

ABORIGINAL CULTURAL HERITAGE AND ARCHAEOLOGICAL ASSESSMENT REPORT

Residential Development Planning
Proposal - of Fort Wallace, Stockton NSW

FINAL

February 2017



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Fort Wallace, Stockton NSW

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Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Defence Housing Australia

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Report No. 3772/R01/V4
February 2017



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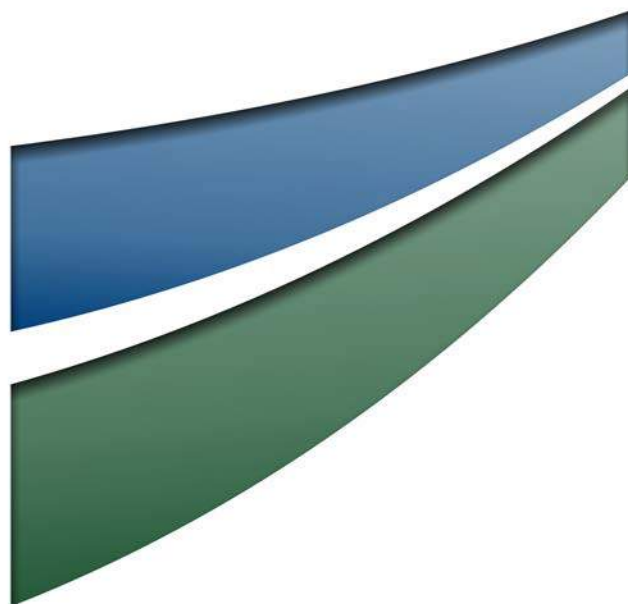
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Executive Summary



Defence Housing Australia (DHA) recently purchased from the Department of Defence the Fort Wallace and Stockton Rifle Range sites to facilitate the development of the properties for residential use by Australian Defence Force personnel and private individuals. Umwelt (Australia) Pty Limited (Umwelt) has been commissioned by DHA to prepare an Aboriginal Cultural Heritage and Archaeological Assessment for a rezoning application for Fort Wallace (comprising Lots 100 and 101 DP1152115) and the subsequent residential development of the site (the project area) in Stockton, NSW (refer to **Figure 1.1**). It is proposed to rezone the project area from the current Infrastructure (SP2 Defence) to Low Density Residential and REI Public Recreation under the Newcastle Local Environmental Plan (LEP) 2012 to allow for the residential subdivision.

DHA has an ongoing requirement for additional housing in the Newcastle area to cater for Newcastle-based Defence members and their families and to replace existing DHA dwellings that do not meet current standards. The proposed Master Plan is prepared to demonstrate how the site could appropriately facilitate a residential development for the Fort Wallace site includes a mix of residential typologies primarily placed within the former Fort Wallace clearance footprint (refer to **Figure 1.2**). The Master Plan has sought to retain the Fort Wallace landscape and focus development within the previously disturbed areas of the site

Aboriginal party consultation was conducted in accordance with the Office of Environment and Heritage's Aboriginal Cultural Heritage Consultation Requirements for Proponents (Office of Environment and Heritage 2010). Five Aboriginal organisations registered for consultation for the Project. These

parties have been consulted regarding the assessment strategy and draft assessment report and four groups who registered early in the process were invited to participate in a field survey for the Project.

The proposed development area is located within the Fern Bay Site complex (38-4-0895) and a further ten sites (Aboriginal Resource and Gathering, artefact scatters and burials) are located within the Fort Wallace property boundary outside of areas of proposed impact. The Fern Bay Complex site consists of middens, artefact scatters and isolated finds. The site card noted traditional knowledge records the presence of ceremonial sites and traditional burials within the site area. Therefore it is likely that further artefacts and shell is likely to occur within the project area. The extent of historical disturbance associated with the establishment and ongoing use of the Fort has impacted much of the project area and is likely to have also impacted any sub-surface deposits that may be present within the disturbed areas. However, outside the disturbance footprint (that is, where sub-surface disturbance does not extend to the depth of deposits), it is possible that intact or partially intact deposits may be present.

A field survey was conducted on the 21 September 2016 of the areas of pedestrian accessibility; in the southern end of the site many of the previously recorded sites were inaccessible due to dense vegetation. Five new sites were recorded (detailed in **Section 5.4** and **Figure 5.2**). Areas of archaeological potential were identified within the less disturbed areas of the site adjoining the parade ground and the western dune parallel to Fullerton Street, as shown in **Figure 5.3** and discussed in **Section 5.4.3**. These areas of archaeological potential were identified due to the presence of the newly identified sites and the

archaeological pattern for the areas which indicates the potential for archaeological deposits within the dune profiles in areas of low previous disturbance. The central portion of the site has been subject to substantial disturbance as a result of the construction of the Fort and as a result lacks archaeological potential.

Registered Aboriginal parties also identified the Burial Hill location as an area of cultural sensitivity and specified that no impacts should occur in this area; refer to **Figure 2.1** for registered Aboriginal party sensitivity mapping.

The recommendations presented below were provided by registered Aboriginal party representatives participating in the survey.

- Undertake inspection of areas where buildings currently stand after their removal and salvage any artefacts found.
- The Burial Hill should be well marked and demarcated as a no go zone so there is no access (machinery or foot traffic) during any works.
- Excavation of test pits across entire impact footprint with focus on the western dune which has been identified as a midden.

The following recommendations have been developed in light of the archaeological context of the region, the findings of the survey, the archaeological assessment of the project area, the cultural assessment of the area by Aboriginal parties; the potential impacts of the project and current cultural heritage legislation.

- DHA should ensure that its employees and contractors are aware that it is an offence under Section 86 of the NPW Act to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an Aboriginal Heritage Impact Permit (AHIP).
- DHA should apply to the Director-General of OEH for an AHIP in accordance with Section 90 of the NPW Act, with this AHIP to cover the entirety of the impact area on the finalised master plan. The need to cover the entirety of the impact area is in recognition that archaeological material has been identified and/or predicted throughout the project area as a result of the movement and redistribution of the former dunes throughout the site. The AHIP should include provision for surface collection across the entirety of the project area (where Aboriginal objects are identified) and for

the completion of sub-surface investigations where the project will involve impacts within the areas of low to moderate and moderate archaeological potential identified in **Figure 5.3**. All salvage works (both surface collection and sub-surface investigation) should be conducted in accordance with the methodology specified in **Section 10.0**.

- Should the proposed impacts change such that it is proposed to impact in the immediate vicinity of the areas of previously recorded sites to the south of the current proposed impacts or the active seaward dune further survey would be required.
- The AHIP should specifically exclude impacts to recorded burial sites. In the event that suspected human skeletal material is identified within the other portions of the project area, all works should cease immediately and the NSW Police Department, OEH and the registered Aboriginal parties should be contacted so that appropriate management strategies can be identified.

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1.0 Introduction

Defence Housing Australia (DHA) recently purchased from the Department of Defence the Fort Wallace and Stockton Rifle Range sites to facilitate the development of the properties for residential use by Australian Defence Force personnel and private individuals. This assessment is part of a suite of specialist assessments of the site that have informed consideration of the site's potential for redevelopment. These assessments have been used as the basis of master plan options and the development of a recommended master plan, which has subsequently informed proposed revised planning controls for the site with respect to land use and height of buildings.

It is intended that a planning proposal will be lodged with Newcastle City Council, seeking support of the strategic merit of the proposal to proceed to a Gateway Determination by the Department of Planning and Environment (DPE). It is intended that the planning proposal, if supported by both Council and DPE, would then proceed to public exhibition and finalisation through an amendment to the LEP. Key outcomes of the master plan may be established in a site specific Development Control Plan or Stage 1 DA. Appropriate approvals will then be sought for the subdivision and development of the site under the amended planning controls.

The master plan has been used as a demonstration of how the site could appropriately accommodate residential uses in response to best practice urban design and planning principles. Where appropriate, this report has considered the likely impacts of the master plan on the Aboriginal Cultural Heritage and archaeology of the site to enable as detailed an assessment as possible. However, it is acknowledged that further detailed work will be undertaken and consideration given to potential archaeological and aboriginal heritage impacts at subdivision and detailed design stage.

Umwelt (Australia) Pty Limited (Umwelt) has been commissioned by DHA to prepare an Aboriginal Cultural Heritage and Archaeological Assessment for a rezoning application for Fort Wallace (comprising Lots 100 and 101 DP1152115) and the subsequent residential development of the site (the project area) in Stockton, NSW (refer to **Figure 1.1**). It is proposed to rezone the project area from the current Infrastructure (SP2 Defence) to Low Density Residential and REI Public Recreation under the Newcastle Local Environmental Plan (LEP) 2012 to allow for the residential subdivision.

1.1 Project Description

DHA has an ongoing requirement for additional housing in the Newcastle area to cater for Newcastle-based Defence members and their families and to replace existing DHA dwellings that do not meet current standards. In response to this, DHA purchased two sites: Fort Wallace, Stockton, NSW and the Rifle Range, Fern Bay, NSW. DHA intends to obtain the necessary planning approvals to develop these sites for residential use with a mix of housing suitable for both Australian Defence Force (ADF) personnel and the private market.

The two sites are located close to the Royal Australian Air Force (RAAF) Base Williamstown which lies 11 to 12 kilometres to the north of the sites. The Newcastle central business district lies a few kilometres to the south across the Hunter River.

1.1.1 Proposed Master Plan – Fort Wallace

The proposed Master Plan prepared to demonstrate how the site could appropriately facilitate a residential development for the Fort Wallace site includes a mix of residential typologies primarily placed within the former Fort Wallace clearance footprint (refer to **Figure 1.2**). The Master Plan has sought to retain the Fort Wallace landscape and focus development within the previously disturbed areas of the site. The residential typologies for the Fort Wallace include the following:

- ***Townhouses*** – up to 19 attached 1-3 storey dwellings with a lightweight design that facilitates layouts that are responsive to site features and context.
- ***Dune apartments*** – up to 42 designed to minimise the overall building footprint and bulk and maximise visual connections with the surrounding landscape.
- ***Coastal cluster houses*** – up to 24 townhouse style dwellings set within natural landscape areas. Private open space is limited to decks and immediate terrace areas attached to each dwelling.
- ***Courtyard homes*** – up to 3 large courtyard family homes including 4 bedrooms, 3 bathrooms, open plan living space, single garage and an ample rear garden.
- ***Single eco-homes*** – up to 14 lightweight, climate responsive individual homes set within generous lots.



Legend

 Project Area (Fort Wallace)

FIGURE 1.1
Locality Plan



Image Source: Nearmap (May 2016)
Data Source: LPI NSW (2009), Architectus (2016)

0 100 200 250m
1:5000

Legend

- Project Area
- Asset Protection Zone
- Historic Heritage Item
- Stormwater Detention Basin (Subject to design resolution)
- Dune Apartment
- Townhouse
- Courtyard Home
- Cluster Home
- Single Eco Home

FIGURE 1.2
Proposed Master Plan

1.2 Legislative Context

This section incorporates a review of legislation and planning instruments relevant to the assessment of Aboriginal cultural heritage within the project area.

1.2.1 Environmental Protection and Assessment Act 1979

The *Environmental Protection and Assessment Act 1979* (the EP&A Act) regulates development activity in New South Wales. Specifically Part 3 of the EPA Act provides the legislative framework for plan making including the process for LEP amendments. In accordance with the requirements of Part 3, this assessment includes consideration of Aboriginal cultural heritage. The Office of Environment and Heritage (OEH) has provided updated advice regarding planning proposals that specifies that planning proposals should identify whether Aboriginal cultural heritage values are known or likely to occur, involving an assessment of archaeological factors and consultation with Aboriginal parties 'who have appropriate cultural information relevant to determining cultural significance.' This advice has been taken into consideration in the preparation of the current assessment.

Any subsequent development of the project area will be regulated under Part 4 of the EPA Act. Section 79C establishes the matters which the consent authority is required to consider in determining a development application, including the likely environmental impacts, which in turn, requires consideration of potential impacts to Aboriginal cultural heritage, as undertaken in this report.

1.2.2 Newcastle Local Environmental Plan 2012

The Newcastle Local Environmental Plan (LEP) is established under the provisions of the EP&A Act. It provides guidance for development activities within the Newcastle Local Government Area. Part 5.10 establishes the requirements for development consent in relation to heritage conservation. The objectives of this part of the LEP include conservation of Aboriginal objects or Aboriginal places of heritage significance. In accordance with these provisions, development consent is required for any activity that will involve:

- demolishing or moving an Aboriginal object
- disturbing or excavating an Aboriginal place of significance
- erecting a building on land on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance
- or subdividing land containing an Aboriginal object or Aboriginal place of heritage significance.

There are some minor exceptions to these provisions, including activities that meet the requirements for exempt development.

With reference to consideration of the effects of development, Clause 8 of Part 5.10 specifies, that for developments in an Aboriginal place of significance, the consent authority must 'consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment.... and notify the local Aboriginal communities about the application and take into consideration any response received within 28 days.'

1.2.3 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NSW) (hereafter NPW Act) is the primary statutory control relevant to this report. The Office of Environment and Heritage (OEH) is primarily responsible for regulating the management of Aboriginal cultural heritage in New South Wales under the NPW Act. The NPW Act is accompanied by the *National Parks and Wildlife Regulation 2009* (the Regulation), the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a – hereafter referred to as the Code of Practice), and other codes of practice relating to demonstration of due diligence.

The NPW Act defines an Aboriginal object as:

..any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales

Under Section 84 of the NPW Act, an Aboriginal Place must be declared by the Minister as a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture.

In accordance with Section 86(1) of the NPW Act, it is an offence to harm or desecrate a known Aboriginal object, whilst it is also an offence to harm an Aboriginal object under Section 86(2). Similarly, Section 86(4) states that a person must not harm or desecrate an Aboriginal place.

Harm to an Aboriginal object or place is defined as any act or omission that:

- a) destroys, defaces or damages an object or place, or*
- b) in relation to an object – moves the object from the land on which it had been situated, or*
- c) is specified by the regulations, or*
- d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c),*

but does not include any act or omission that:

- e) desecrates the object or place, (noting that desecration constitutes a separate offence to harm), or*
- f) is trivial or negligible, or*
- g) is excluded from this definition by the regulations.*

Section 87(1) of the NPW Act specifies that it is a defence to prosecution under Section 86(1) and Section 86(2) if the harm or desecration of an Aboriginal object was authorised by an Aboriginal Heritage Impact Permit (AHIP) and the activities were carried out in accordance with that AHIP. Sections 87(2) and (4) establish that it is a defence to prosecution under Section 86(2) if due diligence was exercised to reasonably determine that the activity or omission would not result in harm to an Aboriginal object or if the activity or omission constituting the offence is a low impact act or omission (as defined in Section 80B of the Regulation). Furthermore, Clause 3A of the Regulation specifies that an act carried out in accordance with the Code of Practice is excluded from the definition of harm.

1.2.4 Environment Protection and Biodiversity Conservation Act 1999

To determine if there were any federally listed Aboriginal heritage sites or places present within the proposal area, a search was undertaken of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (refer **Appendix A**). Fort Wallace is listed on the commonwealth heritage list for historic values. The site is listed as major component of the system of defence for the Newcastle area which was of great importance as an industrial producer in both World War One and Two. The site is not listed in relation to any Aboriginal cultural heritage values and therefore there are no requirements under the EPBC Act in relation to this Aboriginal cultural heritage and archaeological assessment.

1.3 Project Team

All Aboriginal cultural input for this report has been provided by the registered Aboriginal parties and their representatives, as noted through the text. The inspection of the survey area was completed by Dave Feeney (Karuah Indigenous Corporation), Jamie Merrick (Worimi Local Aboriginal Land Council), Lennie Anderson (Nur-Run-Gee), and Rebecca Young (Murrooma). The archaeological component of the inspection was undertaken by Alison Lamond (Archaeologist – Umwelt).

This report (including facilitating the recording of Aboriginal cultural input) was prepared by Alison Lamond (Archaeologist – Umwelt) and Nicola Roche (Manager Cultural Heritage – Umwelt).

All cultural information provided by the registered Aboriginal parties (RAPs) will be documented in the final ACHAA report. All registered Aboriginal parties are requested to review this draft ACHAA, particularly in relation to the Aboriginal cultural values of the project areas, and the ways in which the ACHAA may, or may not contribute to the documenting and managing of these values.

2.0 Aboriginal Party Consultation

Consultation regarding the Aboriginal cultural values associated with the project area has been undertaken in accordance with Part 8A, Clause 80C of the Regulation. A detailed Aboriginal party consultation log and all correspondence is summarised in **Table 2.1** and included in **Appendix B**. Notifications were developed with reference to the requirements of Clause 80C Sub-clause (4), and the registration of Aboriginal parties was completed in accordance with Clause 80C Sub-clause (5). As a result of this process, five Aboriginal parties registered an interest in ongoing consultation regarding the project.

The registered Aboriginal parties are:

- Karuah Indigenous Corporation
- Mur-Roo-Ma Inc.
- Nur-Run-Gee Pty Ltd
- Worimi Local Aboriginal Land Council and
- Wonn1.

A draft methodology for the ACHAA was provided to all Aboriginal parties registered at that point on 2 August 2016. It was requested that all Aboriginal parties provide comment on the proposed assessment methodology, particularly in relation to the Aboriginal cultural values of the project area and the way in which the assessment may or may not contribute to documenting these values and assisting in their management. No objections were raised with reference to the draft methodology.

Wonn1 responded to the registration of interest later in the project. They were provided with the methodology and all information regarding the project.

Karuah Indigenous Corporation, Mur-Roo-Ma Inc, Nur-Run-Gee Pty Ltd and Worimi Local Aboriginal Land Council participated in the pedestrian survey of the survey area. The inspection of the survey area was conducted on 22 September 2016 by Dave Feeney (Karuah Indigenous Corporation), Jamie Merrick (Worimi Local Aboriginal Land Council), Lennie Anderson (Nur-Run-Gee), Rebecca Young (Murrooma) and Alison Lamond (Archaeologist – Umwelt).

The registered Aboriginal parties that participated in the survey provided feedback as a group after the survey of the project area, summarised below and provided in full in **Appendix B**.

The survey response provided the following statements with regard to significance:

- the burial hill site is a well-known Aboriginal burial site and is significant to our local people
- the project area is within the Fern Bay Aboriginal Site complex and is of high significance to our people.

