieve complete or partial avoidance is not viable.

Total or partial avoidance through redesign is therefore not considered to be a practicable mitigation method.

6.2 Expected impacts

The impacts on sites 38-4-1618/38-4-1628, 38-4-1619/ 38-4-1627, Medowie PAD 01, Medowie PAD 02 Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06 cannot be avoided by the proposed works (Figure 9).

6.2.1 Partial

AHIMS site 38-4-1619/ 38-4-1627 extends outside of the study area, across Medowie Road towards the Pacific Dunes Golf Course. The eastern most portion of the site is located outside of the current study area and will therefore not be impacted on by the proposed works. The Diocese has indicated that the southern portion of the study area may be utilised as an overflow carpark in the future in order to accommodate for the growing school population. The use of this area as an overflow car park along with vegetation clearing activities for the purpose of maintaining the asset protection zone will impact on AHIMS site 38-4-1619/ 38-4-1627. Impacts to the site are not expected to extend beyond approximately 400 millimetres in depth. The artefact deposits within this site are known to extend to a depth of approximately 900 millimetres. The proposed works will therefore have a direct impact resulting in a partial loss of value at this site.

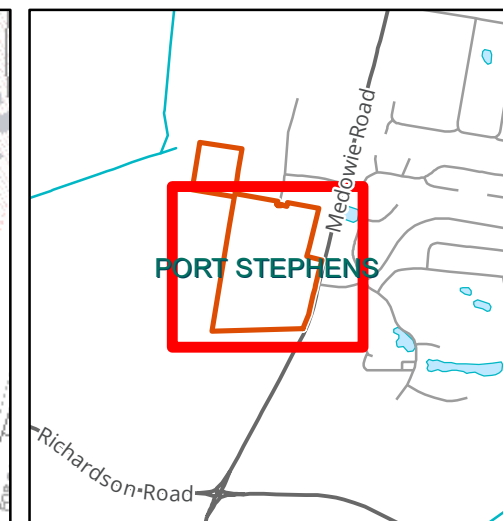
6.2.2 Total

AHIMS site 38-4-1618/38-4-1628, Medowie PAD 01, Medowie PAD 02 Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06 cannot be avoided by the proposed works and are entirely contained within the proposed development area. Impacts to these sites will therefore be direct with a total loss of value.

A summary of impacts is provided below in Table 5.

Table 5 Summary of potential archaeological impacts

AHIMS Site No.	Site Name	Significance	Type Of Harm	Degree Of Harm	Consequence Of Harm
38-4-1618/38-4-1628	TP4 and TP5 Aboriginal Site 1	Low	Direct	Total	Total loss of value
38-4-1619/ 38-4-1627	TP7, TP9, TP10 – Medowie Power Aboriginal Site 2	Low	Direct	Partial	Partial loss of value
38-4-1970	Medowie PAD 01	Moderate	Direct	Total	Total loss of value
38-4-1971	Medowie PAD 02	Low	Direct	Total	Total loss of value
38-4-1973	Medowie PAD 03	Low	Direct	Total	Total loss of value
38-4-1972	Medowie PAD 04	Low	Direct	Total	Total loss of value
38-4-1974	Medowie PAD 05	Low	Direct	Total	Total loss of value
38-4-1975	Medowie PAD 06	Low	Direct	Total	Total loss of value



Legend

- Study area
- AHIMS records
- Site extent

Figure 9: Impacts to Aboriginal sites within the study area

0 25 50 75 100 125
Metres

Scale: 1:2,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Biosis Pty Ltd

Albury, Ballarat, Melbourne,
Newcastle, Sydney, Wangaratta & Wollongong

Matter: 26830
Date: 03 July 2018
Checked by: CIA, Drawn by: GD, Last edited by: lwilson
Location: P:\26800s\26830\Mapping\26830_F# ImpactArea

6.3 Management and mitigation measures

Ideally, heritage management involves conservation of sites through the preservation and conservation of fabric and context within a framework of '*doing as much as necessary, as little as possible*' (Marquis-Kyle and Walker 1994, p. 13). In cases where conservation is not practical, several options for management are available. For sites, management often involves the salvage of features or artefacts, retrieval of information through excavation or collection (especially where impact cannot be avoided) and interpretation.

Avoidance of impacts to archaeological and cultural heritage sites through design of the development is the primary mitigation and management strategy, and should be implemented where practicable.

