



Anna Bay Sand Quarry

4226 Nelson Bay Road, Anna Bay, NSW

Aboriginal Cultural Heritage Assessment Report

Prepared for Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd
Port Stephens Local Government Area
Consultancy: Niche Environment and Heritage

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Cover photograph: Anna Bay Sand Quarry (Source: Niche 2018)

Executive summary

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd, to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to facilitate the development of the Anna Bay Sand Quarry at 4226 Nelson Bay Road, Anna Bay (the Project), a designated development, under Part 4 of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act). As a designated development, the Secretary's Environmental Assessment Requirements (SEAR 1172) require that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage be undertaken.

The assessment included background archaeological and historical investigation, ongoing consultation with the Registered Aboriginal Parties and an archaeological survey that included representatives from Mur-roo-ma Incorporated, Worimi Traditional Owners Indigenous Corporation, Karuah Indigenous Corporation, Worimi Local Aboriginal Land Council, and Nur-Run-Gee Pty Ltd.

During the survey, it was determined that the southern section of the Subject Area contains an area of high sensitivity within a sand dune system, which may be a continuation of a previously recorded Aboriginal cultural heritage site within the Subject Area, AHIMS ID#38-5-032. The area of sensitivity was named Anna Bay PAD-1 (AHIMS ID#38-5-0347) and would be impacted by the proposed activity.

Subsequently, an Aboriginal Heritage Impact Permit (AHIP) was applied for in April 2019 under s.90 of the *National Parks and Wildlife Act 1974* to allow harm to Aboriginal objects by test excavation at the Anna Bay PAD-1 (AHIMS ID#38-5-0347) Aboriginal cultural heritage site. The AHIP (C0004974) was issued on 8 July 2019.

The test excavation was carried out over three days from 23 to 25 July 2019. Sixteen test pits, measuring 50 cm x 50 cm, were excavated. No Aboriginal objects were identified. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site. An Aboriginal Site Impact Recording Form (ASIRF) was submitted to BCD advising of the updated status "Not a Site".

No further investigation or impact assessment is required. Works may proceed with caution without an Aboriginal Heritage Impact Permit. Based on community consultation with the RAPs for the Project, and with the completion of this ACHA by Niche, the following recommendations have been made:

Recommendation One

- All workers should be inducted into the Subject Area so they are made aware of their obligations under the *National Parks and Wildlife Act 1974* and any conditions of any future consent with respect to Aboriginal heritage prior and during and after construction activities.

Recommendation Two

- In the unlikely event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately.
- A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site.
- In consultation with the RAPs for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material.
- If the material is an Aboriginal object, the Proponent will notify:

- the BCD's Enviroline on 131 555; and
 - representatives of the RAPs.
- Facilitate, in co-operation with the appropriate authorities and the RAPs:
- The recording and assessment of the finds
- Compliance with any legal requirements and BCD directions
- The development and implementation of appropriate management strategies based on an assessment of significance of the finds.
- Recommencement of ground disturbance works may only resume once legal requirements are fulfilled

Recommendation Three

- All workers should be inducted into the Subject Area so they are made aware of their obligations under the *National Parks and Wildlife Act 1974* and any conditions of consent prior and during and after construction activities
- In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately.
- The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm.
- The NSW Police must be contacted immediately.
- No further action is to be undertaken until the NSW Police provide written notification to the Proponent.
- If the skeletal remains are identified as Aboriginal, The Proponent or their agent must contact:
 - the BCD's Enviroline on 131 555; and
 - representatives of the RAPs.
- No works are to continue until the BCD provides written notification to the proponent or their Agent.
- An Aboriginal Heritage Impact Permit may be required to manage human remains.