The recommendations presented below were provided by registered Aboriginal party representatives as a part of their response to the survey:

- Undertake inspection of areas where buildings currently stand after their removal and salvage any artefacts found.

- The burial hill should be well marked and demarcated as a no go zone so there is no access (machinery or foot traffic) during any works.
- Excavation of test pits across entire impact footprint with focus on the western dune which has been identified as a midden.

Figure 2.1 was developed with the Registered Aboriginal Parties to identify areas of cultural sensitivity and provide further detail to mitigation Recommendations

A draft version of this ACHAA report was supplied to all the registered Aboriginal parties on 11 January 2017 with an invitation to review all aspects of this document, particularly those related to mitigation and management. Registered Aboriginal parties were asked specifically to provide any cultural information they deemed appropriate to the preferred management of the project area.

Information provided by the registered Aboriginal parties is summarised in **Sections 6.1** and **9.1** and provided in full in **Appendix B**.

2.1 Native Title

A search of the Native Title Tribunal register was undertaken on 7 November 2016. No Native Title Claims and no Indigenous Land-Use Agreements (ILUAs) have been registered or notified by the National Native Title Tribunal as being in place over the project area.



Image Source: Nearmap (May 2016)
Data Source: LPI NSW (2009), Architectus (2016)

0 100 200 250m
1:5000

Legend

- ▬ Project Area
- ▬ Cultural Sensitivity - Surface Collection and Salvage Excavation
- Very High Cultural Sensitivity - Burial Hill (No Development)
- ▬ Area not Assessed for Impact

FIGURE 2.1

Registered Aboriginal Parties
Cultural Sensitivity
Fort Wallace

Table 2.1 Summary of Aboriginal Party Consultation

Date	Type of Consultation	Parties Contacted	Outcome
18/05/16	Provision of project notification letter requesting identification of any parties who may hold knowledge relevant to Aboriginal cultural heritage within the project area.	Office of Environment and Heritage	25/05/16 provided
		Port Stephens Council	Phone call 19/05/16: suggested to contact Worimi Local Aboriginal Land Council.
		City Of Newcastle	Phone call 24/05/16: suggested to contact Worimi Local Aboriginal Land Council.
		Worimi Local Aboriginal Land Council	Registered and interest in the project.
		Hunter Local Land Services	No response.
		National Native Title Tribunal	No response.
		Native Title Services (NTS Corp)	No response.
		Office of the Registrar Aboriginal Land Rights Act 1983 (NSW)	No response.
30/05/16	Provision of project notice to Aboriginal parties identified by OEH.	Maaingal Aboriginal Heritage	No response.
		Mur-Roo-Ma Inc.	Email (06/06/16): registered an interest in the project.
		Nur-Run-Gee Pty Ltd	Phone Call (08/06/16): registered an interest in the project.
		Worimi Aboriginal Community Co-operative	No response.
		Garrigal Aboriginal Community Inc	No response.
		Doo-Wa-Kee	No response.

Date	Type of Consultation	Parties Contacted	Outcome
		Lakkari NTCG	No response.
		Lower Hunter Aboriginal Incorporated	No response.
		Gimbay Gatigaan Aboriginal Corporation	No response.
		Karuah Indigenous Corporation	Email (06/06/16): registered an interest in the project.
		Wonn1	Email (11/07/16): contacted to register an interest 28 days after registration closed. Agreed to provide with all information regarding the project.
02/08/2016	Provision of draft Assessment Methodology to Registered Aboriginal parties	Mur-Roo-Ma Inc.	No response.
		Nur-Run-Gee Pty Ltd	No response.
		Karuah Indigenous Corporation	No response.
		Worimi Local Aboriginal Land Council	No response.
04/08/16	Provision of draft Assessment Methodology to Wonn1	Wonn1	No response
07/09/2016	Invitation to Registered Aboriginal Parties to Participate in a survey of the project area on 21/09/16	Mur-Roo-Ma Inc.	Accepted.
		Nur-Run-Gee Pty Ltd	Accepted.
		Karuah Indigenous Corporation	Accepted.
		Worimi Local Aboriginal Land Council	Accepted.
21/9/2016	Survey of project area	Mur-Roo-Ma Inc.	Representative participated.

Date	Type of Consultation	Parties Contacted	Outcome
		Nur-Run-Gee Pty Ltd	Representative participated.
		Karuah Indigenous Corporation	Representative participated.
		Worimi Local Aboriginal Land Council	Representative participated.
01/11/2016	Registered Aboriginal Parties provided a joint response to the survey	Mur-Roo-Ma Inc.	Response described the area of high cultural significance, in particular the burial hill area. The response included mitigation recommendations detailed in Sections 2.0, 6.1 and 9.1 . The response is provided in full in Appendix B .
		Nur-Run-Gee Pty Ltd	
		Karuah Indigenous Corporation	
		Worimi Local Aboriginal Land Council	
17/12/2016	Public advertisement in Newcastle Herald providing notification of assessment and opportunity to register interest for on-going project consultation.		
5/12/2016	Email contact in response to advertisement	Wonn1	Wonn1 emailed responding to the advertisement. As group had previously responded to registration letter, they had previously been provided information regarding the project.
11/01/2017	Draft ACHAA provided to Registered Aboriginal Parties	Mur-Roo-Ma Inc.	Response via email (19/01/2017) requesting change to management recommendation (Section 10.3).
		Nur-Run-Gee Pty Ltd	Response via email (13/01/2017) requesting change to management recommendation (Section 10.3).

Date	Type of Consultation	Parties Contacted	Outcome
		Karuah Indigenous Corporation	
		Worimi Local Aboriginal Land Council	
		Wonn1	
31/01/2017	Provided detail of management recommendation (Section 10.3) change suggested by Mur-roo-Ma and Nur-Run-Gee to all registered parties	Mur-Roo-Ma Inc.	Response(via email (31/01/2017)
		Nur-Run-Gee Pty Ltd	Response via email (13/01/2017)
		Karuah Indigenous Corporation	Response via email (7/02/2017)
		Worimi Local Aboriginal Land Council	No response.
		Wonn1	Response via email (8/2/2017)

3.0 Environmental Context

The decisions that people make regarding such things as where they live, the range of resources that they use and other aspects of daily life may be influenced by the environment in which they live. The preservation and visibility of sites is also affected by environmental factors such as vegetation cover, past land use and disturbance. A review of the environmental context of the project area is therefore integral to considerations of site visibility, preservation and occurrence within the project area.

The project area is approximately 32 hectares in size and is broadly located between Fullerton Street, Stockton, and the high water mark at Stockton Beach, south of the Stockton Bridge. The project area is surrounded by residential development to the north, the Pacific Ocean to the east, a redundant waste water facility to the south and the northern arm of the Hunter River to the west.

3.1 Landscape Geomorphology and Soils

The project area is located within a large dual barrier formation known as Stockton Bight. The development of the Stockton Bight dual barrier system has been the subject of considerable geomorphic research which has been summarised by several authors (Dean-Jones 1990: Chapter 2; Thom et al 1992; Umwelt 2000:4.2-4.4; ERM 2006:5-9). A brief summary of the landscape history of Stockton Bight is provided below with an emphasis on the outer barrier which contains the project area.

Stockton Bight consists of an inner barrier of Pleistocene age (referred to as the Inner Barrier), a seaward barrier of Holocene age (referred to as the Outer Barrier) and a low-lying swampy depression that divides the barriers and is known as the Inter-Barrier depression. Prior to approximately 120,000 years before present (BP), the Hunter River flowed to the north-east of its present route, passing through what is now Fullerton Cove. During the last Interglacial period (approximately 120,000BP), sea levels increased, exceeding current levels and depositing sediments to form the initial stage of the Inner Barrier. These swamps provided a broad range of resources for Aboriginal people. The nature of poorly drained low-lying areas within this context also has significant implications for how Aboriginal people lived within the landscape and the likely location of archaeological sites.

During the last Glacial period (approximately 116,000 to 10,000BP) climatic conditions changed again and sea levels fell such that the shoreline was approximately 30 kilometres seaward of the current shoreline. The beach sands that had been deposited as the Inner Barrier strand plain were subsequently exposed to aeolian reworking across much of Stockton Bight, resulting in the formation of wind-blown sand dunes across the majority of the Inner Barrier. These sediments blocked watercourses fed from the surrounding valleys, resulting in the formation of fresh water swamps such as Grahamstown Swamp and also causing the Hunter River to begin to assume its current course. As the climate became warmer and wetter from approximately 10,000 to 6500BP, sea levels gradually rose again and deposited former beach sands as back-barriers and enclosed tidal deltas to form estuarine lagoons. Approximately 7900 to 7400BP sea level rose to approximately 1 to 1.5 metres above its current level. Sea level remained at this elevation until approximately 2000BP, after which time it gradually receded until reaching its current level (Sloss et al. 2007). Between approximately 6000 and 4500BP the Outer Barrier began to develop due to the deposition of wind-blown sand along the coastline and inland. This created a series of beach ridges and strand plains that further impeded drainage from low-lying areas and increased siltation of lagoons to form the Inter Barrier depression, including the commencement of the formation of Fullerton Cove. A series of additional phases in the formation and subsequent evolution of the Outer Barrier took place throughout the Holocene period and continues to the present day.

It is important to note that the sandy sediments within the project area belong to the Holocene beach ridge, strand plain and dune sequence mentioned above, and have a maximum age of approximately 6000BP (Dean Jones 1992:4). This sequence includes up to three phases of dune transgression estimated at approximately 4500 – 4000BP, 2300 – 1200BP, and the current coastal phase which is still active and began no earlier than approximately 300BP (Dean Jones 1992:4).

The project area is primarily located within the Hawks Nest soil landscape which typically comprises a speckled brownish grey to brownish black loose loamy sand (A1 horizon) overlying a bleached yellow orange loose sand (A2 horizon), which in turn overlies a mottled dark brown to brown sand with organic/iron staining mottles (yellow orange to pale brown) B horizon (Murphy 1995).

While broad scale soil landscape mapping confirms that the project area is primarily situated within an aeolian landscape identified as the Hawkes Nests soil landscape unit., it also includes sections of the Boyces Track soil landscape unit (as defined by Matthei 1995) which comprise both steep stable Holocene dunes and low Holocene sand-sheets on the Tomago coastal plains.

The soils within the project area are predominantly aeolian in nature and are typically very deep. Within this context, unconsolidated sands were originally blown up to form dunes/strandplains and then have been subject to the impacts of wind and water based erosion and deposition until such time as enough vegetation covered the dune/strandplain to consolidate the sand, with the root systems of the vegetation stabilising the sand and dead vegetation enriching the sands to form what is known as a podsol. However, stabilised dunes can still be affected by water and wind erosion moving sands downslope (degrading) or by the addition of new wind-blown sand or ongoing podsol formation (aggrading). At various times the dunes within the project area may have been both aggrading and degrading surfaces. This in turn may have affected the location and integrity of any archaeological deposits contained within the project areas.

3.2 Flora and Fauna

The project area has been largely cleared of native vegetation in association with Department of Defence utilisation of the site and other development impacts. The project area is situated in proximity to fresh water, marine and estuarine environments (MCH 2005:9), and is dominated by the Coastal Tea Tree – Banksia scrub vegetation community. This is primarily dominated by coastal tea-tree (*Leptospermum laevigatum*) with occurrences of coastal wattle (*Acacia longifolia* subsp. *sophorae*) and coast banksia (*Banksia integrifolia*). The native groundcover consisted primarily of pig face (*Carpobrotus glaucescens*), spiny-headed mat-rush (*Lomandra longifolia*) and dune fan flower (*Scaevola calendulacea*) (Umwelt 2016). These vegetation communities contain many plants recorded as having been used by Aboriginal people for various purposes including food, medicine and raw materials for the construction of storage vessels, weapons and tools (refer to ERM 2006). Vegetation communities of this type would also have supported a range of mammal, reptile and bird species that provided food and other resources for Aboriginal people.

The nearby Hunter River Estuary area (including Fullerton Cove) (located to the west and northwest of the project area) contains mangrove and saltmarsh communities that form important breeding environments for native fish and crustaceans (Matthei 1995:192), and would have supplied abundant plant and animal resources to the Aboriginal inhabitants of the area. In addition, the beachfront to the east would have hosted a range of important marine resources.

3.3 Other Resource Availability

Due to the nature of its formation, the project area does not provide immediate access to suitable stone resources for the manufacture of stone implements. The nearest identified high-quality stone resource frequently utilised for the manufacture of stone implements by the Aboriginal people that inhabited this region consists of outcropping tuff at Nobbys Head, which is approximately 5 kilometres south of the project area (Umwelt 2011b). Outcropping tuff from the Tomago Coal Measures is also present at Shortland in association with an identified quarrying site (approximately 10 kilometres to the west of the project area), and in the Tomago area (approximately 9 kilometres to the northwest of the project area). While an Aboriginal quarrying site has been identified at Shortland, there is no evidence of quarrying by Aboriginal people being undertaken at Tomago (Dean-Jones 1990:116). Siliceous tuffs with the characteristics of silcrete have also been identified at Tomago and on the eastern margin of Grahamstown Dam (approximately 12 kilometres to the north of the project areas) and a potentially utilised quartzite resource was also recorded to the west of Medowie, approximately 17 kilometres north northeast of the project area (Dean-Jones 1990:116).

3.4 Land-use History

It is important to consider the extent to which past land use and disturbance factors have affected the integrity and visibility of archaeological material within the project area. The project area has been subject to considerable previous disturbance.

Fort Wallace was constructed on the site between 1912 and 1913 in order to cover the blind spot at Fort Scratchley caused by Nobbys Head. It included two gun pits, a magazine, barracks and quarters for non-commissioned officers. The fort was substantially upgraded in the 1930s adding further gun emplacements, plotting room, magazines, engine rooms, drill hall, officers quarters, mess, casualty rooms anti-aircraft defences, blast walls and a quick firing battery. Further barracks were constructed in the 1970s and continued to be used as the home of the 130 Signal Squadron until 1993 when the base was closed (GML 2008). The extensive earthworks involved in the ongoing development of the site by the Department of Defence has resulted in significant disturbance across the site and modification of the former dune and swale landforms. This disturbance extended to substantial depth in particular in areas of bunker and tunnel construction.

The integrity of archaeological deposits can also be affected by processes of dune formation and other natural factors commonly referred to as bioturbation. These include insect/animal burrowing and/or the active growth and subsequent decay of trees and their roots. These factors can act to relocate or generally disturb archaeological deposits from their primary depositional contexts.

More importantly, the level of human-generated disturbance within the project area is high, as would be expected given the prior development of the site by the Department of Defence and the establishment of associated infrastructure such as electricity water and other services. However, due to the nature of dune formation, undisturbed sections of the soil profile may continue to considerable depths within the dune fields. The occurrence of surface disturbance therefore does not necessarily indicate that sub-surface deposits (if present) have been subject to the same level of impact unless it can be demonstrated that effects of disturbance extend for considerable depth such as in the areas of bunker and tunnels and building footings/sub-floor impacts.

3.5 Summary

The project area is situated within a Holocene transgressive dune field in an area that would have provided access to a range of very rich resource zones that would have made this area attractive to Aboriginal occupation, and/or a suitable place for the procurement of resources. The project area has been subject to significant disturbance, which in turn has the potential to impact on the distribution and integrity of archaeological material within the site. However, due to the nature of soil landscapes within the area, there remains the potential for archaeological deposits with varying degrees of integrity to remain present within portions of the project area.

4.0 Cultural Context

In order to understand Aboriginal cultural heritage sites it is necessary to understand the cultural context of the area. This includes both the results of previous archaeological investigations in the region and ethnohistoric, information regarding how Aboriginal people lived during the early European contact period.

4.1 Ethnohistoric Information

Ethnohistoric accounts may include information that is relevant to the way in which Aboriginal people lived during the period of early non-Aboriginal settlement. However, the reliability and accuracy of ethnohistoric records is affected by a number of factors. The majority of early historical records were written by non-Aboriginal men who would not have had access to 'closed' aspects of Aboriginal society. Aboriginal culture was largely foreign to early European settlers and was typically (and incorrectly) viewed as being 'primitive', with historical accounts often intentionally or unintentionally reinforcing this stereotype. By the time the Port Stephens, Newcastle and Lower Hunter areas were settled by Europeans, introduced diseases had already had an impact on the Aboriginal population (refer to Butlin 1982). Subsequent European settlement also resulted in significant population movement and massive social disruption and dislocation. Early ethnohistoric records generally do not distinguish between different Aboriginal tribal or clan groups and it is not possible to determine whether behaviours or practices that they describe are specific to a tribe, clan or perhaps even family or individual. Furthermore, even if ethnohistoric records could provide an accurate portrayal of Aboriginal society at the time of early settlement, it must be recognised that culture is dynamic and significant changes may have occurred throughout the very long period within which Aboriginal people may have lived in the area.

The above limitations of ethnohistoric accounts are apparent in the significant disparities in descriptions of boundaries of the Worimi area (refer to ERM 2006:20). However, according to Tindale (1974), Enright (1932) and Elkin (1932) the project area is situated within Worimi traditional lands. Considerable research regarding the archaeological and ethnohistoric context of the region has been summarised by several authors (Dean-Jones 1990, ERM 2005, ERM 2006), MCH Pty Ltd (2004, 2005a, 2005b). Overall, ethnohistoric sources indicate that the Worimi had a system of established social organisation and beliefs and an economic system that was largely focused on the rich coastal resources that were capable of supporting populations at greater density than those in the inland areas (Umwelt 2014).

Of particular relevance to the project area are references to a Worimi man, Willie Price, requesting recognition of ownership of part of the Worimi lands. Price asked for recognition of ownership of land in 1873 at Nelson's Bay near Karuah, and was given land within an existing coastal reserve and it was held only as 'permissive occupancy'. Although Price was unable to gain further security over the land, the Lands Department was still prepared to confirm his right of occupation in 1892 when it was queried. (Miromaa, nd.). Registered Aboriginal Parties report that after the land was taken back from Price, he died and was buried in a sand hill within what would become Fort Wallace (burial hill identified during survey, refer to **Section 5.5**).

Current understandings of the cultural values of the area are subject to discussion in subsequent sections of this report.