As noted above, the proposed works cannot avoid impacts to the archaeological sites identified within the study area. It is not feasible for the proposed works to completely avoid impacts to these sites; therefore, the following mitigation measures, which consider the principles of ecologically sustainable development (ESD) and intergenerational equity in their design, are proposed:

6.3.1 No further archaeological works at 38-4-1618/38-4-1628, 38-4-1619/ 38-4-1627, Medowie PAD 02 Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06

Aboriginal sites 38-4-1618/38-4-1628, 38-4-1619/ 38-4-1627, Medowie PAD 02 Medowie PAD 03, Medowie PAD 04, Medowie PAD 05, and Medowie PAD 06 consist of low density subsurface artefact deposits. Impacts to these sites cannot be avoided by the proposed works. These sites have been tested as part the current and previous (Umwelt 2013) test excavation programs. The artefacts recovered during the test excavations have been catalogued and analysed which has contributed to our current knowledge of Aboriginal archaeological site type and distribution throughout the Port Stephens region. The test excavations have increased our current understanding of Aboriginal occupation in the region ensuring that any scientific and cultural information obtained can be accessed and used by future generations. Further testing and salvage of these sites is not recommended.

6.3.2 Salvage of Medowie PAD 01

Medowie PAD 01 site contains high density, intact subsurface archaeological deposits that cannot be avoided by the proposed works. This site should be salvaged through archaeological excavations under a CHMP prior to development (Figure 10). This ensures that the most information possible is obtained from the site prior to its destruction. Following salvage excavations an analysis of any potential archaeological objects or features identified will be undertaken to provide further information about the potential uses of the site by Aboriginal people. This not only increases current understanding of the site but increases our knowledge of Aboriginal occupation in the wider Port Stephens region and ensures that any scientific and cultural information that we obtain can be accessed and used by future generations.

6.3.3 Long term care agreement

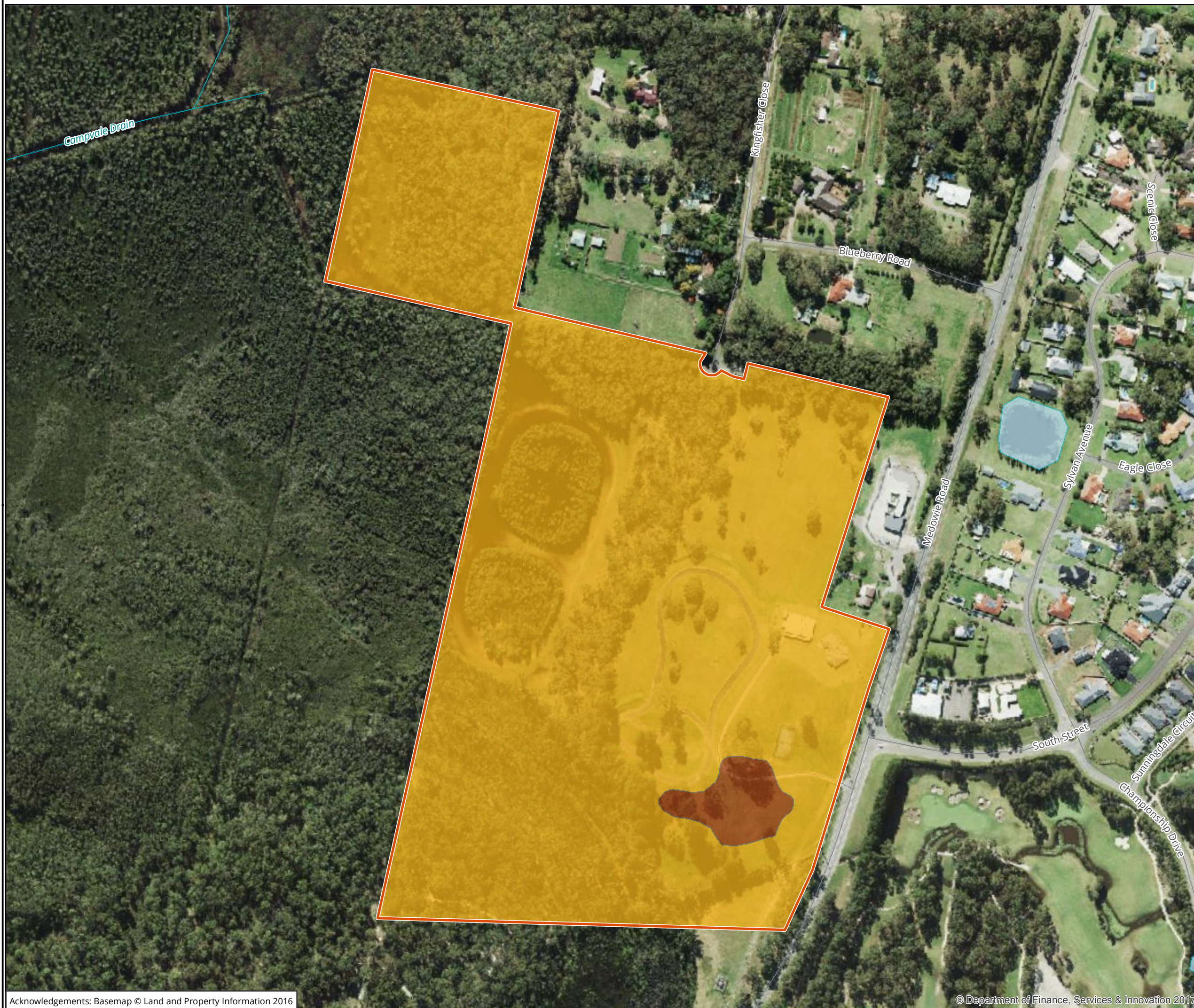
The establishment of a long term care agreement in consultation with RAPs should be developed in order to ensure the artefacts are adequately cared for. Several management options are possible depending on the wishes of RAPs. Artefacts recovered from the salvage excavations can be given back to the Aboriginal community through a long term care agreement where they can then be used to teach subsequent generations about Aboriginal culture or can be reburied in a culturally appropriate place. This approach considers the principles of ESD and intergenerational equity and more importantly ensures that recovered artefacts are managed according to the wishes of RAPs.