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Glossary and abbreviations

Term	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present day Aboriginal communities.
ACHA	Aboriginal Cultural Heritage Assessment
Aboriginal object(s)	The legal definition for material Aboriginal cultural heritage under the NSW <i>National Parks and Wildlife Act 1974</i> .
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Project.
AHIP	Aboriginal Heritage Impact Permit
Archaeology	The scientific study of material traces of human history, particularly the relics and cultural remains of past human activities
Archaeological deposit	A layer of soil material containing archaeological objects and/or human remains
Archaeological investigation	The process of assessing the archaeological potential of an impact area by a qualified archaeologist.
Archaeological site	An area that contains surface or sub-surface material evidence of past human activity in which material evidence (artefacts) of past activity is preserved
Artefact	An object made by human agency (e.g. stone artefacts).
Assemblage	A group of artefacts found in close association with one another Any group of items designated for analysis that exist in spatial and/or vertical context – without any assumptions of chronological or spatial relatedness
Avoidance	A management strategy which protects Aboriginal cultural heritage sites within an impact area by avoiding them totally in development.
BCD	Biodiversity and Conservation Division of the Department of Planning, Industry and Environment (DPIE), previously known as the Office of Environment and Heritage (OEH)
Catchment	The area from which a surface watercourse or a groundwater system derives its water.
Code of Practice	<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
DECCW	The Department of Conservation, Climate Change and Water, now the Office of Environment and Heritage
Development	The processes involved in preparing the Subject Area for subdivision and associated road infrastructure, including levelling and compacting for future housing constructing, and cutting and compacting areas for road infrastructure.
DA	Development Application
DPIE	Department of Planning, Industry and Environment
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i>
Flake	A piece of stone detached from a core, displaying a bulb of percussion and striking platform.
Harm	With regard to Aboriginal objects this has the same meaning as the NSW <i>National Parks and Wildlife Act 1974</i> .
HMP	Heritage Management Plan
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.

Term	Definition
Impact area	An area that requires archaeological investigation and management assessment.
In situ	Latin words meaning 'on the spot, undisturbed'.
Isolated artefact / find	A single artefact found in an isolated context.
Landscape character	The aggregate of built, natural and cultural aspects that make up an area and provide a sense of place. Includes all aspects of a tract of land – built, planted and natural topographical and ecological features.
Land unit	An area of common landform, and frequently with common geology, soils and vegetation types, occurring repeatedly at similar points in the landscape over a defined region. It is a constituent part of a land system.
Landform	Any one of the various features that make up the surface of the earth.
LEP	Local Environmental Plan
Management plans	Conservation plans which identify short and long term management strategies for all known Aboriginal cultural heritage site s recorded within a (usually approved) Subject Area.
Methodology	The procedures used to undertake an archaeological investigation.
Mitigation	To address the problem of conflict between land use and Aboriginal cultural heritage site conservation.
NPW Act	National Parks and Wildlife Act 1974
NPW Regulation	National Parks and Wildlife Regulation 2009
OEH	Office of Environment and Heritage
Open camp site	An archaeological Aboriginal cultural heritage site situated within an open space (e.g. archaeological material located on a creek bank, in a forest, on a hill, etc.).
PAD	Potential Archaeological Deposit. A location considered to have a potential for subsurface archaeological material.
Site recording	The systematic process of collecting archaeological data for an archaeological investigation.
Aboriginal cultural heritage site	A place where past human activity is identifiable.
Spit	A unit of archaeological excavation with an arbitrary assigned measurement of depth and extent.
Survey coverage	A graphic and statistical representation of how much of an impact area was actually surveyed and therefore assessed.
PSC	Port Stephens Council

1. Introduction

Hay Enterprises NSW Pty Ltd (the Proponent) intends to establish the Anna Bay Sand Quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period (the Project). The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380) (the Subject Area) within the coastal, semi-rural locality of Anna Bay. It is situated 12 km southwest of Nelson Bay and 25 km northeast of Newcastle Airport in the Port Stephens region of NSW, in the Parish of Tomaree, in the County of Gloucester, in the Port Stephens Council Local Government Area (LGA) (Figure 1, Figure 2).

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd to produce an Aboriginal Cultural Heritage Assessment Report (ACHAR) in accordance with the following guidelines:

- *Aboriginal cultural heritage consultation requirements for proponents 2010* (Department of Environment, Climate Change and Water, 2010)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment, Climate Change and Water, 2010) (Hereafter referred to as the Code of Practice)
- *Guide to Investigating assessing and reporting Aboriginal Cultural heritage in NSW* (Office of Environment and Heritage, 2011)
- *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants* (Office of Environment and Heritage, 2011)

1.1 The proponent and Subject Area

The Proponent intends to establish the Anna Bay Sand Quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period (the Project). The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 in Deposited Plan 1191380) within the coastal, semi-rural locality of Anna Bay, 12 km south west of Nelson Bay and 25 km north east of Newcastle Airport. The Subject Area is situated within the Port Stephens region of NSW, in the Parish of Tomaree, in the County of Gloucester, and in the Port Stephens Council Local Government Area (Figure 1, Figure 2).