4.2 Archaeological Context

4.2.1 Aboriginal Heritage Management Information System (AHIMS) Recorded Sites

The OEH Aboriginal Heritage Information Management System (AHIMS) is a database of Aboriginal sites for which site cards have been submitted. The AHIMS database was searched on 17 May 2016 for sites located in the vicinity of Fort Wallace and Stockton Rifle Range. A total of 73 sites were identified within this search area (and provided in full in **Appendix C**). Ten previously recorded sites are located within the Fort Wallace project area. While the registered coordinate of 38-4-0895 (Fern Bay Site complex) is located outside the project area, it is a large site which includes almost the entire Fort Wallace Project area (refer to **Figure 4.1**). The registered sites located within the project area are detailed below in **Table 4.1**

Table 4.1 AHIMS Registered Sites located within Fort Wallace

AHIMS Site ID	Site Name	Site Description	Location relative to proposed impacts within the project area
38-4-0895	Fern Bay site complex	The site is a major complex of middens artefact scatters and isolated finds. The site card noted traditional knowledge records the presence of ceremonial sites and traditional; burials within the site area. The site area is approximately 4 kilometres north to south and 0.4 to 1 kilometres wide east to west.	The site encompasses most of the 38-4-0895 site area. All areas of proposed development are within the registered site area and will impact the site.
38-4-1102	Treatment works 1	Aboriginal Resource and Gathering (17), Site card not available.	Sites are located within the southern portion of the project area outside areas of proposed impact.
38-4-1103	Treatment works 2	Burial. Site Card not available.	
38-4-1104	Treatment works 3	Artefact Scatter (106). Site card not available.	
38-4-1105	Treatment works 4	Aboriginal Resource and Gathering (200), Site card not available.	

AHIMS Site ID	Site Name	Site Description	Location relative to proposed impacts within the project area
38-4-1106	Treatment works 5	Artefact Scatter (200). Site card not available.	
38-4-1107	Treatment works 6	Artefact Scatter (150). Site card not available.	
38-4-1108	Stockton Nth TW	Artefact Scatter (150). Site card not available.	
38-4-1109	Stockton TW 7	Aboriginal Resource and Gathering (200), Site card not available.	
38-4-1110	Stockton TW midden	Aboriginal Resource and Gathering (200), Site card not available.	
38-4-1123	Stockton 13B	Artefact Scatter (80) no further detail provided on the site card.	



Legend

- Project Area
- Asset Protection Zone
- Heritage Item
- 38-4-0895 Fern Bay Complex Boundary
- ✱ Aboriginal Resource and Gathering
- Artefact Scatter (Open Camp Site)
- + Burial

FIGURE 4.1
Previously Recorded
Aboriginal Sites (AHIMS)

4.3 Previous Archaeological Investigations

Many of these sites across the project area have been recorded by Aboriginal parties and are not associated with available archaeological reports. It is understood that the burial recordings are based on occurrence of anomalies on GPR study (i.e. the presence of human skeletal material has not confirmed).

4.3.1 38-4-0895 – Fern Bay Complex

The main archaeological assessments undertaken for the Fern Bay site complex were undertaken in relation to the Fern Bay sewer line, with works being undertaken by McCardle Cultural Heritage (MCH 2004, 2005a and 2005b) and Nur-Run-Gee (nd) on behalf of Hunter Water Corporation. The outcomes of these assessments are discussed below. This site complex extends across much of the project area (refer to **Figure 4.1**).

MCH (2004) undertook a survey and assessment of the sewer line that was proposed to service the residential area of Fern Bay. MCH (2004) identified that cultural materials were present throughout the survey area in areas where disturbance resulted in the exposure of material that would previously have been in a sub-surface context. Based on this information and the fact that survey area consisted of stabilised dune ridges in a resource-rich area, MCH (2004) stated 'it is logical to conclude that sub-surface deposits may exist throughout the survey area.' On this basis, MCH (2004) identified the Fern Bay site complex. The site was assessed as having high archaeological significance and it was recommended that test excavations be conducted prior to the commencement of the proposed works.

Subsequent archaeological investigations conducted within the Fern Bay site complex included:

- archaeological ground surveys of the entire sewerage route
- ground penetrating radar (GPR) study of the project area
- geomorphological investigations at three bore hole locations (each measuring 2 m x 1 m)
- initial archaeological testing of seven bore hole locations, each measuring 1 m x 1 m (see MCH 2005a:26)
- additional archaeological testing at two borehole locations (each measuring 1 m x 1 m), and two 2 m x 2 m test excavations at the proposed pump house location (see MCH 2005b:22).

Cultural material was recovered from five locations, with consolidated shell midden material and stone artefacts identified at two locations (FB8 and FB14). Excavations at these locations resulted in the recovery of over 100 stone artefacts and over 10 kg of shell (predominantly oyster).

On the basis of this information, MCH (2005b) recommended that works in the vicinity of FB14 (located south of the intersection of Braid Road and Fullerton Street) and FB8 (located at the intersection of Rankin Road and Fullerton Street) be modified to reduce impacts in these areas of high sensitivity and that works in all other portions of the site complex should be monitored, with the potential to undertake salvage excavations as required.

Following completion of these investigations, the Hunter Water Corporation received a Section 90 Consent to Destroy with permit to collect in August 2005 for the construction of the Fern Bay Sewerage scheme and associated cultural salvage works. All project related ground disturbing works were monitored by Aboriginal party representatives and salvage excavations (salvage pits and shovel probes) were undertaken at 29 locations (see Nur Run Gee 2006). The cultural salvage investigations undertaken by Nur Run Gee

(2006) included the excavation of 32 m² of land to an average depth of approximately 1 metre below ground surface. The distribution of cultural material was variable however Nur Run Gee (2006) identified that there is the potential for archaeological deposits to be present within the Fern Bay site complex in any area that has not been subject to significant sub-surface disturbance.

4.3.2 Previous Archaeological Assessment

Southeast Archaeology (2004) undertook an assessment of the project area as a part of the Department of Defence disposal study. A survey of the site focused on exposed areas along access road, tracks, clearings and disturbed ground and the erosion areas on the seaward dune. No Aboriginal objects were identified in the survey. This was concluded to be the result of low visibility, historical impacts and a suggested 'low intensity of Aboriginal occupation as a result of the lack of fresh water'. It was assessed that there was very low potential for Aboriginal archaeological deposits within the main fort complex but a moderate to high potential for midden deposits to occur and survive in the undisturbed portions of the site (Southeast Archaeology 2004).

The other previous archaeological assessment in proximity to the Fort is the McCardle 2004 assessment (discussed in **Section 4.3.1**). This included a survey along Fullerton Street located west of Fort Wallace. Shell fragments were identified on the western side of the road (opposite side to Fort Wallace boundary). This report also noted the possible presence of burials within the Fort Wallace site and along Fullerton Street (McCardle 2004).

The Fort Wallace Heritage Management Strategy (HMS) (GML 2008) outlined previously provided Aboriginal cultural heritage information for the site. This includes that the site is part of a male dominated ceremonial area with a corroboree ground located 100m to the south. The HMS also identified that the Fort is constructed on part of a large midden site which extends for 7 kilometres along the Stockton peninsula. The HMS identifies that burial sites are located in the vicinity and within Fort Wallace (GML 2008).

4.4 Archaeological implications for the Project area

The outcomes of the review of the environmental and cultural context of the project area has a number of key implications in relation to the potential for additional archaeological sites to be present within the project area and the characteristics of Aboriginal sites and Aboriginal cultural resources that may be contained within the project area. Previous assessments of the area have identified a number of sites in the vicinity, of which the Fern Bay complex site 38-4-0895 includes a significant portion of the project area. Therefore it is likely that further artefacts and shell is likely to occur within the project area. The extent of historical disturbance associated with the establishment and ongoing use of the Fort has impacted much of the project area and is likely to have also impacted any sub-surface deposits that may be present within the disturbed areas. However, outside the disturbance footprint (that is, where sub-surface disturbance does not extend to the depth of deposits), it is possible that intact or partially intact deposits may be present.

5.0 Survey

5.1 Survey Methodology

A pedestrian survey of all accessible areas within the project area was undertaken to assess the potential impacts of the project, including the identification of sites that may be at risk from a potential residential development of the site.

The survey methodology was prepared taking into account the following requirements:

- to survey an adequate sample of all of the landforms present in the project area
- to locate, ground truth and assess the current condition of the previously recorded sites within the project area.

The survey methodology complies with the survey requirements of OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. During the survey all participants had the opportunity to discuss any potential impacts of the project on Aboriginal cultural heritage sites and values.

Information recorded during the survey included:

- the nature of the landforms and vegetation
- the levels of visibility and exposure within the survey area
- the effects of erosion and disturbance
- the availability of Aboriginal resources, with a particular focus on the types of resource plants (bush tucker) that may be present in the project area
- detailed records of archaeological sites present
- the likelihood that potential archaeological deposits (PAD) may be present within the project area
- information provided by Aboriginal parties regarding the cultural significance/or cultural values of the area.

All sites and artefacts located were recorded to OEH standards. The archaeological and Aboriginal and cultural significance of the sites/artefacts was discussed with the registered Aboriginal parties participating in the survey and any requirements for sub-surface testing of sites and PADs as part of the assessment process or post approval was also specifically discussed.

5.2 Results of Survey

The survey of the project area was undertaken on the 21 September 2016 by a field team of an archaeologist and representatives of the registered Aboriginal parties, as recorded in **Table 5.1**.

Table 5.1 Field Survey Team

Dates	Organisation	Representative
21/09/2016	Karuah Indigenous Corporation	Dave Feeney
	Murrooma	Rebecca Young
	Nun Run-gee	Lennie Anderson
	Worimi Local Aboriginal Land Council	Jamie Merrick
	Umwelt (archaeologist)	Alison Lamond

5.2.1 Effective Coverage

The survey was constrained by the level of vegetation coverage and previous land use. Large portions of the project area have been completely modified for the construction of defence structures, not simply the construction of road and buildings but the concrete bunkers and the parade ground. The construction of the concrete structures clearly involved the excavation of large amounts of sand which was then replaced back around the concrete bunkers to give the appearance of dunes and to fill the parade ground and buildings areas.

A series of 10 transects were able to be completed around the remaining structures in an attempt to target areas of exposure and the least modified areas proposed to be impacted by the project (refer to **Figure 5.1** and **Table 5.2**). Ground visibility across the project area varied considerably with the majority of the area having limited to no ground surface visibility due to dense vegetation and bitumen and other areas of enhanced visibility occurring primarily within access tracks and the edges of the parade ground.

The effective coverage for the project area is 0.5 per cent (project area = 318024.5 m² and effective coverage area = 1359.5 m²). This is reflective of the heavy vegetation coverage and highly developed nature of much of the project area, as will be discussed below.



Legend

- Project Area
- Survey Transects
- Asset Protection Zone
- 38-4-0895 Fern Bay Complex Boundary
- ★ Aboriginal Resource and Gathering
- Artefact Scatter (Open Camp Site)
- + Burial

FIGURE 5.1
Survey Transects

Table 5.2 Effective coverage

Transect	Landform	MGA Start	MGA End	Survey Unit Area (m ²) approx.	Visibility %	Exposure %	Effective Coverage	Sites and areas of cultural sensitivity within transect
1	Modified sand dunes	387057 E 6360280 N	387200 E 6360113 N	11000 m ² (220 x 50m)	10%	20%	220 m ² 2%	Fort Wallace Shell 2 38-4-1106
2	Modified sand dunes	387143 E 6360181 N	387188 E 6360422 N	12500 m ² (250 x 50m)	5%	5%	31.25 m ² 0.25%	Burial Hill
3	Modified sand dunes	387188 E 6360422 N	387271 E 6360389 N	5000 m ² (100 x 50m)	5%	5%	12.5 m ² 0.25%	
4	Modified sand dunes	387271 E 6360389 N	387343 E 6360479 N	6000 m ² (120 x 50m)	5%	5%	15 m ² 0.25%	
5	Modified sand dunes	387343 E 6360479 N	387178 E 6360496 N	8500 m ² (170 x 50m)	2%	5%	8.5 m ² 0.1%	
6	Modified sand dunes	387278 E 6360488 N	387417 E 6360693 N	12500 m ² (250 x 50m)	5%	10%	62.5 m ² 0.5%	
7	Modified sand dunes	387417 E 6360693 N	387331 E 6360706 N	5000 m ² (100 x 50m)	30%	50%	750 m ² 15%	Fort Wallace IF1

Transect	Landform	MGA Start	MGA End	Survey Unit Area (m ²) approx.	Visibility %	Exposure %	Effective Coverage	Sites and areas of cultural sensitivity within transect
8	Modified sand dunes	387331 E 6360706 N	387209 E 6360654 N	7000 m ² (140 x 50m)	15%	15%	157.5 m ² 2.25%	
9	Modified sand dunes	387233 E 6360735 N	387146 E 6360429 N	16000 m ² (320 x 50m)	5%	10%	80 m ² 0.5%	Fort Wallace Shell 1 Fort Wallace IF2
10	Modified sand dunes	387057 E 6360280 N	387146 E 6360429 N	9000 m ² (180 x 50m)	5%	5%	22.5 m ² 0.25%	

5.3 Evaluation of Disturbance

The entire project consists of consist of modified dune formations as the area has been substantially modified through the construction of the existing buildings, concrete bunkers and tunnels. These works would have required the excavation of large portions of the dune to significant depths, with sand then replaced around the completed concrete structures for camouflage, restoring the appearance of dunes. It also appears the excess fill created from this process was used to create the level areas for the parade ground and surrounding buildings.

Areas of lower disturbance occur outside the central developed area. In particular at the northern edge of the parade ground in the sections of remnant dune and on the northern sections of the western dune with limited disturbance through surface impacts and the installation of electricity poles. The southern portion of the western dune has been subject to more significant impacts with the construction of structures and access roads; however the lower portions of the dune appear intact.

5.4 Archaeological Sites

All of the newly identified sites are located within the Fern Bay site 38-4-0895 and are exposures within the larger site. However they were recorded individually in accordance with OEH requirements and this information will be provided to AHIMS for the registration as separate sites to facilitate the management of the sites. The locations of all identified archaeological sites within the project area and its vicinity are detailed in **Figure 5.2**.

5.4.1 Newly identified sites within Fort Wallace

Five new site areas (within the Fern Bay site complex) were identified during the survey and are detailed below and in **Figure 5.2**. AHIMS site cards for these sites have been submitted in accordance with the requirements of the NPW Act.

5.4.1.1 Fort Wallace IF 1 (387392E 6360688N)

Fort Wallace IF 1 consists of a broken flake of Nobbys Tuff located within an exposure in a section of disturbed dune on the edge of the parade ground (**Plates 5.1 and 5.2**). The site has a westerly aspect to the north arm of the Hunter River. The site and surrounding area have been subject to significant disturbance as a result of the earthworks to create the level parade ground. The artefact was present in a large exposure which included fragmented shell, gravel and modern material.



Legend

- Project Area
- Asset Protection Zone
- 38-4-0895 Fern Bay Complex Boundary
- ★ Aboriginal Resource and Gathering
- Artefact Scatter (Open Camp Site)
- + Burial

- Isolated Find
- ☼ Shell

FIGURE 5.2
Newly Identified
Archaeological Sites



Plate 5.1 Across site area, view to the south southeast

© Umwelt, 2016



Plate 5.2 Artefact, dorsal face

© Umwelt, 2016

5.4.1.2 Fort Wallace IF 2 (387227E 6360679N)

Fort Wallace IF 2 consists of a flake of Nobbys Tuff and fragment of oyster shell in an exposure on a dune crest (**Plates 5.3 and 5.4**). The dune runs parallel to Fullerton Street at the front of the project area. Further shell fragments are exposed at the base of an electricity pole approximately 10 metres to the south. The area has been subject to disturbance through the construction of the neighbouring parade ground but this disturbance does not appear to extend across the entirety of the dune. It is assessed that there is potential for shell and artefacts in a subsurface context within the dune due to the increased shell visible in the area of disturbance at the electricity pole.



Plate 5.3 Across site, view to the south

© Umwelt, 2016



Plate 5.4 Artefact and oyster shell

© Umwelt, 2016

5.4.1.3 Fort Wallace IF 3 (387207E 6360680N)

Fort Wallace IF 3 consists of a broken flake of quartzite in an exposure on the western slope of the dune running parallel to Fullerton Street at the front of the Fort Wallace site (**Plates 5.5** and **5.6**). The exposure is approximately 3 metres by 6 metres with 30 per cent visibility. The site has a westerly aspect downslope to the Hunter River. The site is possibly not in situ as a result of movement down the moderate to steep slope of the dune.



Plate 5.5 Across site, view to the south

© Umwelt, 2016



Plate 5.6 Quartzite Broken Flake, dorsal view.

© Umwelt, 2016

5.4.1.4 Fort Wallace Shell 1 (387227E 6360679N)

Fort Wallace Shell 1 consists of shell eroding out of the slope in an exposure on the western slope of the dune running parallel to Fullerton Street at the front of the Fort Wallace site (**Plate 5.7**). The site is located on a moderate to steep slope and a westerly aspect downslope to the Hunter River. Cockle is the dominant species with small amounts of whelk and oyster. The site is assessed to have potential for further cultural material to be present within a sub-surface context.



Plate 5.7 Shell eroding from slope, view to the east

© Umwelt, 2016

5.4.1.5 Fort Wallace Shell 2 (387069E 6360249N)

Fort Wallace Shell 2 consists of multiple pieces of shell visible in an artificial sand formation built up around a concrete defence structure the surface is steeply sloping (**Plate 5.8**). The ends of rusted star pickets are visible where they have been used to help form or maintain the sand formation. The sand and shell appear to have been disturbed when the concrete structure was built. The shell is not in situ and the site is in poor condition and subject to active erosion.



Plate 5.8 Disturbed shell located is highly modified and formation surrounding concrete bunker

© Umwelt, 2016

5.4.2 Previously recorded sites within the Project area

Only the location of previously recorded site 38-4-1106 (artefact scatter) was able to be accessed during the survey, with the remainder of the sites (refer to **Figure 4.1** and **Table 4.1**) located in areas obstructed by dense vegetation. No Aboriginal objects were visible at the 38-4-1106 registered coordinate and no further details about the site are available due to the unavailable site card.

5.4.3 Assessment of Archaeological Potential

Archaeological potential within the project area was assessed with reference to visible surface sites and the known archaeological patterns for the region. The areas located to the north of the parade ground include disturbed surface artefact and shell scatters which potentially indicate subsurface deposits and is consistent with archaeological predictions for this landform. This area has also been subject to minimal disturbance as a result of previous activities on the site. Therefore it is assessed as having moderate archaeological potential (refer to **Figure 5.3**).