6.3.4 Fencing of archaeological sites

The archaeological sites identified during this assessment should be clearly fenced in order to prevent any unintentional impacts prior to the site being salvaged.

6.3.5 Heritage inductions

Heritage inductions for all site workers and contractors should be undertaken in order to prevent any unintentional harm to Aboriginal sites located within the study area and its surrounds.



Legend

 Study area

Salvage

 Salvage not required

 Area recommended for salvage

Figure 10: Recommended Salvage Area

0 30 60 90 120 150
Metres

Scale: 1:3,500 @ A3
Coordinate System: GDA 1994 NSW Lambert



Albury, Ballarat, Melbourne,
Newcastle, Sydney, Wangaratta & Wollongong

Matter: 26830
Date: 03 July 2018,
Checked by: AKE, Drawn by: LW, Last edited by: Iharley
Location: P:\26800s\26830\Mapping\
26830_F# Salvage

7 Conclusions and recommendations

A total of eight Aboriginal archaeological sites have been identified within the study area as part of this assessment as outlined below:

- AHIMS 38-4-1618/38-4-1628 Aboriginal Site 1
- AHIMS 38-4-1619/38-4-1627 Aboriginal Site 2
- AHIMS 38-4-1970 / Medowie PAD 01
- AHIMS 38-4-1971 / Medowie PAD 02
- AHIMS 38-4-1973 / Medowie PAD 03
- AHIMS 38-4-1972 / Medowie PAD 04
- AHIMS 38-4-1974 / Medowie PAD 05
- AHIMS 38-4-1975 / Medowie PAD 06

Medowie PAD 01 consists of a relatively intact, high density subsurface archaeological deposit which demonstrates ongoing long-term occupation of the study area by Aboriginal people. This site type has been identified frequently within the local region and has therefore been assessed as having moderate archaeological significance. Discussions with RAP's on site indicate that this site has high cultural significance to the Worimi community due to its ability to demonstrate long-term connections to the local area.

The remaining Aboriginal archaeological sites identified within the study area consist of low density subsurface deposits which demonstrate sporadic occupation of the flat, crest, and slope landforms present within the study area. This site type is found frequently throughout the Port Stephens area and has therefore been assessed as having low archaeological significance. Discussions with RAP's on site indicate that these sites have high cultural significance to the Worimi community as they demonstrate long-term connections to the local area.

As impacts to these sites cannot be avoided by the proposed works the following management recommendations have been developed relevant to the study area and are influenced by:

- predicted impacts to Aboriginal cultural heritage
- the planning approvals framework
- current best conservation practise, widely considered to include:
 - ethos of the Australia ICOMOS Burra Charter (2013)
 - the code.