1.2 The proposed development

The main components of the development proposal are depicted in Figure 3 and will be:

- The extraction of sand dune to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.

This work will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

Following the removal of vegetation along the northern face of the dunes within the Subject Area, the aeolian sand is now able to encroach upon the transmission line easement. The emergency extraction of

sand from beneath the transmission lines is evidence of the danger this can pose. The quarrying of sand from the Subject Area will assist with keeping the dunes out of the transmission easement

1.3 Statutory context

The proposed Anna Bay Sand Quarry will be assessed as a Designated Development as per Schedule 3 subclauses 19(1) (c) (iii) and 19(1) (c) (VI) of the *NSW Environmental Planning and Assessment Act, 1979* (EP&A Act) and is being considered by Port Stephens Council under Part 4 of the EP&A Act. Secretary's Environmental Assessment Requirements (SEARs) (SEAR #1172) were issued on 23 October 2017 for the project and required that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological) should be conducted. This included evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage. This cultural heritage assessment was undertaken to inform an Environmental Impact Statement (EIS).

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty on behalf of Hay Enterprises NSW Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform the EIS for the Project. Niche has prepared the ACHA in accordance with the following legislation, regulation and guidelines:

- *National Parks and Wildlife Act 1974* ('NPW Act')
- *National Parks and Wildlife Regulation 2009* ('NPW Regulation')
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water NSW, 2010) ('Consultation Requirements')
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water NSW, 2010)
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (OEH)
- *The Burra Charter* (The Australia ICOMOS charter for places of cultural significance)

1.4 Objectives

The assessment requirements and objectives for the Aboriginal Cultural Heritage Assessment are provided in the Table below.

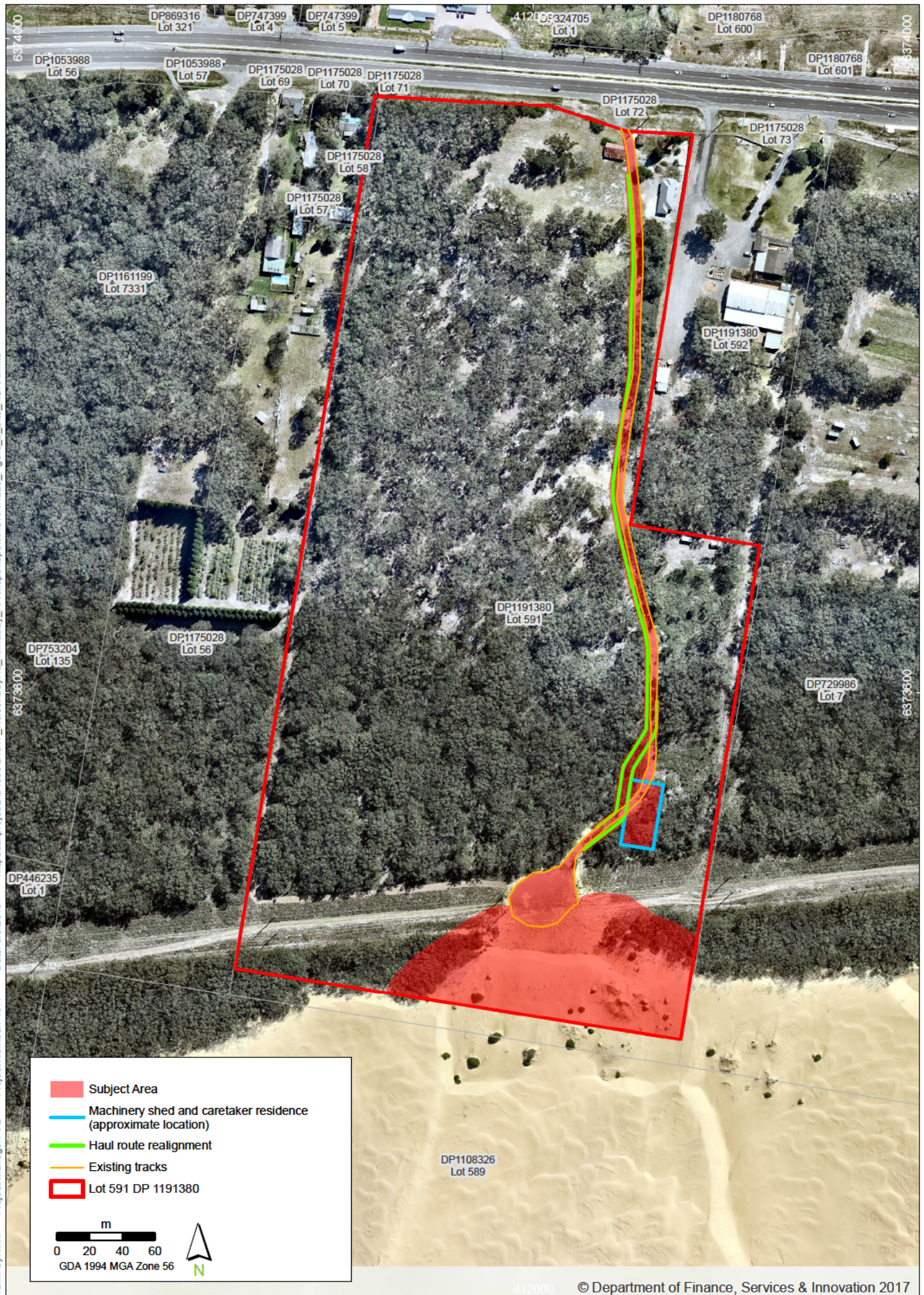
Table 1: Assessment requirements and objectives