The western dune (adjacent to Fullerton Street) was identified as a part of previous Fern Bay site complex investigations as an area of archaeological potential (refer to **Section 4.3**). Excavations to the north of the project area have identified shell and artefact deposits within the dune. Within the project area the northern part of the western dune has been subject to minimal disturbance. On this basis, this dune is considered likely to retain archaeological deposits at depth and is assessed as having moderate archaeological potential. The southern portion of the western dune within the project areas has been subject to a higher level of disturbance as a result of the construction of buildings and access roads. However limited impacts occur at depth, therefore the southern section of the western dune is assessed to have low to moderate archaeological potential (refer to **Figure 5.3**).

Conversely the central portion of the site has been subject to very high levels of disturbance as a result of the construction of buildings, concrete bunkers and tunnels and the creation of levelled areas and as a result is assessed as having low archaeological potential.

5.5 Aboriginal Party Response to Survey

During the survey the registered Aboriginal parties identified the importance of the burial hill site and the whole areas as part of the Fern Bay site complex.

The burial hill was identified as the location of the burial of 'King' Willy Price, a well-known site of significance to the local Aboriginal community. It was identified that the area needs to be a demarcated no go zone area during any construction works.

The western dune was highlighted in particular as part of the Fern Bay site complex which was described as an area of previously identified midden of cultural significance that required subsurface investigation.

The registered Aboriginal parties provided detail for mapping to outline cultural sensitivity and recommendations (refer to **Figure 2.1**). *Further information may be added after review by Registered Aboriginal Parties*

5.6 Survey Conclusions

As a result of the survey of the project area areas of cultural sensitivity and archaeological sensitivity were identified along with recommendations of their management. Areas of archaeological potential were identified within the less disturbed areas of the site adjoining the parade ground (including area of Fort Wallace IF 1) and the western dune parallel to Fullerton Street (including site areas Fort Wallace IF2, Fort Wallace Shell 1 and Fort Wallace Shell 2), as shown in **Figure 5.3**. These areas of archaeological potential were identified due to the presence of these sites and the archaeological pattern for the areas which indicates the potential for archaeological deposits within the dune profiles in areas of low previous disturbance. The central portion of the site has been subject to substantial disturbance as a result of the construction of the Fort and as a result lacks archaeological potential.

Registered Aboriginal parties also identified the Burial Hill location as an area of cultural sensitivity and specified that no impacts should occur in this area, refer to **Figure 2.1** for registered Aboriginal party sensitivity mapping.

Survey was limited to areas of proposed impact partly due to the dense vegetation particularly at the southern end of the site. These locations of previously recorded sites, aside from 38-4-1106, could not be accessed without excessive impact to fragile dune vegetation. Should impacts change and include these areas of previously recorded sites further survey would be required.



Image Source: Nearmap (May 2016)
Data Source: LPI NSW (2009), Architectus (2016)

0 100 200 250m
1:5000

Legend

- ▬ Project Area
- ▨ Low to Moderate Archaeological Sensitivity
- ▨ Moderate Archaeological Sensitivity
- Potentially requiring AHIP
- Burial Hill
- Area not Assessed for Impact

File Name (A4): R01/3772_012.dgn
20161125 11.27

FIGURE 5.3
Archaeological Sensitivity
Fort Wallace

6.0 Significance Assessment

The Burra Charter defines cultural significance in terms of aesthetic, scientific, historic and social values. Aboriginal cultural heritage is typically assessed according to its social and scientific significance; however other values may also be of importance. The assessment of cultural significance is critical in establishing mitigation and management strategies for cultural heritage (refer to Pearson and Sullivan, 1995:21).

The assessment of significance provides a guideline for determining appropriate mitigation and management strategies. The relationship between levels of significance and management strategies can be summarised as follows:

- High significance – the site should be conserved and protected from the impacts of development, where possible.
- Moderate significance – the site should be protected if possible, however, if impacts to the site are unavoidable, appropriate mitigation strategies should be implemented prior to impact.
- Low significance – the site should be protected if possible, however, if impacts to the site are unavoidable, the presence of the site should not impede the proposed development.

6.1 Aboriginal Cultural Significance

As Aboriginal cultural significance relates to the values of a site, place or landscape to Aboriginal people, it must be determined by Aboriginal people. The registered Aboriginal parties participating in the project are therefore the appropriate stakeholders to assess the significance of their cultural heritage. In assessing this significance, a range of factors may be considered and this can extend beyond the physical presence of a site and its contents to intangible aspects of the cultural landscapes. Archaeological material, cultural knowledge, natural resources and landscape attributes may all be considered.

The registered Aboriginal parties provided a survey response which provided the following statements with regard to significance:

- the burial hill site is a well-known Aboriginal burial and is significant to our local people
- the project area is within the Fern Bay Aboriginal Site complex and is of high significance to our people.

The registered Aboriginal parties' survey response is provided in **Appendix B**

No further comments were received from Aboriginal parties in response to the draft report.

6.2 Scientific (Archaeological) Significance

The criteria applied to the assessment of archaeological significance are listed in **Table 6.1**. The significance of the new sites identified within the project area is assessed in **Table 6.2** with reference to the criteria described below. All of these sites are a part of the Fern Bay site complex (AHIMS #38-4-0895) but have been assessed individually as a result of the size and variation across the larger site.

The majority of the sites identified within the project area are of low significance as they consist of small numbers of artefacts/dispersed scatter of shell that is not likely to be in their original depositional location and have been subject to disturbance. However Fort Wallace IF21 and Fort Wallace Shell 1 are likely to be associated with subsurface deposits that may not have been subject to substantial disturbance and as a result have increased archaeological significance.

Table 6.1 Criteria for Assessment of Archaeological Significance of the Sites

Criterion	Low	Moderate	High
Rarity	The site within the surrounding landscape, its integrity, contents and/or potential for sub-surface artefacts, are common within the local and regional context.	The site within the surrounding landscape, its integrity, contents and/or potential for sub-surface artefacts, are common within the regional context but not the local context.	The site within the surrounding landscape, its integrity, contents and/or potential for sub-surface artefacts, are rare within the local and regional context.
Representativeness	This site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts, is common within a local and regional context and sites of similar nature (or in better condition) are already set aside for conservation within the region.	This site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts, is uncommon within a local context but common in a regional context and sites of similar nature (or in better condition) are already set aside for conservation within the region.	This site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts, is uncommon within a local and regional context and sites of similar nature (or in better condition) are not already set aside for conservation within the locality or region.
Research potential	The site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts has limited potential to contribute to a greater understanding of how Aboriginal people lived within this area or region.	The site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts has moderate potential to contribute to a greater understanding of how Aboriginal people lived within this area or region.	The site, when viewed in relation to its integrity, contents and/or potential for sub-surface artefacts has high potential to contribute to a greater understanding of how Aboriginal people lived within this area or region.

Criterion	Low	Moderate	High
Education potential	The site is not readily accessible and/or when viewed in relation to its contents, integrity and location in the landscape has limited suitability to be used for educational purposes. Other sites with higher education potential are known to be present in the local area and region.	The site is not readily accessible and/or when viewed in relation to its contents, integrity and location in the landscape provides a tangible example that is suitable to assist in educating people regarding how Aboriginal people lived in this area or region. However, other sites with higher education potential are known or expected to be present in the local area or region.	The site is readily accessible and/or when viewed in relation to its contents, integrity and location in the landscape, provides a very good tangible example that is suitable to assist in educating people regarding how Aboriginal people lived in this area or region. Other sites of higher education potential are generally not known to exist in the local area or region.
Integrity	Stratigraphic integrity of the site has clearly been destroyed due to major disturbance/loss of topsoil. The level of disturbance is likely to have removed all spatial and chronological information.	The site appears to have been subject to moderate levels of disturbance, however, there is a moderate possibility that useful spatial information can still be obtained from sub-surface investigation of the site, even if it is unlikely that any useful chronological evidence survives.	The site appears relatively undisturbed and there is a high possibility that useful spatial information can still be obtained from sub-surface investigation of the site, even if it is still unlikely that any useful chronological evidence survives.

Table 6.2 Assessment of Archaeological Significance

Archaeological Site	Rarity Value	Representative Value	Research Potential	Educational Potential	Integrity	Overall Archaeological Significance
Fort Wallace IF 1	Low	Low	Low	Low	Low	Low
Fort Wallace IF 2	Low	Low	Low to Moderate	Low	Low to Moderate	Low
Fort Wallace IF 3	Low	Low	Low	Low	Low	Low
Fort Wallace Shell 1	Low	Low	Low to Moderate	Low	Low to Moderate	Low
Fort Wallace Shell 2	Low	Low	Low	Low	Low	Low

As the locations of the previously recorded sites could not be accessed due to vegetation and are located outside the proposed project impact area, the significance of the sites is not assessed (refer to **Sections 5.4** and **5.6**). Should it be identified that impacts are required to these sites, this will require re-evaluation.

The areas of moderate and low to moderate archaeological sensitivity identified in **Figure 5.3** and **Section 5.6** potentially include deposits with high research potential and integrity (particularly in the moderate sensitivity area). While the potential deposits are not rare or highly representative as subsurface artefact and shell deposits are common the Stockton/Fern Bay area, subsurface investigation of the area is required to clarify the significance of these deposits.

7.0 Assessment of Harm Associated with the Project

This assessment is related to the various activities involved in the potential residential development of the Fort Wallace site (refer to **Section 1.0**). Due to the nature of these works which will include substantial ground disturbance for earthworks, road construction, service installation and residential construction, it is acknowledged that these works have potential to harm Aboriginal objects.

The locations of these sites area detailed in **Figure 5.2**.

Table 7.1 Harm to identified Aboriginal Sites

Harm	Site
Located within the Fort Wallace Area subject to impacts as a result of proposed master plan	Fort Wallace IF 1
	Fort Wallace IF 2
	Fort Wallace IF 3
	Fort Wallace Shell 1
	Fort Wallace Shell 2
	38-4-0895
Located within project area outside of any proposed impacts- no harm	38-4-1102
	38-4-1103
	38-4-1104
	38-4-1105
	38-4-1106
	38-4-1107
	38-4-1108
	38-4-1109
	38-4-1110
	38-4-1123

If developed in accordance with the proposed master plan, there are no impacts proposed to the Burial Hill location.

8.0 Mitigation Strategies & Recommendations

The following management and mitigation recommendations have been developed with consideration of the cultural and archaeological landscape, the cultural and archaeological significance of Fort Wallace and the impact of the proposal. Due to the identified Aboriginal objects across the project area and the potential for subsurface deposits within 38-4-0895, Umwelt recognises it is not practicable to avoid Aboriginal objects.

There are a range of management strategies that have been developed for the project area that include varying levels of mitigation of identified or potential harm. These management strategies have also been developed in consultation with the registered Aboriginal stakeholder representatives and in accordance with OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

8.1 Mitigation Strategies

8.1.1 Strategy 1 Site Conservation

This management strategy would involve the conservation of all or part of the project area. The project design has been developed based on the outcomes of previous archaeological assessments with reference to areas of identified sensitivity and excludes the majority of the less disturbed portions of the project area, including vegetated dunes. While it is not proposed to establish a formal conservation outcome for these areas, the avoidance of impacts does dictate that any deposits that may be present in these areas will be preserved under the current proposal. It is noted that RAPs for the project have identified the need for a conservation outcome and the proposed project design avoids impact to the highly significant Burial Hill.

8.1.2 Strategy 2 Site Destruction with Salvage

This mitigation strategy would involve the completion of constrained and targeted salvage works within an initial sample of the areas of moderate and low to moderate archaeological potential (refer to **Figure 5.3**) proposed to be impacted (including sections of the dune fronting Fullerton Street) within the project area. Based on the outcomes of initial excavations, it may be necessary to undertake further targeted subsurface salvage and/or monitoring of surrounding proposed impact areas. All surface objects within areas of impacts would be subject to collection.

8.1.3 Strategy 3 Site Destruction without Salvage

This management strategy would involve proceeding with construction of the residential development and the subsequent disturbance to any cultural material that may be present in the vicinity of the project area without any further salvage. As discussed above this assessment identified a number of archaeological sites and areas of subsurface archaeological potential and it is proposed that, further investigation of the areas of moderate archaeological potential is required to clarify their archaeological significance. Subsurface investigation and salvage is not archaeologically justified in areas of high previous disturbance which have been assessed as lacking archaeological potential.

This strategy is not considered acceptable from an Aboriginal cultural perspective, with the registered Aboriginal parties identifying the need for the salvage of artefacts (regardless of context) prior to the commencement of works. The registered Aboriginal parties have recommended the subsurface investigation of the entire impact area including areas assessed as low archaeological potential as a result of substantial previous disturbance.

9.0 Recommendations

It is recognised that recommendations provided from an Aboriginal cultural perspective may differ to those based on an archaeological perspective. Scope is therefore provided for the inclusion of both sets of recommendations.

9.1 Aboriginal parties recommendations

The recommendations presented below were provided by registered Aboriginal party representatives as a part of their response to the survey:

- Undertake inspection of areas where buildings currently stand after their removal and salvage any artefacts found.
- The Burial Hill should be well marked and demarcated as a no go zone so there is no access (machinery or foot traffic) during any works.
- Excavation of test pits across entire impact footprint with focus on the western dune which has been identified as a midden.

Figure 2.1 was developed with the Registered Aboriginal Parties to identify areas of cultural sensitivity and provide further detail to mitigation Recommendations

Further recommendations provided by registered Aboriginal parties following the review of the draft report will be included below.

9.2 Archaeological recommendations

The following recommendations have been developed in light of the archaeological context of the region, the findings of the survey, the archaeological assessment of the project Area, the cultural assessment of the area by Aboriginal parties; the potential impacts of the project and current cultural heritage legislation.

- DHA should ensure that its employees and contractors are aware that it is an offence under Section 86 of the NPW Act to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an Aboriginal Heritage Impact Permit (AHIP).
- DHA should apply to the Director-General of OEH for an AHIP in accordance with Section 90 of the NPW Act, with this AHIP to cover the entirety of the impact area on the finalised master plan. The need to cover the entirety of the impact area is in recognition that archaeological material has been identified and/or predicted throughout the project area as a result of the movement and redistribution of the former dunes throughout the site. The AHIP should include provision for surface collection across the entirety of the project area (where Aboriginal objects are identified) and for the completion of sub-surface investigations where the project will involve impacts within the areas of low to moderate and moderate archaeological potential identified in **Figure 5.3**. All salvage works (both surface collection and sub-surface investigation) should be conducted in accordance with the methodology specified in **Section 10.0**.
- Should the proposed impacts change such that it is proposed to impact in the immediate vicinity of the areas of previously recorded sites to the south of the current proposed impacts or the active seaward dune further survey would be required.

- The AHIP should specifically exclude impacts to recorded burial sites. In the event that suspected human skeletal material is identified within the other portions of the project area, all works should cease immediately and the NSW Police Department, OEH and the registered Aboriginal parties should be contacted so that appropriate management strategies can be identified.

10.0 Salvage Methodologies

This section provides methodologies for all salvage activities to be undertaken within the AHIP area.

10.1 Surface Collection

The locations of all surface artefacts within areas subject to impact by the proposed works will be assessed and, where appropriate, artefacts will be grouped into loci for the purposes of recording and analysis. The location of the artefacts will be recorded using a hand-held GPS and will the artefacts will then be collected and bagged in meaningful groupings according to location. Sites identified outside areas of impact (refer to **Table 7.1**) will not be subject to salvage.

10.2 Sub-Surface Investigation

It is proposed to undertake staged sub-surface investigations. The aim of Stage 1 of the sub-surface investigations will involve excavation of a sample of areas subject to sub-surface disturbance within the identified areas of moderate archaeological potential (refer to **Figure 5.3**). A second stage of sub-surface investigations may then be trigger based on the outcomes of Stage 1 investigations.

Stage 1 investigations will be undertaken at a sample of up to 5 per cent of areas of low to moderate and moderate archaeological potential where the project will require ground surface disturbance at depths below 20 cm (nominal depth of general surface disturbance from current land use). The sampled locations will be selected by an archaeologist in consultation with Aboriginal party representatives to ensure adequate coverage of the areas of moderate archaeological potential.

The methods for Stage 1 excavations would include:

- Excavation at the selected locations (see above) in units measuring one metre by one metre.
- Excavations undertaken by hand according to stratigraphic unit to a maximum of 100 millimetres per spit as appropriate
- Drawings and photographs to be undertaken for each soil profile identified. Where the soil profiles are consistent, it would not be necessary to draw a section for each investigation unit.
- The sieving of all material using 5 millimetre aperture nested wire-mesh sieves.
- Excavations may continue to a maximum depth of approximately 1.5 metres below ground surface if assessed as safe to do so, however given the nature of sand deposits, it may be necessary to cease excavation at a shallower depth in order to adhere to relevant WorkCover (NSW) requirements.
- Excavation may cease at a shallower depth due to safety concerns, or if B horizon sands or the water table are encountered. If it is agreed upon by the archaeologist and the Aboriginal stakeholder representatives present on site, excavations may also cease within expected artefact bearing deposits if those deposits have remained culturally sterile for a minimum of 20 centimetres in depth.
- Should any features (such as a hearth or heat treatment pit or an accumulation of animal bone or shell likely to relate to Aboriginal cultural activities) be identified, it will be excavated in accordance with the methodology provided in **Section 10.4**.

- Should human/possible human skeletal material (single bones or an intact burial) be located within any excavated area, it will be managed in accordance with the methodology provided in **Section 10.5**.

10.3 Stage Two Excavations

Where the Stage 1 excavations trigger further excavation requirements, Stage 2 excavations would be undertaken. Stage 2 excavation will only be undertaken where one or more of the triggers identified below is identified.