Prior to any development impacts occurring within the study area, the following recommendations have been made.

Recommendation 1: Archaeological Salvage works

Archaeological salvage of AHIMS 38-4-1970 / Medowie PAD 01

Medowie PAD 01 has been identified as having moderate archaeological significance. The archaeological test excavations have identified a moderate to high density intact subsurface archaeological deposit (Medowie PAD 01) within a flat landform on the edge of a dune system.

If impacts on this site cannot be avoided this site should be salvaged through salvage excavations under an approved CHMP. Salvage excavations should focus on the areas of highest density along transect 1 (see Figure 10).

The boundary of Medowie PAD 01 should be fenced in order to ensure the site is not impacted on prior to the site being salvaged under an approved CHMP. Vehicle and pedestrian movement across this site should also be excluded.

No further archaeological works outside of AHIMS 38-4-1970 / Medowie PAD 01 salvage area

No further archaeological works are required within the development footprint outside of the area proposed for salvage in Figure 10. Works may proceed with caution in these areas in line with the approved CHMP.

Partial conservation of AHIMS site 38-4-1619/ 38-4-1627

The western portion of AHIMS site 38-4-1619/ 38-4-1627 is located within the study area. The first 400 millimetres of deposit within this site is expected to be impacted on by the proposed works. It is recommended the deposits below 400 millimetres in depth be conserved in order to preserve the archaeological value of this site.

Should impacts to the deposits below 400 millimetres be unavoidable, further archaeological works in the form of salvage excavations are not required.

The boundary of site 38-4-1619/ 38-4-1627 should be fenced in order to ensure the site is not impacted on prior to development approval. Vehicle and pedestrian movement across this site should also be excluded.

Recommendation 2: Development of a Cultural Heritage Management Plan (CHMP)

It is recommended that a CHMP be developed in consultation with the RAP's, DPE and OEH. The CHMP will outline Aboriginal site management requirements including the management of unexpected finds, and further works required prior to development, such as archaeological salvage works. The CHMP should also outline areas of low archaeological potential where development works are able to be undertaken without further archaeological works required.

Development of salvage methodology for AHIMS 38-4-1970 / Medowie PAD 01

The CHMP should outline a salvage methodology for Medowie PAD 01. The salvage methodology should be developed in consultation with the RAP's, DPE, and OEH.

Stop works provision – previously unidentified sites or objects

The CHMP should include a stop work provision for any potential heritage sites identified during construction, not identified as part of this assessment or the CHMP

All Aboriginal places and objects are protected under the NPW Act. This protection extends to Aboriginal objects and places that have not been identified but might be unearthed during construction. If construction proceeds, work must cease if Aboriginal objects or places are identified which have not previously been identified as part of this assessment or have not been approved for harm under a CHMP. OEH and the archaeologist must be notified to make an assessment of the find and advise on subsequent management.

Historical archaeological sites are protected under the relics provisions (s139 – 146) of the NSW *Heritage Act 1977*. Should any historical archaeological sites be identified during any phase of the proposed development, all works must cease in the vicinity of the find and the project archaeologist and OEH notified. Should the archaeological nature of the find be confirmed the Heritage Branch of the NSW Department of Planning, will require notification.

Stop works provision – Discovery of Aboriginal Ancestral Remains

The CHMP should also include a provision for the discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity the Diocese must:

- immediately cease all work at that location and not further move or disturb the remains
- notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location
- not recommence work at that location unless authorised in writing by OEH.

Heritage training and induction

The CHMP should develop a training and heritage induction for all employees, contractors and associated subcontractors working on site. The induction training should address elements related to:

- relevant legislation
- CHMP conditions
- location of identified heritage sites
- basic identification skills for Aboriginal and non-Aboriginal artefacts and human remains
- procedure to follow in the event of an unexpected heritage item find during construction works
- procedure to follow in the event of discovery of human remains during construction works
- penalties and non-compliance.

Long term care and control agreement

As part of the CHMP, a long term care agreement of artefacts should be developed for all Aboriginal artefacts identified during the test excavations and salvage works. This should be undertaken in consultation with the RAPs.

Recommendation 3: Continued consultation with the registered Aboriginal stakeholders

As per the consultation requirements, a copy of this report should be provided to the RAPs for their review and comment. The proponent must allow the registered Aboriginal parties **28 days** to provide any comments on this report. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project.