Salvage Excavation Triggers

- Where test excavations identify Aboriginal cultural material in the form of stone artefacts, further salvage excavations would only be required if high artefact densities are reached and/or significant artefacts or archaeological features are recovered. High artefact densities will consist of 50 stone artefacts or more per 1 by 1 metres Stage 1 excavation unit. Significant artefacts and archaeological features will be determined by the representatives of the registered Aboriginal parties on site and the archaeologist.
- Where Stage 1 excavations identify Aboriginal cultural material in the form of undisturbed midden material, Stage 2 excavations would be targeted in order to obtain an adequate sample of in-situ deposit that would be able provide further local and regional information on the age, settlement and habitation of past Aboriginal land use.
- The location of Stage 2 excavation areas will be selected with reference to the location of Stage 1 excavation areas that meet the triggers identified above. Stage 2 excavations will not extend outside the areas proposed for impact and will not exceed more than 25% of the total area of proposed sub-surface disturbance within the areas of low to moderate and moderate archaeological potential. The Stage 2 excavations will be conducted using the same methods used for Stage 1 excavations.

10.4 Excavation of Features

Should a feature such as a possible hearth or heat treatment pit or an accumulation of animal bone or shell likely to relate to Aboriginal cultural activities be identified during excavations, the following methodology will be followed:

- The surface of the feature will be cleaned by hand (using trowels, hand shovels and brushes as required) to allow the edges of the feature to be identified.
- The feature will then be excavated in cross-section (half-sectioned or part thereof depending on the location of the feature within the excavation unit and whether it extends outside the excavation unit) to investigate the dimensions and orientation of the feature to more accurately assess whether it is a cultural feature or the result of natural process (for example, a burnt tree root/stump or accumulation of bone within a former void). The excavation will proceed according to the stratigraphy (if any) of the in-filling materials.
- If it is identified as a feature, it will be photographed in cross-section and a stratigraphic profile of the cross-section will be recorded (where possible).
- If it is identified as a feature, it will then be excavated in its entirety within the excavation unit. All excavated cultural materials (including those from original cross-sectional excavation) will be retained for analysis and samples of relevant materials will be sent for additional analysis, including radio-carbon dating. If the feature extends outside the excavation unit, it will be further assessed whether

excavation should continue into the adjoining area. This will be considered with reference to the need to maintain the integrity of the feature during excavation and/or backfilling if required.

- Following the removal of all in-filling material, the remaining cut feature (where present) will be planned to scale and photographed.
- Following this excavation can resume in the remaining portion of the excavation unit.

10.5 Management of Potential Human Skeletal Remains

Should human/possible human skeletal material (single bones or an intact burial) be located within the excavation/salvage area, it will be managed in accordance with the strategy outlined below:

- All salvage/excavation works within the immediate vicinity of the skeletal material will cease and the area will be cordoned off for 10 metres from all edges of the skeletal material.
- The skeletal material will be inspected to determine whether it is human or animal. If necessary, advice will be sought from a forensic specialist.
- If the skeletal material is human, the NSW Police and OEH will be contacted. No excavation will proceed until an appropriate course of action has been determined in consultation with NSW Police, OEH and the Aboriginal parties.
- If the skeletal material is not human, the skeletal remains (or part thereof) will be assessed, together with its depositional context, to determine the likelihood of a cultural origin. If the deposit is not considered a cultural feature, excavation may proceed in accordance with the general methodology. If the bone is identified as a feature, excavation may proceed in accordance with the methodology for the excavation of features provided in **Section 10.4**.

10.6 Post-Excavation Analysis and Reporting

Following the completion of salvage works (surface collection and sub-surface investigations), cultural material will be subject to analysis in accordance with the protocols provided below.

10.6.1 Stone Artefacts

Umwelt proposes to record and analyse all stone artefacts recovered during AHIP works. The analysis of the stone artefacts would be undertaken to determine artefact distribution, density, artefact and raw material variability, typological dates and the possible type of activities undertaken across the study area.

In accordance with best practice standards, Umwelt will record the following features, at a minimum:

- Artefact type
- Attributes
- Raw material
- Length, width and thickness
- Photographic recording of diagnostic and selected artefacts.

10.6.2 Midden Material

Umwelt proposes to record and analyse any midden material recovered. Dependent on the scale of recovered material, a sample of the all shell midden material would be recorded and analysed.

In accordance with best practice standards, Umwelt will record the following features, at a minimum:

- Material (by weight)
 - shell
 - bone
 - organics
 - charcoal
- Species
- Where relevant, calculate Minimum Number of Individuals (MNI) (per species)
- Type
 - non-artefactual
 - artefactual
 - attributes
 - use-wear.

10.6.3 Reporting

As part of the post field work analysis, all artefacts and a sample of the shell midden material would be subject to comprehensive analysis undertaken at the Umwelt Teralba offices.

The results of all Aboriginal cultural heritage archaeological investigations would be collated into one overarching archaeological excavation report. The final excavation report would discuss the results of the investigations and the site formation and post depositional processes.

The report would also include digitised photographic records, excavation results and outcomes of analysis (where undertaken). The report would also reassess the significance of the identified archaeological resources and the future archaeological potential of the study area.

The report would be provided to registered Aboriginal parties and submitted to OEH.

11.0 Management of Cultural Materials

All archaeological material would be temporarily stored at Umwelt (Australia) Pty Limited Head Office:

75 York Street
Teralba NSW 2284

Upon the completion of the cultural material recording and analysis and the preparation of the final excavation report, the salvaged material will be returned to the project area for redistribution/burial in accordance with the code of practice. An appropriate location will be determined by the registered Aboriginal parties in consultation with the proponent

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APPENDIX A

EPBC Act Protected Matters Search Tool Results



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 01/12/16 15:17:13

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

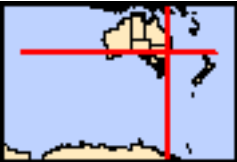
[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 1.0Km](#)



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	59
Listed Migratory Species:	73

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	2
Commonwealth Heritage Places:	1
Listed Marine Species:	96
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	1
Invasive Species:	42
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Hunter estuary wetlands		Within Ramsar site

Listed Threatened Ecological Communities		[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.		

Name	Status	Type of Presence
Central Hunter Valley eucalypt forest and woodland	Critically Endangered	Community may occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta steady White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		

Name	Status	Type of Presence
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus parramattensis subsp. decadens Earp's Gum, Earp's Dirty Gum [56148]	Vulnerable	Species or species habitat may occur within area
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat may occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
Tetralthea juncea Black-eyed Susan [21407]	Vulnerable	Species or species habitat likely to occur within area

Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area

Sharks		
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species	[Resource Information]	
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Sterna albifrons Little Tern [813]		Breeding may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Roosting known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area

Name	Threatened	Type of Presence
Limicola falcinellus Broad-billed Sandpiper [842]	Critically Endangered	Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]		Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Philomachus pugnax Ruff (Reeve) [850]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land	[Resource Information]
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The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land - Commonwealth Land - Australian Telecommunications Commission

Commonwealth Heritage Places		[Resource Information]
Name	State	Status
Historic		
Fort Wallace	NSW	Listed place

Listed Marine Species	[Resource Information]
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* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Roosting known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Endangered	Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]		Roosting known to occur within area
Calidris ferruginea Curlew Sandpiper [856]		Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]	Critically Endangered	Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]		Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]	Vulnerable	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]		Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]	Endangered	Roosting known to occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]		Roosting known to occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area

Name	Threatened	Type of Presence
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Himantopus himantopus Black-winged Stilt [870]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Philomachus pugnax Ruff (Reeve) [850]		Roosting known to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Breeding may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophrys Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche sp. nov. Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur

Name	Threatened	Type of Presence
Xenus cinereus Terek Sandpiper [59300]		within area Roosting known to occur within area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat may occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paegnius Rough-snout Ghost Pipefish [68425]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Stigmatopora olivacea a pipefish [74966]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Mammals

Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area

Reptiles

Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans

Name	Status	Type of Presence
------	--------	------------------

Mammals

Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within

Name	Status	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Foraging, feeding or related behaviour may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat known to occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat likely to occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat may occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Hunter Wetlands	NSW
Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included.	
Name	State
North East NSW RFA	New South Wales

Invasive Species

[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur

Name	Status	Type of Presence
		within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species

Name	Status	Type of Presence
Pinus radiata		habitat likely to occur within area
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Protasparagus densiflorus		
Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Protasparagus plumosus		
Climbing Asparagus-fern, Ferny Asparagus [11747]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii		
Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta		
Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis		
Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium		
Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
Kooragang Nature Reserve		NSW

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-32.88767 151.7945

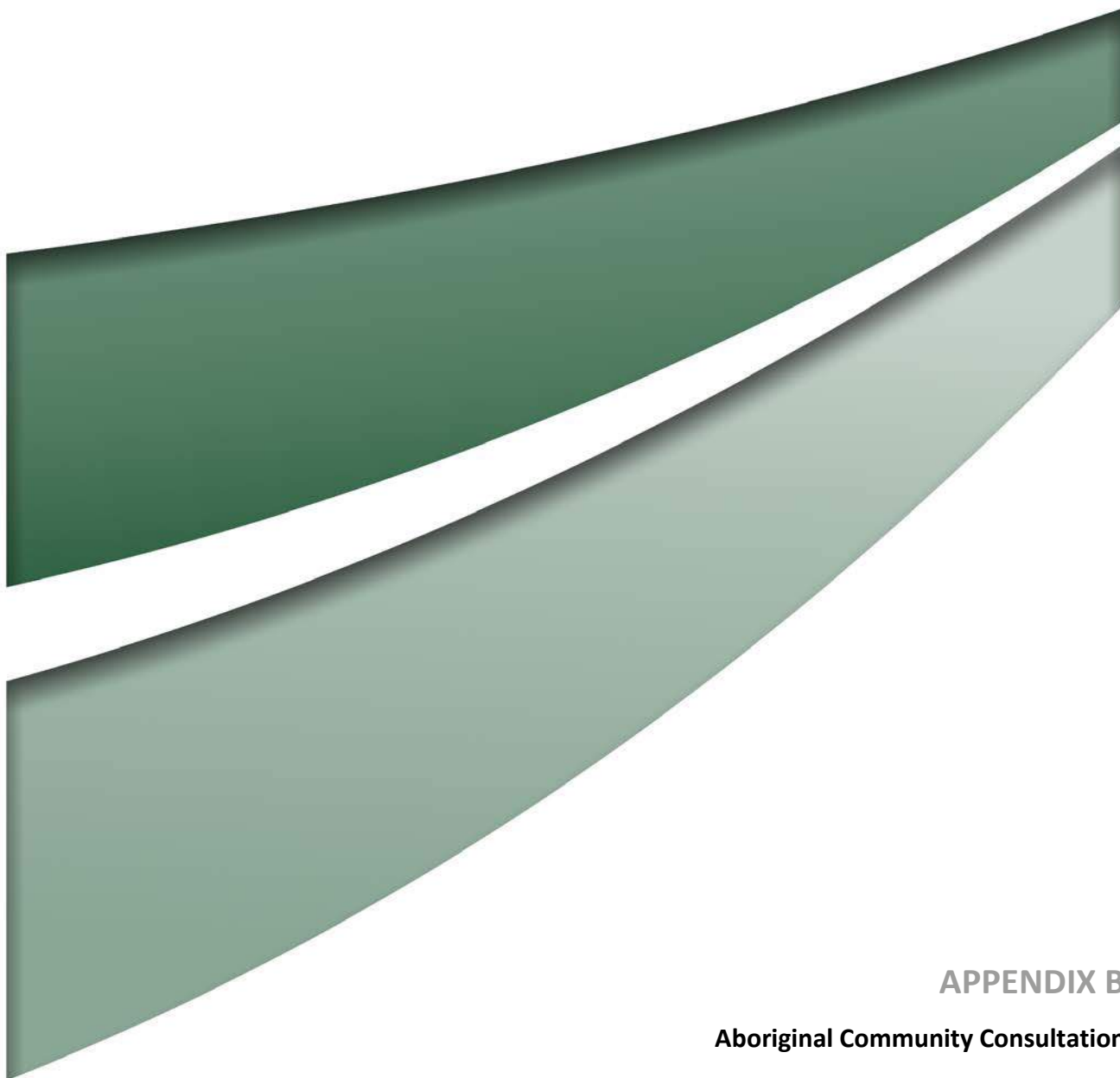
Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.



APPENDIX B

Aboriginal Community Consultation



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Our Ref:3772/AL/30052016

30 May 2016

Carol Ridgeway-Bissett
Maaingal Aboriginal Heritage
17 Parkes Street
Nelson Bay NSW 2315

Dear Carol

**Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and
Stockton Rifle Range Sites, Stockton, NSW**

Defence Housing Australia (DHA) is proposing to seek development approvals for Fort Wallace and Stockton Rifle Range, Stockton, NSW (refer to Figure 1). DHA has commissioned Umwelt (Australia) Pty Ltd (Umwelt) to prepare an Aboriginal Cultural Heritage and Archaeological Assessment for the proposed development.

In accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Umwelt, on behalf of DHA, is seeking to ascertain if your organisation has cultural knowledge relevant to determining the significance of Aboriginal sites/objects within the project area. This information will be used to inform the Aboriginal Cultural Heritage and Archaeological Assessment, which in turn may support an application for an Aboriginal Heritage Impact Permit. In order to facilitate the consultation process, please register an interest in the project by no later than **13 June 2016**.

Please send any registrations of interest in the project to:

Alison Lamond
Umwelt (Australia) Pty Ltd
75 York St, Teralba NSW 2284
Ph: 4950 5322
Email: alamond@umwelt.com.au

In compliance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), the contact details for DHA are as follows:

Gulliver Coote
Defence Housing Australia
Suite 201, Level 2
287 Elizabeth Street
Sydney, NSW
Ph: 02 9762 5612
Email: gully.coote@dha.gov.au

Should you have any queries or wish to discuss this notification letter, please do not hesitate to call me on 02 4950 5322 or alamond@umwelt.com.au.

Yours sincerely

Alison Lamond
Archaeologist

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Our Ref:3772/AL/30052016

30 May 2016

Anthony Anderson
Mur-Roo-Ma Inc.
7 Vardon Road
Fern Bay NSW 2295

Dear Anthony

**Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and
Stockton Rifle Range Sites, Stockton, NSW**

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Our Ref:3772/AL/30052016

30 May 2016

Lea Anderson
Nur-Run-Gee Pty Ltd
22 Popplewell Road
Fern Bay NSW 2295

Dear Lea

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Our Ref: 3772/AL/30052016

30 May 2016

Cheryl Hendry
Worimi Aboriginal Community Co-operative
17a Wahgunyah Road
Nelson Bay NSW 2315

Dear Cheryl

**Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and
Stockton Rifle Range Sites, Stockton, NSW**

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Our Ref:3772/AL/30052016

30 May 2016

Del Arnold
Garrigal Aboriginal Community Inc.
PO Box 182
Gloucester NSW 2422

Dear Del

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Our Ref:3772/AL/30052016

30 May 2016

Mick Leon
Doo-Wa-Kee
PO Box 22
Taree NSW 2430

Dear Mick

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Archaeologist

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Dedicated Team,
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Our Ref:3772/AL/30052016

30 May 2016

Mick Leon
Lakkari NTCG
C/- 4/39 Short Street
Forster NSW 2428

Dear Mick

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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In accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), Umwelt, on behalf of DHA, is seeking to ascertain if your organisation has cultural knowledge relevant to determining the significance of Aboriginal sites/objects within the project area. This information will be used to inform the Aboriginal Cultural Heritage and Archaeological Assessment, which in turn may support an application for an Aboriginal Heritage Impact Permit. In order to facilitate the consultation process, please register an interest in the project by no later than **13 June 2016**.

Please send any registrations of interest in the project to:

Alison Lamond
Umwelt (Australia) Pty Ltd
75 York St, Teralba NSW 2284
Ph: 4950 5322
Email: alamond@umwelt.com.au

In compliance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010), the contact details for DHA are as follows:

Gulliver Coote
Defence Housing Australia
Suite 201, Level 2
287 Elizabeth Street
Sydney, NSW
Ph: 02 9762 5612
Email: gully.coote@dha.gov.au

Should you have any queries or wish to discuss this notification letter, please do not hesitate to call me on 02 4950 5322 or alamond@umwelt.com.au.

Yours sincerely

Alison Lamond
Archaeologist

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Our Ref:3772/AL/30052016

30 May 2016

David Ahoy
Lower Hunter Aboriginal Incorporated
5 Killara Drive
Cardiff South NSW 2285

Dear David

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Our Ref:3772/AL/30052016

30 May 2016

Candy Lee Towers
Gimbay Gatigaan Aboriginal Corporation
126 Hanbury Street
Mayfield NSW 2304

Dear Candy Lee

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Our Ref: 3772/AL/30052016

30 May 2016

David Feeney
Karuah Indigenous Corporation
1/7 Mustons Rd
Karuah NSW 2324

Dear David

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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Our Ref:3772/AL/30052016

30 May 2016

Arthur Fletcher
Kauwul t/a Wonn1
619 Main Road
Glendale NSW 2285

Dear Arthur

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites, Stockton, NSW

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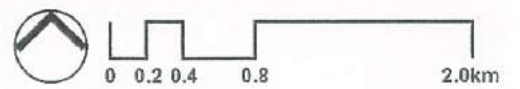
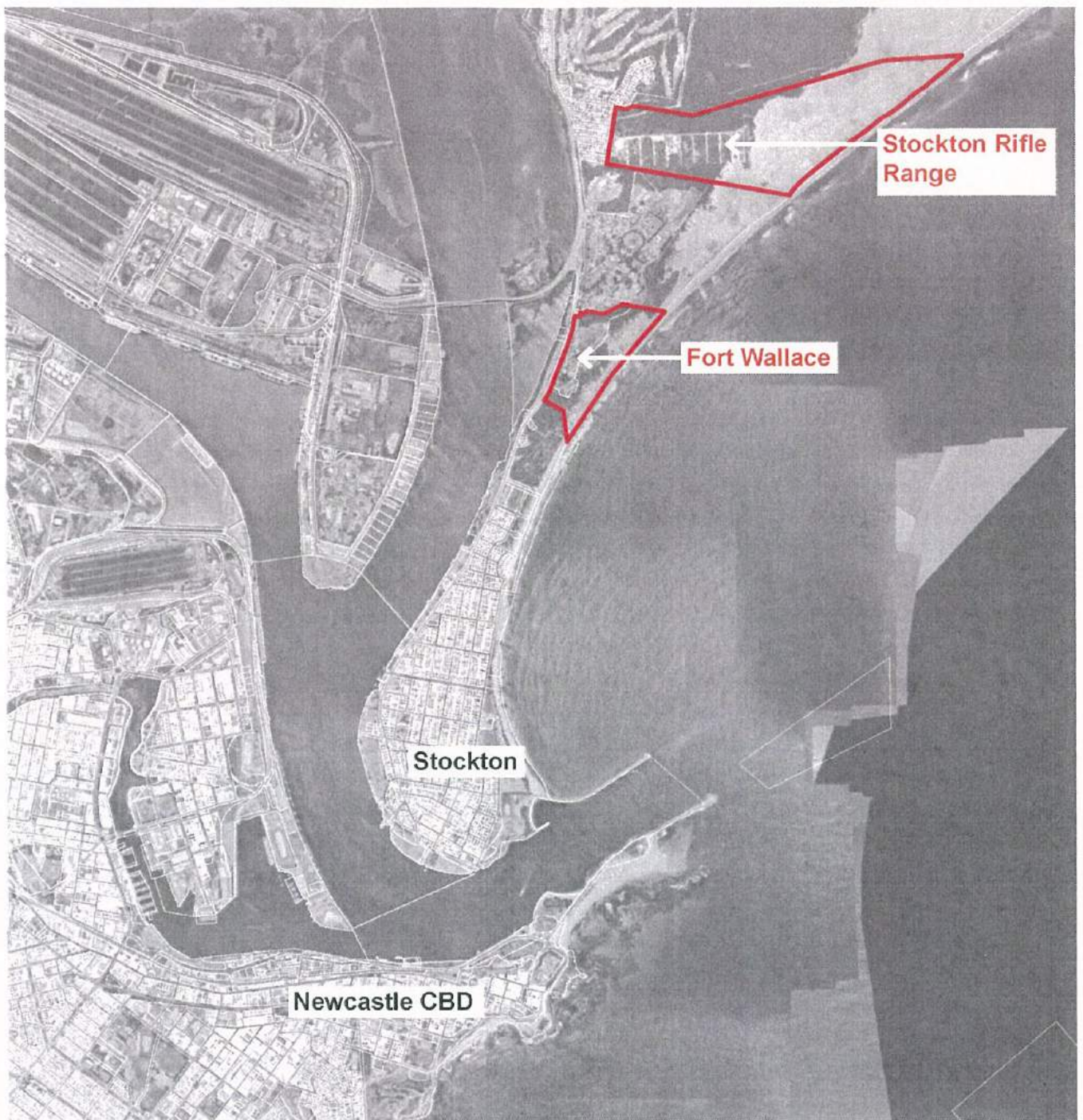


Figure 1



Our Ref: 3772/ AL/NR/02082016

2 August 2016

Karuah Indigenous Corporation
David Feeney
1/7 Mustons Rd
KARUAH NSW 2324

'karuahindigenous@outlook.com'

Dear David Feeney

Re: Draft Assessment Methodology: Aboriginal Cultural Heritage and Archaeological Assessment Stockton Rifle Range and Fort Wallace Stockton, NSW

Thank you for your registration of interest in the abovementioned project. The proposed works area is illustrated in **Figure 1** and is herein referred to as the Stockton Rifle Range and Fort Wallace project areas.

The Aboriginal cultural heritage and archaeological assessment (ACHAA) of the project area will be undertaken in accordance with the requirements of the *National Parks and Wildlife Act 1974* (NPW Act), the *National Parks and Wildlife Regulation 2009* (NPW Regulation) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (the Code of Practice). In line with these requirements, this letter provides a draft methodology for the ACHAA of the project area for your review and comment.

1.0 Background Information

Defence Housing Australia (DHA) is proposing to seek development consent for residential subdivision of the Stockton Rifle Range and Fort Wallace, located north of Stockton NSW.

The project areas and surrounding area include a large number of previously recorded sites (refer to **Figure 1**). Within the Fort Wallace project area 1 burial site, 4 stone artefact sites and 2 Aboriginal resource and gathering sites are recorded, and a portion of the project area is also contained within the Fern Bay site complex. While previous assessments have identified high levels of disturbance within the main fort complex the area has been previously identified as having high cultural value and was mapped as an area of high Aboriginal cultural sensitivity in a recent assessment of Fern Bay

The Stockton Rifle Range project area includes 4 previously recorded burial sites, 6 artefact sites and 1 midden site and is also partially located within the Fern Bay site complex. This area has also previously been mapped as within a zone of high Aboriginal cultural sensitivity.

2.0 Proposed works

DHA is proposing to seek consent for residential development of the project areas, with the proposed development footprint shown in **Figure 1**.

Detailed designs are yet to be finalised as they are awaiting the results of this assessment and the other environmental assessments, however the development will include vegetation clearance, earthworks, dwelling construction, road construction, service installation and landscaping throughout the project areas.

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3.0 Draft Assessment Methodology

Investigations of the project areas will be undertaken as components of the ACHAA process to support a future application for an Aboriginal Heritage Impact Permit. Following your organisations review of this methodology a field survey will be organised. Pedestrian survey across both project areas will be undertaken in accordance with the requirements under the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. During the survey your representative will be encouraged to participate in discussions related to any sites, objects, PADs, or landscape features of cultural value located. Any information provided will be included in the draft report for review by the broader membership of your group/corporation. It is noted that if information is provided which is of a sensitive nature that your group/corporation can choose to have this information remain private.

During the survey has the Aboriginal cultural significance of any previously or newly identified sites and site management/mitigation required will be discussed. The outcomes of this discussion will then be incorporated into the draft assessment report which will be provided to all Registered Aboriginal Parties for broader group consideration and comment.

Following the end of the survey Umwelt will complete the draft ACHAA for your review. All responses provided by registered Aboriginal parties will be included in full in the ACHAA. The archaeologists at Umwelt pride themselves on dealing fairly with registered Aboriginal parties and in ensuring that everyone involved in the consultation process has their voice heard in the final report.

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It is proposed to undertake a survey of all landforms within both the Stockton Rifle Range and Fort Wallace Project areas over a period of 2 days with the involvement of a representative from each of the registered Aboriginal parties and an archaeologist from Umwelt. The survey methodology will comprise pedestrian transects that will take into account the following requirements:

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All sites and artefacts located will be recorded to OEH standards. The archaeological and Aboriginal and cultural significance of the sites/artefacts will be discussed with the registered Aboriginal parties participating in the survey and any requirements for subsurface testing of sites and PADs post approval will also be discussed.

**Please note that as a result of the presence of previously recorded midden sites and burials within the project areas subsurface testing is not permitted under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. Therefore subsurface investigation can only occur with an AHIP.*

As noted above, a meeting will be held on the afternoon of the survey to ensure that your representatives are fully informed about the project and have an opportunity to provide input on potential management options.

The dates proposed for the survey will be provided shortly.

5.0 Draft Aboriginal Cultural Heritage and Archaeological Assessment

Following the completion of the survey program a draft ACHAA will be prepared for review by all registered Aboriginal parties. The draft ACHAA will include:

- details of the nature of the proposed development
- a description of the potential impacts of the proposed development on Aboriginal cultural heritage and archaeological values
- full details of the registered Aboriginal party consultation process
- the results of an Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) search and Native Title search
- a review of the cultural context of the proposed project area and its surrounds which will draw heavily on information provided by registered Aboriginal parties and the known archaeological sites in the area as well as any new information provided through the AHIMS search and during the assessment process
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- the preparation of a predictive model drawing on all the above
- details of the survey methodology and results
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Yours sincerely



Alison Lamond
Archaeologist

Previously Registered Aboriginal Sites Fort Wallace and Stockton Rifle Range



Our Ref: 3772/ AL/NR/02082016

2 August 2016

Mur-Roo-Ma Inc.
Anthony Anderson/ Bec Young
7 Vardon Road
FERN BAY NSW 2295

murroomainc1@gmail.com

Dear Anthony Anderson/ Bec Young

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We look forward to working in partnership with you on this project. Should you have any queries or wish to discuss this notification letter, please do not hesitate to call Alison Lamond on 02 4950 5322 or via email alamond@umwelt.com.au.

Yours sincerely



Alison Lamond
Archaeologist

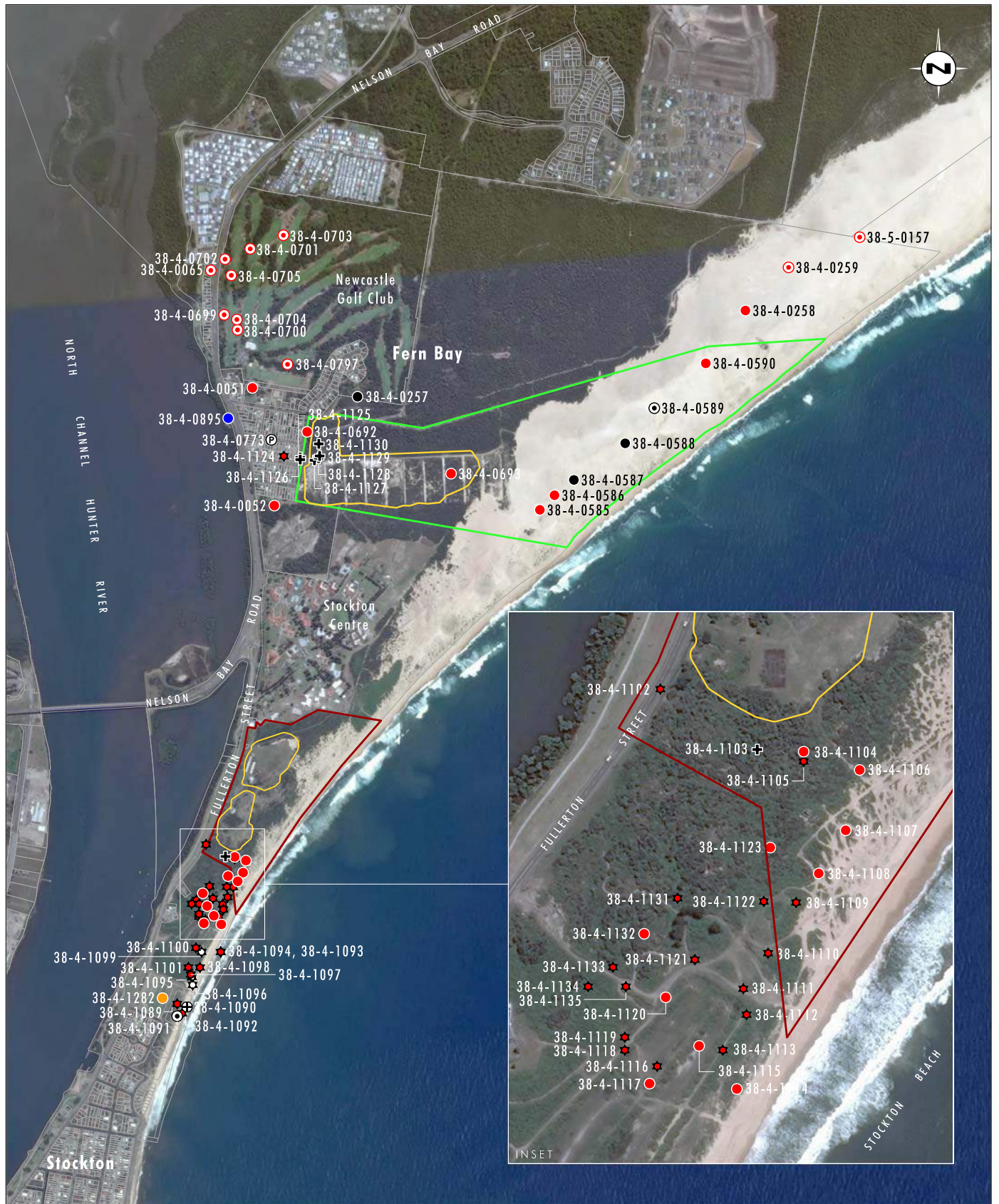


Image Source: Google Earth/DigitalGlobe/
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FIGURE 1

Previously Registered Aboriginal Sites
Fort Wallace and Stockton Rifle Range



Our Ref: 3772/ AL/NR/02082016

2 August 2016

Nur-Run-Gee Pty Ltd
Lennie Anderson
22 Popplewell Road
FERN BAY NSW 2295

Dear Lennie Anderson

Re: Draft Assessment Methodology: Aboriginal Cultural Heritage and Archaeological Assessment Stockton Rifle Range and Fort Wallace Stockton, NSW

Thank you for your registration of interest in the abovementioned project. The proposed works area is illustrated in **Figure 1** and is herein referred to as the Stockton Rifle Range and Fort Wallace project areas.

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**Please note that as a result of the presence of previously recorded midden sites and burials within the project areas subsurface testing is not permitted under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. Therefore subsurface investigation can only occur with an AHIP.*

As noted above, a meeting will be held on the afternoon of the survey to ensure that your representatives are fully informed about the project and have an opportunity to provide input on potential management options.

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Attn: Alison Lamond

Alternatively, you may email your comments to: alamond@umwelt.com.au

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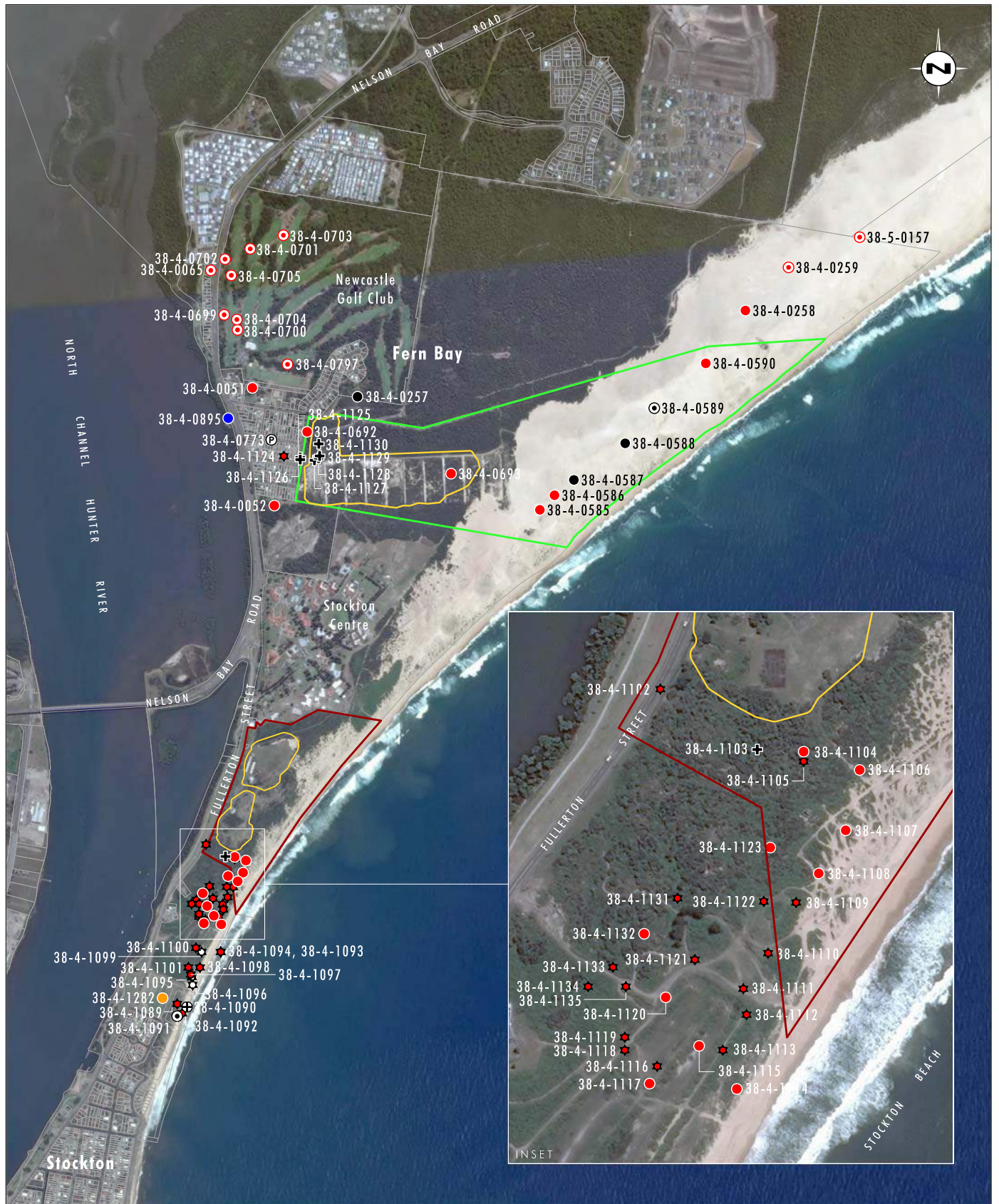


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FIGURE 1

Previously Registered Aboriginal Sites
Fort Wallace and Stockton Rifle Range



Our Ref: 3772/ AL/NR/02082016

2 August 2016

Worimi Local Aboriginal Land Council
Jackie Henderson
2163 Nelson Bay Road
WILLIAMTOWN NSW 2318

Dear Jackie Henderson

Re: Draft Assessment Methodology: Aboriginal Cultural Heritage and Archaeological Assessment Stockton Rifle Range and Fort Wallace Stockton, NSW