A copy of the final report will be sent to:

- Registered Aboriginal Parties
- OEH
- AHIMS register.

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Appendices

Appendix 1 Consultation log

Appendix 1.1 Stage 1 – Notification of project proposal and registration of interest

Step 1- Identification of Aboriginal people/parties with an interest in the proposed study area.

Organisation contacted	Date and type of contact	Date and type of response	Response details
OEH	9/03/2018 - email	26/03/2018 - email	Provided Aboriginal stakeholder list for the Catherine McAuley Catholic College Development
Native Title Services CORP Limited	9/03/2018 - email	3/07/2018 - phone	Received a phone call from George Tonna, George stated that he had passed on the relevant information to Stakeholders. George sent an email confirming this on 3/7/2018
Office of the Registrar, Department of Aboriginal Affairs	9/03/2018 - email	N/A	Provided a letter stating there were no Aboriginal owners registered for the study area
National Native Title Tribunal	9/03/2018 - email	9/03/2018	Provided Native title search results
Worimi Local Aboriginal Land Council	9/03/2018 - email	12/03/2018 - email	Provided names and contacts for interested Aboriginal parties
Port Stephens Council	9/03/2018 - email	N/A	N/A

Step 2- Public advertisement

Public notices were provided in the Port Stephens Examiner (22/03/2018) and The Newcastle Herald (22/03/2018). A copy of the advertisement is provided in Appendix 2.

Step 3- Registration of interest

The registration period ran from the 27/03/2018 to 10/04/2018. Letters of invitation were sent to Aboriginal people identified during Step 1 outlined above. Leeway was given to Aboriginal parties/groups who provided responses shortly after the close of this period and they have been registered as Aboriginal parties for consultation.

Organisation contacted		Date and type of contact	Date and type of response	Response details
Murooma Inc	Anthony Anderson	27/03/2018 - email	27/03/2018 - email	Registered interest
Nur-run-gee Pty Ltd	Lennie Anderson	27/03/2018 -	27/03/2018 -	Registered

Organisation contacted		Date and type of contact	Date and type of response	Response details
		email	email	interest
AGA Services	Ashley Sampson	27/03/2018 - email	N/A	N/A
AGA Services	Gregory Sampson	27/03/2018 - email	N/A	N/A
AGA Services	Adam Sampson	27/03/2018 - email	N/A	N/A
Cacatua Culture Consultants	Donna Sampson	27/03/2018 - email	N/A	N/A
Cacatua Culture Consultants	George Sampson	27/03/2018 - email	N/A	N/A
Crimson-Rosie	Jeffery Matthews	27/03/2018 - email	N/A	N/A
Divine Diggers Aboriginal Cultural Consultants	Deidre Perkins	27/03/2018 - email	28/03/2018 - email	Registered interest
Hunters & Collectors	Tania Matthews	27/03/2018 - email	N/A	N/A
Karuah Indigenous Corporation	David Feeney	27/03/2018 - email	29/03/2018 - email	Registered interest
Kawul Pty Ltd trading as Wonn1 Sites	Arthur Fletcher	27/03/2018 - email	N/A	N/A
Lakkari NTCG	Mick Leon	27/03/2018 - email	N/A	N/A
Lower Hunter Aboriginal Incorporated	David Ahoy	27/03/2018 - email	N/A	N/A
Lower Hunter Wonnarua Cultural Services	Lea-Anne Ball	27/03/2018 - email	N/A	N/A
Lower Hunter Wonnarua Cultural Services	Uncle Tommy Miller	27/03/2018 - email	N/A	N/A
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson	27/03/2018 - email	3/04/2018 - email	Registered interest
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson-Carroll	27/03/2018 - email	27/03/2018 - email	Registered interest
Didge Ngunawal Clan	Paul Boyd	27/03/2018 - email	27/03/2018 - email	Registered interest
Didge Ngunawal Clan	Lilly Carroll	27/03/2018 - email	27/03/2018 - email	Registered interest

Organisation contacted		Date and type of contact	Date and type of response	Response details
Muragadi	Shaun Carroll	N/A	9/04/2018 - email	Registered interest
Merrigan	Jesse Carroll-Johnson	N/A	3/04/2018 - email	Registered interest
Barraby Cultural Services	Lee Field	N/A	23/03/2018 - email	Registered interest
Yulay Cultural Services	Akira Jalomaki	N/A	29/03/2018 - email	Registered interest
Yurrandaali Cultural Services	Bo Field	N/A	23/03/2018 - email	Registered interest

The following Aboriginal organisations registered an interest in the project. Worimi LALC responded to Biosis's request for information however they did not register an interest in the project. As a result they were not sent an information package or Methodology package on 18/4/2018. Biosis contacted Worimi LALC on 14/5/2018 and informed them of this discrepancy. Worimi LALC was registered as a RAP on 14/05/2018.

Organisation contacted		Date and type of response	Response details
Murooma Inc	Anthony Anderson	27/03/2018 - email	Registered interest
Nur-run-gee Pty Ltd	Lennie Anderson	27/03/2018 - email	Registered interest
Divine Diggers Aboriginal Cultural Consultants	Deidre Perkins	28/03/2018 - email	Registered interest
Karuah Indigenous Corporation	David Feeney	29/03/2018 - email	Registered interest
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson	3/04/2018 - email	Registered interest
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson-Carroll	27/03/2018 - email	Registered interest
Didge Ngunawal Clan	Paul Boyd	27/03/2018 - email	Registered interest
Didge Ngunawal Clan	Lilly Carroll	27/03/2018 - email	Registered interest
Muragadi	Shaun Carroll	9/04/2018 - email	Registered interest
Merrigan	Jesse Carroll-Johnson	3/04/2018 - email	Registered interest
Barraby Cultural Services	Lee Field	23/03/2018 - email	Registered interest
Yulay Cultural Services	Akira Jalomaki	29/03/2018 - email	Registered interest
Yurrandaali Cultural Services	Bo Field	23/03/2018 - email	Registered interest
Worimi LALC	Jamie Merrick/ Jackie Henderson	12/3/2018 & 14/05/2018 - Phone and email	Registered interest

Appendix 1.2 Stage 2 – Presentation of information about the proposed project

Step 1- Provision of project information pack

A copy of the information pack was sent out to RAP's on 18/4/2018. A copy of the information pack is provided in Appendix 3. Due to the late registration of Worimi LALC, they were sent the project information on 14/05/2018. Worimi LALC responded that they were happy to review the project information prior to test excavations being carried out. Responses from Worimi LALC and other RAP's have been included below.

Organisation contacted	Date and type of contact	Date and type of response	Response details
Divine Diggers Aboriginal Cultural Consultants	18/04/2018 - email	See step 2 below	See step 2 below
Karuah Indigenous Corporation	18/04/2018 - email	See step 2 below	See step 2 below
Nur-run-gee Pty Ltd	18/04/2018 - email	See step 2 below	See step 2 below
Muragadi	18/04/2018 - email	See step 2 below	See step 2 below
Merrigan	18/04/2018 - email	See step 2 below	See step 2 below
Murra Bidgee Mullangari	18/04/2018 - email	See step 2 below	See step 2 below
Barraby Cultural Services	18/04/2018 - email	See step 2 below	See step 2 below
Yulay Cultural Services	18/04/2018 - email	See step 2 below	See step 2 below
Yurrandaali Cultural Services	18/04/2018 - email	See step 2 below	See step 2 below
Didge Ngunawal Clan	18/04/2018 - email	See step 2 below	See step 2 below
Nur-run-gee Pty Ltd	18/04/2018 - email	See step 2 below	See step 2 below
Worimi LALC	14/5//2018 - email	See step 2 below	See step 2 below

Appendix 1.3 Stage 3 – Gathering information about cultural significance

Step 1- Provision of project methodology pack and consultation meeting

A copy of the methodology was sent out to RAPs on 18/4/2018. Due to the late registration of Worimi LALC, they were sent the methodology on 14/05/2018. Worimi LALC responded that they were happy to review the methodology prior to test excavations being carried out. Responses from Worimi LALC and other RAP's have been included below.

A copy of the methodology pack and RAP responses is provided in Appendix 4.

Barraby, Yurrandaali, Yulay, Divine Diggers Aboriginal Cultural Consultants, Merrigan, Murra Bidgee Mulangari and Murrooma Inc all expressed approval of the proposed methodology. Didge Ngunawal Clan also agreed with the methodology and indicated he would like artefacts reburied on site. Worimi LALC also supported the methodology and asked if excavations could be extended beyond 3x3 metres in the event of significant finds.

Organisation contacted	Date and type of contact	Date and type of response	Response details
Divine Diggers Aboriginal Cultural Consultants	18/04/2018 - email	23/04/2018 - email	Approval of methodology