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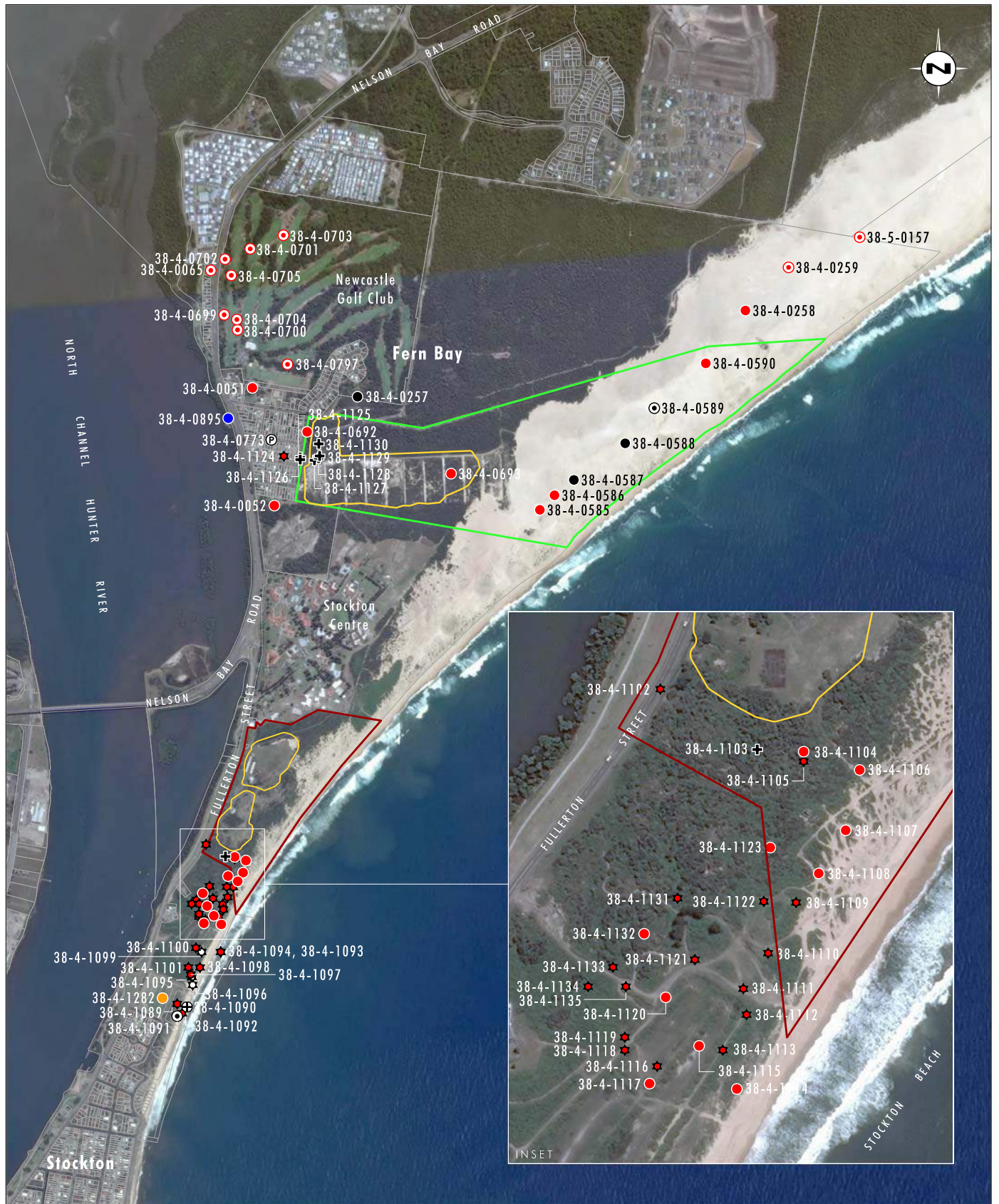


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FIGURE 1

Previously Registered Aboriginal Sites
Fort Wallace and Stockton Rifle Range



Our Ref: 3772/ AL/NR/02082016

4 August 2016

Wonn1
Suzie Worth and Arthur Flechter
619 Main Road
GLENDALE NSW2285

suzieworth17@bigpond.com

Dear Suzie and Arthur

Re: Draft Assessment Methodology: Aboriginal Cultural Heritage and Archaeological Assessment Stockton Rifle Range and Fort Wallace Stockton, NSW

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Alison Lamond
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From: Alison Lamond
To: ["Jaqualine Henderson"](#)
Subject: Changes to Fort Wallace Draft Report
Date: Tuesday, 31 January 2017 1:55:00 PM
Attachments: [3772_R01_V3_DRAFT.pdf](#)

Hi Jackie

We have received some early comments about the Fort Wallace draft report (another copy attached), comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Nur-Run-Gee and Mur-Roo-Ma both made comments regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

Draft version sent out

- Where test excavations identify Aboriginal cultural material in the form of stone artefacts, further salvage excavations would only be required if high artefact densities are reached and/or significant artefacts are recovered. High artefact densities will consist of 50 stone artefacts or more per 1 by 1 metres Stage 1 excavation unit.

Change (additions in red)

- Where test excavations identify Aboriginal cultural material in the form of stone artefacts, further salvage excavations would only be required if high artefact densities are reached and/or significant artefacts **or archaeological features** are recovered. High artefact densities will consist of 50 stone artefacts or more per 1 by 1 metres Stage 1 excavation unit.
Significant artefacts and archaeological features will be determined by the representatives of the registered Aboriginal parties on site and the archaeologist.

Hopefully I have addressed the concerns raised, let me know if I have missed anything.

Thanks

Alison Lamond
Senior Archaeologist

Umwelt (Australia) Pty Limited
75 York Street
Teralba, NSW 2284

Phone: (02) 4950 5322
Mobile: 0427 125 687

www.umwelt.com.au

Inspired People | Dedicated Team | Quality Outcomes

Newcastle ph. 02 4950 5322 | Perth ph. 08 6260 0700 | Canberra ph. 02 6262 9484 | Sydney ph. 1300 793 267 | Brisbane ph. 1300 793 267

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Please consider the environment before printing this email

From: Alison Lamond
To: ["David Feeney"](#)
Subject: Changes to Fort Wallace Draft Report
Date: Tuesday, 31 January 2017 1:51:00 PM

Hi Dave

Sorry in the delay in getting back to you the responses to the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Nur-Run-Gee and Mur-Roo-Ma both made comments regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

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From: Alison Lamond
To: ["Anthony Anderson"](#)
Subject: Changes to Fort Wallace Draft Report
Date: Tuesday, 31 January 2017 1:50:00 PM

Hi Bec and Anthony

Sorry in the delay in getting back to you about your response to the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Lennie also made a comment regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

Draft version sent out

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Please consider the environment before printing this email

From: Alison Lamond
To: ["lennie.anderson011@bigpond.com"](mailto:lennie.anderson011@bigpond.com)
Subject: Changes to Fort Wallace Draft Report
Date: Tuesday, 31 January 2017 1:49:00 PM

Hi Lennie

Sorry in the delay in getting back to you about your responses to the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Anthony and Bec also made a comment regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

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Significant artefacts and archaeological features will be determined by the representatives of the registered Aboriginal parties on site and the archaeologist.

Hopefully I have addressed your concern, let me know if I have missed anything.

Thanks

Alison Lamond
Senior Archaeologist

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Please consider the environment before printing this email

Frances Davies

From: Dave Feeney <karuahindigenous@outlook.com>
Sent: Monday, 6 June 2016 4:58 PM
To: Alison Lamond
Subject: RE: Hi David

Hi Alison;

The Karuah Indigenous Corporation would like to registrar there interest in the projects
Regarding the Aboriginal Cultural Heritage and archaeological assessment for Fort Wallace and
Stockton Rifle Range
At Stockton NSW

Thank you

Dave Feeney
Chief Executive Officer
Snr Cultural Officer
Karuah Indigenous Corporation

From: Alison Lamond [<mailto:alamond@umwelt.com.au>]
Sent: Monday, 6 June 2016 9:20 AM
To: karuahindigenous@outlook.com
Subject: Hi David

Hi David
Here is my email

Alison Lamond
Archaeologist

Umwelt (Australia) Pty Limited
75 York Street
Teralba, NSW 2284

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Please consider the environment before printing this email



9 Vardon Road Fern Bay 2295 NSW
49281910
0402827482

ABN: 97 807 719 484

Monday 6th of June 2016.

Umwelt

Re: Aboriginal Cultural Heritage and Archaeological Assessment – Fort Wallace and Stockton Rifle Range Sites- Fern Bay/Stockton, NSW

To Alison Lamond,

Please find enclosed application for Murrooma Incorporated to register our interest to be a part of the community consultation process for this proposed project.

Anthony Anderson and Bec Young are representatives of Murrooma who both hold specific cultural knowledge and education relevant to determining the significance of Aboriginal objects and places in the Fern Bay/ Stockton region. We are both Traditional Custodians of the Worimi area and are in a position to speak for country.

The project area is within a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. We believe that in order to gain the specific information that will be required for this area, it must be sorted through Local Knowledge Holders and this is what we can offer in the consultation process.

Thankyou

Anthony Anderson - CEO

Bec Young- Operations Manager

From: [David Feeney](#)
To: [Alison Lamond](#)
Subject: Re: Changes to Fort Wallace Draft Report
Date: Tuesday, 7 February 2017 1:40:11 PM

Hi Alison;
All changers are good

Thank you

Dave Feeney

From: Alison Lamond <alamond@umwelt.com.au>
Sent: Tuesday, January 31, 2017 3:51:06 AM
To: David Feeney
Subject: Changes to Fort Wallace Draft Report

Hi Dave

Sorry in the delay in getting back to you the responses to the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Nur-Run-Gee and Mur-Roo-Ma both made comments regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

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Significant artefacts and archaeological features will be determined by the representatives of the registered Aboriginal parties on site and the archaeologist.

Hopefully I have addressed your concern, let me know if I have missed anything.
Thanks

Alison Lamond
Senior Archaeologist

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From: [Suzie Worth](#)
To: [Alison Lamond](#)
Cc: [Arthur Fletcher](#)
Subject: RE: Changes to Fort Wallace Draft Report
Date: Thursday, 2 February 2017 3:17:02 PM

Hi Alison

I have discussed the changes as stated in your email below and we agree to a point, on the red inclusions to the recommendations. However:

- We feel that “50 stone artefacts or more per 1 by 1 metres” pit is rather a bit much! A more appropriate number of objects per square metre would be 20-25 and also depends on the distance between each pit. A large significant site including shell midden could be missed and devalued.
- Since it has been suggested that “significant artefacts and archaeological features will be determined by the representatives of the registered Aboriginal parties on site and the archaeologist”. This does not give those who are only being consulted on this project, the opportunity to comment on the determination of the significance of these objects. Could you please let us know what is found during the course of the excavation?

Thank you for this opportunity to review the comments of the other Aboriginal representatives.

Kind regards,
Suzie Worth
For Arthur Fletcher
Kauwul Wonn1

From: Alison Lamond [mailto:alamond@umwelt.com.au]
Sent: Tuesday, 31 January 2017 1:53 PM
To: Arthur Fletcher <wonn1sites@gmail.com>; Suzie Worth <suzieworth17@bigpond.com>
Subject: Changes to Fort Wallace Draft Report

Hi Arthur and Suzie

We have received some early comments about the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Nur-Run-Gee and Mur-Roo-Ma both made comments regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

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Hopefully I have addressed your concern, let me know if I have missed anything.
Thanks

Alison Lamond
Senior Archaeologist

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Please consider the environment before printing this email

From: [Anthony Anderson](#)
To: [Alison Lamond](#)
Subject: Re: Changes to Fort Wallace Draft Report
Date: Friday, 3 February 2017 10:00:54 AM

Hi Ali, Yep that is fine it just gives us the wording to fall back on and gives our community a bit more control over the artefacts that we might come across.

Thanks

Bec and Anthony

On Tue, Jan 31, 2017 at 1:50 PM, Alison Lamond <alamond@umwelt.com.au> wrote:

Hi Bec and Anthony

Sorry in the delay in getting back to you about your response to the Fort Wallace draft report, comment doesn't close until next Wednesday (8 feb) but I wanted to give you a chance to see the changes in response to the comments sent through so far.

Lennie also made a comment regarding the Stage 2 Salvage excavation triggers (Section 10.3). Is this change of wording appropriate?

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Hopefully I have addressed your concern, let me know if I have missed anything.

Thanks

Alison Lamond
Senior Archaeologist

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Please consider the environment before printing this email

--

Anthony Anderson
CEO Mur-roo-ma Incorporated
Justice of The Peace

From: lennie.anderson011@bigpond.com
To: [Alison Lamond](mailto:alamond@umwelt.com.au)
Cc: murroomainc1@gmail.com
Subject: Re: Draft Aboriginal Cultural Heritage report for DHA proposed residential development of Fort Wallace
Date: Wednesday, 11 January 2017 11:06:29 PM

Hi Alison,

Thank you for a very thorough report. One thing I did not agree with but, is the amount or number of items of Cultural Material uncovered/discovered (50) that warrants further investigation. This is not correct if it's an isolated find (1 or 2) Artefacts then Yes consider it investigated, but if there is more (no determining number) then further investigation is required and will or would be decided by those Cultural People engaged onsite at that time!

Thanking You
Lennie Anderson OAM
Worimi Traditional Custodian
Nur-Run-gee Pty Ltd (Director)

----- Original Message -----

From: "Alison Lamond" <alamond@umwelt.com.au>
To: "lennie.anderson011@bigpond.com" <lennie.anderson011@bigpond.com>
Sent: Wednesday, 11 Jan, 2017 At 11:13 AM
Subject: Draft Aboriginal Cultural Heritage report for DHA proposed residential development of Fort Wallace

Hi Lennie

Please find attached the Draft Aboriginal Cultural Heritage report for DHA proposed residential development of Fort Wallace for your review and input. Please don't hesitate to contact me to discuss any aspect of the report and any necessary changes.

The closing date for this report will be Wednesday the 8 February.

Regards

Alison Lamond

Senior Archaeologist

Umwelt (Australia) Pty Limited

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From: [Anthony Anderson](#)
To: [Alison Lamond](#)
Subject: Registration of Interest
Date: Monday, 6 June 2016 11:09:14 AM
Attachments: [Umwelt- Rifle Range.docx](#)

Dear Alison-

Please find letter of interest for Murrooma Incorporated.

Thanks
Bec Young

--

[Anthony Anderson](#)
[CEO Mur-roo-ma Incorporated](#)
[Justice of The Peace](#)



Wonn1
Entity of Kauwul Pty Ltd

619 Main Road Glendale, 2285

PHONE: 0249547751 Mobile: 0402146193

ABN: 27 153 953 363

11 July 2016

Ms A Lamond
Umwelt (Australia) Pty Ltd
75 York Street
TERALBA NSW 2284
Email: alamond@umwelt.com.au

Dear Alison

**RE: EXPRESSIONS OF INTEREST FOR ABORIGINAL CULTURAL HERITAGE AND
ARCHAEOLOGICAL ASSESSMENT – FORT WALLACE AND STOCKTON RIFLE
RANGE SITES, STOCKTON NSW**

Thank you for the invitation from your organisation to express our interest in being consulted for the above project and we would appreciate the opportunity to review the resulting draft report.

Below are our organisation's details as requested:

Registered Aboriginal Party: Kauwul trading as Wonn1

Name and Contact Details of site worker/s: Arthur Fletcher Phone: 0402 146 193

Brief Description of Skills and Experience:

Arthur Fletcher has had many years' experience in cultural heritage/archaeological survey and excavation work within the Port Stephens, Lower and Upper Hunter Valley on projects including mining, infrastructure and development sites. He has worked with EnergyAustralia, TransGrid, Hunter Water, RTA/RMS including Hunter Expressway, ARTC and on many mine sites including Centennial, Xstrata Ravensworth, Rio Tinto, etc. Arthur has had sites training through NSW NPWS and continues to expand cultural heritage knowledge independently through his association with skilled knowledge-holder Elders within the Hunter Valley and further afield. He has undertaken many inductions for RTA, ARTC and carries SGS Induction cards for Xstrata and Rio Tinto Coal & Allied sites (Induction cards are available upon request).
(White Card: Arthur Fletcher Work Cover CG100787865SEQ1 11/03/2006)

Statement of Physical Fitness to Undertake the Necessary Sites Work:

Arthur is physically fit and will be able to complete the specific project tasks required within acceptable survey terrain limits and climate.

Statement of Cultural Knowledge and/or Connection with Country:

Arthur is a Wonnarua/Gringai elder with knowledge of cultural lore and a concentrated interest, knowledge and understanding of cultural heritage, sites and spiritual beliefs of his traditional Country and has a long cultural association within the Newcastle and lower Worimi country.

Thank you once again for this opportunity to be consulted on this project. We look forward to hearing from you soon.

Kind regards

A handwritten signature in black ink, appearing to read 'Suzie Worth', with a stylized flourish at the end.

Suzie Worth
For Arthur C Fletcher
Wonn1 (Kauwul Pty Ltd)

Attached.



9 Vardon Road
Fern Bay NSW 2295
Ph: 02 49281910
M: 0402827482
Murroomainc1@gmail.com
ABN: 97 807 719 484

Tuesday 18th October 2016

Umwelt
Att: Alison Lamond

Re: Response and Comments from recent Site Survey-Aboriginal archaeological assessment Fern Bay Rifle Range and Fort Wallace- DHA.

To Alison,

After completion of the recent sites survey of Fern Bay Rifle Range and Stockton Fort Wallace, all groups represented attended a meeting to discuss our comments and recommendations for the local areas due to the high cultural sensitivity.

Fern Bay Rifle Range-

The area was discussed with maps issued by Alison on the survey and these were some findings:

The Northern side of the current access road was discussed and all RAP groups have indicated that due to the very significant areas through here both culturally and historically that we believe this area should not be developed on, that includes no roads etc behind the proposed housing on the Popplewell road site. This area has very significant intellectual property rights and storylines attached. The whole area is extremely important to our Traditional Owners to remain intact with no development to ensure protection of these traditional Worimi storylines.

- Development of houses on the Northern side, if needed can be completed along the road in line with the houses existing on Popperwell road, this area is already disturbed and will not affect our Aboriginal Sites.

We also discussed Braid road upgrade and believe that this should not be used as a new access or thorough fare through to the new development. There are known burials within this area and no excavation should take place on either side of the fence. An option may be using Rankin or Taylor road for main access into development. This will ensure no disturbance of the burials and protection of our Aboriginal sites.

Some possible steps for movement on construction within the open area/southern side of the access road:

- 1- Surface collection of accessible sites.
- 2- Storage is possible at Worimi LALC until work is finalised this includes the final process of re-burial of Aboriginal objects salvaged.
- 3- Due to the limitations of access and visibility from vegetation in our initial survey, all areas were not accessed and we are aware of sites from previous works in this area that have been since covered by vegetation. We would require to clear vegetation completely, all vehicles or machinery to be rubber tyred in order to minimise impact of sites. Once vegetation cleared another assessment to be completed in order to record and salvage these further sites.
- 4- Test pits to get extensive information from the sites identified- both scientific and cultural. All RAP groups believe the whole area surveyed is a large site complex however for the test pitting we may be able to capture the more complex exposed areas at first to test the extent.
- 5- We agreed on the development proceeding in the open area/southern side of access track however a full salvage excavation or the footprint/damage of development is recommended in order to protect all Aboriginal objects. This includes all areas to be developed that will be excavating the natural ground, e.g. structural supports or drainage.
- 6- The only area not to be excavated or developed on is the Northern area and the area where previous artefacts have been re-buried and returned to their natural place and the most southern/western corner due to the burials as previously discussed.

Fort Wallace- Stockton

The area was discussed with maps issued by Alison on the survey and these were some findings:

- 1- We discovered while we were completing the survey that someone had completed possible Geo Tech work within the area that we were surveying. There were holes dug and soil displaced and all material removed from the soil and spread back out around the marker pegs. This whole area is a site complex and is recorded on AHIMS as such. This disturbance and excavation may have uncovered or destroyed Aboriginal Objects. We have asked Alison to find out who was given access to complete this work as it is a severe breach of the Act. We will continue to follow this up as none of the RAP groups were aware or present while work was being complete and this area is extremely sensitive to our Traditional Owners especially close to a well know Aboriginal burial which is of great sensitivity.
- 2- We only completed the survey where the houses were potentially going, there are other buildings in the area that may be removed for development and we will return to survey/salvage in this area due to inaccessibility.
- 3- Anything outside the outlined scope of works was not surveyed e.g to the east where dune system begins. This area is extremely significant to our people and there are many Aboriginal sites within this area. If development is to go out of those boundaries another survey will need to be completed.
- 4- Some sites were identified on the AHIMS register that were in accessibility due to vegetation, we would need this cleared for identification and/or salvage.

- 5- To the southern end of the project site on a hill which was demonstrated to Alison is a well-known Aboriginal burial. This site is significant to our local people and NO access, foot passage or machinery will be given for development. We would like this area well marked and made clear it is a no-go-zone for all contractors/workers or anyone who comes in contact due to its sensitivity.
- 6- Test pits to get extensive information from the sites identified- both scientific and cultural. All RAP groups believe the whole area surveyed is a large site complex however for the test pitting we may be able to capture the more complex exposed areas at first to test the extent. Including the front/western dune system of the base which we are aware is an existing midden site that runs for kilometres through Stockton and Fern Bay.
- 7- A full salvage excavation or the footprint/damage of development is recommended in order to protect all Aboriginal objects. This includes all areas to be developed that will be excavating the natural ground, e.g. structural supports or drainage.
- 8- No exploration or work scheduled is to be undertaken on these site until a full comprehensive explanation is given to and accepted by us, in response to the damage to 'known /recorded sites' undertaken by the Geotech subsurface exploration. We would also like to know where the Cultural Material and other inclusions uncovered from those areas are.

As both of these areas are within the Fern Bay Aboriginal Site Complex and are of high significance to our people, we would like to be consulted in all aspects of potential development. It is our cultural roles and responsibilities to ensure the protection of our Aboriginal Heritage and its integrity which is not renewable once destroyed.

Please contact if you have any questions,

Thankyou

Bec Young- Murrooma -Operations Manager/Sites Officer

Anthony Anderson - Murrooma- CEO.

David Feeney-Karuah Indigenous Corporation-CEO

Lennie Anderson- Nurrungee- CEO

Jamie Merrick- Worimi LALC-Senior Sites Officer



Wonn1
Entity of Kauwul Pty Ltd

619 Main Road Glendale, 2285

PHONE: 0249547751 Mobile: 0402146193

ABN: 27 153 953 363

8 February 2017

Ms A Lamond
Umwelt (Australia) Pty Ltd
75 York Street
TERALBA NSW 2284
Email: alamond@umwelt.com.au

Dear Alison

**RE: COMMENTS ON THE DRAFT ABORIGINAL CULTURAL HERITAGE AND
ARCHAEOLOGICAL ASSESSMENT FOR THE PROPOSED DHA PROPOSED
RESIDENTIAL DEVELOPMENT OF STOCKTON FORT WALLACE NSW**

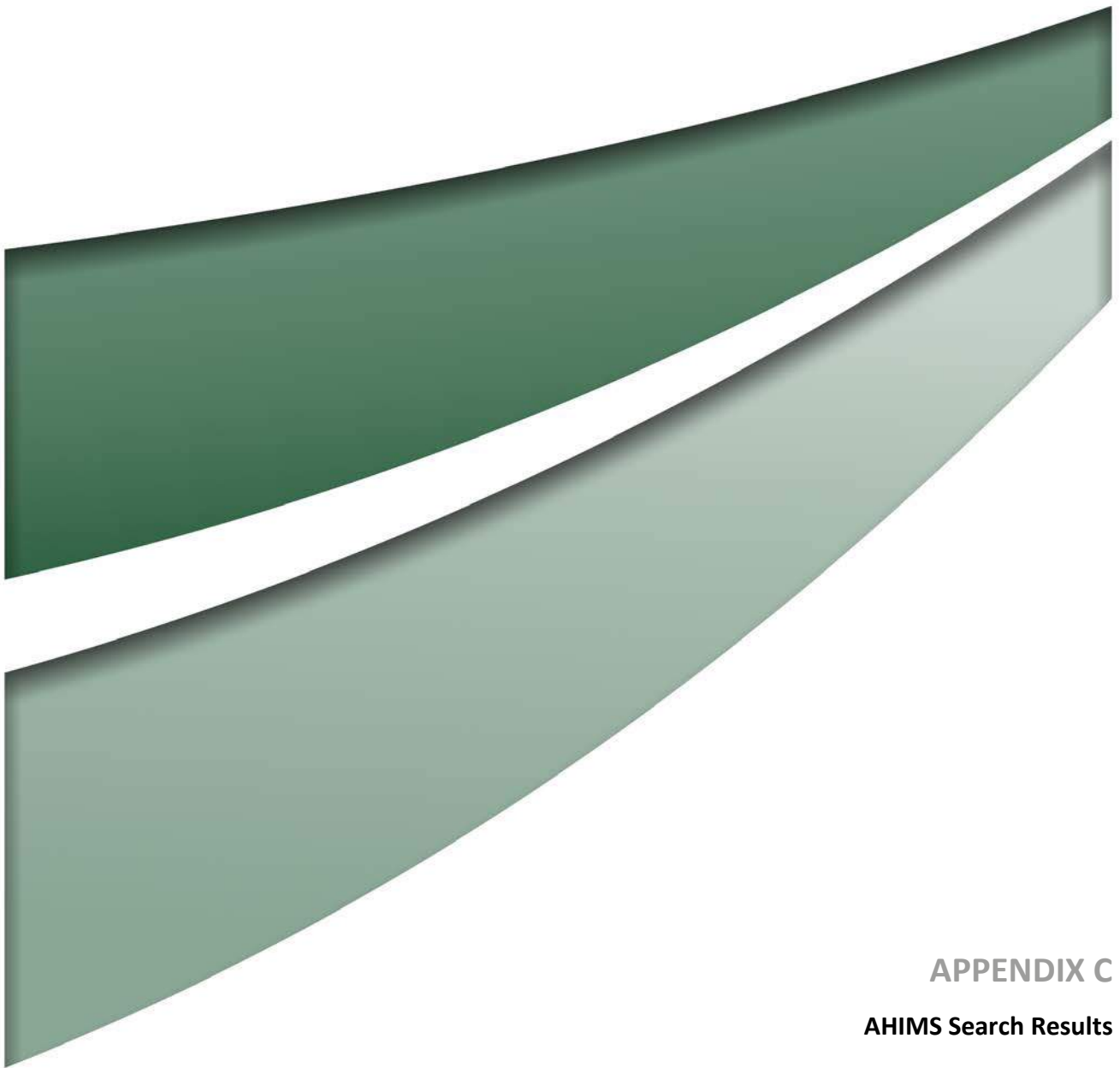
Although we were not involved in the fieldwork component of the above assessment we appreciate the opportunity to review the draft report and to comment on its contents. All we can say is, that further work is definitely required prior to development of the land as this is such a highly sensitive area and really should not be developed any further at all (but this is a government decision, what can we do!). Those Aboriginal people who really care about the Stockton area and the small amount of coastal land left between the Hunter River and Fern Bay, believe that this area ought never be further developed but should be returned to prime bushland and returned to the Aboriginal people to look after. Further sites will be found within this section of coastline and conservation of Burial Hill is paramount.

In conclusion, where ever appropriate in the recommendations for further work and conservation of sites and cultural features, the word 'should' needs to be replaced by the word 'must', as we consider the government and determining authority has to take the recommendations seriously, for the protection of the traditional cultural landscapes of not only the proposed development envelope as identified in this draft report, but the Stockton sand hills region generally.

Thank you once again for this opportunity to receive the documentation on this project and we look forward to being consulted further as well as being invited to participate in any further fieldwork.

Kind regards

Suzie Worth
For Arthur C Fletcher
Wonn1 (Kauwul Pty Ltd)



APPENDIX C
AHIMS Search Results

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Fort Wallace

Client Service ID : 225761

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0257	Fern Hill 1;	AGD	56	387600	6362100	Open site	Valid	Artefact : -	Isolated Find	1845
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0258	Fern Hill 2;	AGD	56	389400	6362500	Open site	Valid	Artefact : -	Open Camp Site	1845
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0259	Fern Hill 3;	AGD	56	389600	6362700	Open site	Valid	Shell : -, Artefact : -	Midden	1845
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0065	Fullerton Cove	AGD	56	386919	6362686	Open site	Valid	Shell : -, Artefact : -	Midden	102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0051	Moscheto Island;Newcastle Golf Club;	AGD	56	387112	6362141	Open site	Valid	Artefact : -	Open Camp Site	102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0052	Moscheto Island;Newcastle Bight;	AGD	56	387214	6361595	Open site	Valid	Artefact : -	Open Camp Site	102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0585	Fullerton 25	AGD	56	388446	6361575	Open site	Valid	Artefact : 52		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0586	Fullerton 26	AGD	56	388514	6361643	Open site	Valid	Artefact : 10		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0587	Fullerton 27	AGD	56	388604	6361714	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0588	Fullerton 28	AGD	56	388842	6361884	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0589	Fullerton 29	AGD	56	388977	6362047	Open site	Valid	Shell : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0590	Fullerton 30	AGD	56	389216	6362255	Open site	Valid	Artefact : 3		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0699	Newcastle Golf Club 2	AGD	56	386981	6362480	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0700	Newcastle Golf Club 3	AGD	56	387043	6362410	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0701	Newcastle Golf Club 4	AGD	56	387102	6362786	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-4-0702	Newcastle Golf Club 5	AGD	56	386985	6362738	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Fort Wallace

Client Service ID : 225761

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0703	Newcastle Golf Club 6	AGD	56	387256	6362849	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>	1781	
38-4-0704	Newcastle Golf Club 7	AGD	56	387040	6362458	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>	1781	
38-4-0705	Newcastle Golf Club 8	AGD	56	387014	6362663	Open site	Valid	Artefact : 20, Shell : 20		102493
	<u>Contact</u>	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>	1781	
38-4-0692	Stockton Rifle Range 1	AGD	56	387366	6361937	Open site	Valid	Artefact : 7		98719,102493
	<u>Contact</u>	<u>Recorders</u>	Leila McAdam					<u>Permits</u>		
38-4-0693	Stockton Rifle Range 2	AGD	56	388034	6361743	Open site	Valid	Artefact : 22		98719
	<u>Contact</u>	<u>Recorders</u>	Leila McAdam					<u>Permits</u>		
38-4-0773	Fern Bay PAD - Rankin RD	AGD	56	387200	6361900	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) : -		102493
	<u>Contact</u>	<u>Recorders</u>	Hilton Naden					<u>Permits</u>	1998,2168,2274,2337	
38-4-0797	Fern Bay PAD	AGD	56	387275	6362250	Open site	Valid	Artefact : -, Shell : -		102493
	<u>Contact</u> T Russell	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>	2046	
38-4-0895	Fern Bay Complex	AGD	56	387000	6362000	Open site	Partially Destroyed	Shell : -, Artefact : -, Aboriginal Ceremony and Dreaming : -, Burial : -		102493
	<u>Contact</u> T Russell	<u>Recorders</u>	Ms.Penny McCardle					<u>Permits</u>	3001	
38-5-0157	Fullerton Site 1;Newcastle Bight;	AGD	56	389930	6362840	Open site	Valid	Shell : -, Artefact : -	Midden,Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Liam Dagg					<u>Permits</u>	845,916	
38-4-1089	Eames avenue midden	AGD	56	386763	6359283	Open site	Valid	Aboriginal Resource and Gathering : 60		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>		
38-4-1090	Eamens Ave stones	AGD	56	386809	6359269	Open site	Valid	Stone Arrangement : 8		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>		
38-4-1091	Eames Ave midden	AGD	56	386763	6359226	Open site	Valid	Shell : 40		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>		
38-4-1092	Eames ave shell	AGD	56	386786	6359239	Open site	Valid	Aboriginal Resource and Gathering : 30		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Fort Wallace

Client Service ID : 225761

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1093	Corroba corroboree ground	AGD	56	386965	6359524	Open site	Valid	Aboriginal Resource and Gathering : 27		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1094	Corrobba Corrobree grounds 1	AGD	56	386965	6359524	Open site	Valid	Aboriginal Ceremony and Dreaming : 1		102493
	<u>Contact</u> Mr.Peter Anderson	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1095	Corroba ceremonial grounds	AGD	56	386831	6359408	Open site	Valid	Aboriginal Ceremony and Dreaming : 1		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1096	Corroba 2	AGD	56	386835	6359371	Open site	Valid	Aboriginal Ceremony and Dreaming : 7		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1097	North Stockton	AGD	56	386826	6359419	Open site	Valid	Aboriginal Resource and Gathering : 28		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1098	North Stockton 3	AGD	56	386869	6359452	Open site	Valid	Aboriginal Resource and Gathering : 46		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1099	Charlie Foes	AGD	56	386876	6359524	Open site	Valid	Aboriginal Ceremony and Dreaming : 8		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1100	Charlie Foes 2	AGD	56	386850	6359543	Open site	Valid	Aboriginal Resource and Gathering : 43		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1101	Stockton North 4	AGD	56	386815	6359452	Open site	Valid	Aboriginal Resource and Gathering : 42		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1102	Treatment works1	AGD	56	386897	6360023	Open site	Valid	Aboriginal Resource and Gathering : 17		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1103	Treatment works2	AGD	56	386987	6359967	Open site	Valid	Burial : 1		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1104	Treatment works3	AGD	56	387030	6359965	Open site	Valid	Artefact : 106		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1105	Treatment works 4	AGD	56	387030	6359956	Open site	Valid	Aboriginal Resource and Gathering : 200		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		
38-4-1106	treatment works 5	AGD	56	387082	6359948	Open site	Valid	Artefact : 200		102493
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>		Mr.Leonard (Lennie) Anderson				<u>Permits</u>		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Fort Wallace

Client Service ID : 225761

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1107	Treatment works 6	AGD	56	387069	6359892	Open site	Valid	Artefact : 150		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1108	Stockto Nth TW	AGD	56	387044	6359852	Open site	Valid	Artefact : 150		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1109	Stockton TW 7	AGD	56	387023	6359825	Open site	Valid	Aboriginal Resource and Gathering : 200		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1110	Stockton TW midden	AGD	56	386997	6359778	Open site	Valid	Aboriginal Ceremony and Dreaming : 200		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Peter Anderson				Permits		
38-4-1111	North Stockton Charlie Foe	AGD	56	386974	6359745	Open site	Valid	Aboriginal Resource and Gathering : 300		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1112	Stockton Stones	AGD	56	386977	6359721	Open site	Valid	Aboriginal Resource and Gathering : 300		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1113	Stockton CF	AGD	56	386955	6359688	Open site	Valid	Aboriginal Resource and Gathering : 200		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1114	Stockton twcf	AGD	56	386968	6359652	Open site	Valid	Artefact : 300		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1115	Stockton TW7	AGD	56	386933	6359692	Open site	Valid	Artefact : 150		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1116	Stockton 8	AGD	56	386894	6359673	Open site	Valid	Aboriginal Ceremony and Dreaming : 50		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1117	Stocko 9	AGD	56	386887	6359657	Open site	Valid	Artefact : 70		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1118	Stockton9	AGD	56	386864	6359688	Open site	Valid	Aboriginal Resource and Gathering : 150		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1119	Stockton 10	AGD	56	386864	6359700	Open site	Valid	Aboriginal Resource and Gathering : 200		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1120	Stockton 11	AGD	56	386902	6359737	Open site	Valid	Artefact : 80		102493
	Contact Mr.Leonard (Lennie) Andersor	Recorders		Mr.Leonard (Lennie) Anderson				Permits		
38-4-1121	Stockton12	AGD	56	386929	6359772	Open site	Valid	Aboriginal Resource and Gathering : 300		102493,102568

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Client Service ID : 225761

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1122	Stockton 13	AGD	56	386993	6359826	Open site	Valid	Aboriginal Resource and Gathering : 250		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1123	Stockton 13B	AGD	56	386999	6359876	Open site	Valid	Artefact : 80		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1124	Cemetery/Braid Rd 1	AGD	56	387258	6361824	Open site	Valid	Aboriginal Resource and Gathering : 250		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1125	Cemetery/Braid Rd 2	AGD	56	387334	6361818	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1126	cemetery Harpurs	AGD	56	387334	6361808	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1127	Cemetery Corner	AGD	56	387400	6361805	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1128	Rifle Range 1	AGD	56	387419	6361815	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1129	Rifle Range 2	AGD	56	387424	6361825	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1130	Cols Corner Braid Rd	AGD	56	387420	6361881	Open site	Valid	Burial : 1		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1131	Trans Pit 1	AGD	56	386913	6359829	Open site	Valid	Aboriginal Resource and Gathering : 80		102493,102568
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1132	Trans Pit 2	AGD	56	386882	6359796	Open site	Valid	Artefact : 50		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1133	Trans Pit 3	AGD	56	386853	6359765	Open site	Valid	Aboriginal Resource and Gathering : 150		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1134	Revetted area	AGD	56	386830	6359747	Open site	Valid	Aboriginal Resource and Gathering : 50		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		
38-4-1135	Revetted area 2	AGD	56	386865	6359747	Open site	Valid	Aboriginal Resource and Gathering : 200		102493
	Contact	Mr.Leonard (Lennie) Andersor	Recorders	Mr.Leonard (Lennie) Anderson				Permits		

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38-4-1282	Corrobra Oval 1	GDA	56	386800	6359500	Open site	Valid	Aboriginal Ceremony and Dreaming : -, Shell : -		102015,10249 3
	<u>Contact</u>								<u>Permits</u>	3345
		<u>Recorders</u>	Ms.Penny McCardle							

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Teralba NSW 2284

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Ph. 1300 793 267

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