Objectives:	Addressed in:
<ul style="list-style-type: none">• Identify whether Aboriginal objects could be present within the Subject Area	Appendix A
<ul style="list-style-type: none">• Undertake further investigation within areas identified as having potential high sensitivity	Appendix A
<ul style="list-style-type: none">• Provide a description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed activity	Section 2
<ul style="list-style-type: none">• Provide a description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, that exist across the whole area that will be affected by the proposed activity and the significance of these values for the Aboriginal people who have a cultural association with the land	Section 5, Section 6

Objectives:	Addressed in:
<ul style="list-style-type: none"> • Demonstrate how the requirements for consultation with Aboriginal people have been met (as specified in clause 80C of the NPW Regulation) 	Section 3, Appendix C
<ul style="list-style-type: none"> • Present the views of those Aboriginal people regarding the likely impact of the proposed activity on their cultural heritage (if any submissions have been received as a part of the consultation requirements, the report must include a copy of each submission and response) 	Section 3, Appendix C
<ul style="list-style-type: none"> • Provide an assessment actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified 	Section 6
<ul style="list-style-type: none"> • Provide any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places and any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise) harm. 	Section 7, Section 8

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2. Description of the Area

2.1 Project Location

The Proponent intends to establish the Anna Bay Sand Quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380) within the coastal, semi-rural locality of Anna Bay, 12 km south west of Nelson Bay and 25 km north east of Newcastle Airport. It is situated within the Port Stephens region of NSW, in the Parish of Tomaree, in the County of Gloucester, and in the Port Stephens Council Local Government Area (Figure 1, Figure 2).

2.2 Description of Aboriginal objects within the Subject Area

2.2.1 Aboriginal Objects

An extensive Aboriginal Heritage Information Management System (AHIMS) search was conducted on 18 January 2018 (AHIMS Client ID: 322781) centred on the Subject Area (Figure 4, Attachment 2). Background research and a cultural heritage and archaeological survey were also completed over the Subject Area, the results of which are presented in more detail in Section 3.4.3.

One previously recorded Aboriginal cultural heritage site was identified within the Subject Area, known as NBRd 4 (AHIMS ID# 3850320). This Aboriginal cultural heritage site comprises shell fragments on the ground surface, with the high possibility of the presence of more shell in the area as part of an extensive shell midden. The registered site card for this Aboriginal cultural heritage site is attached at Appendix C.

Thirteen (13) additional Aboriginal cultural heritage sites were located outside the Subject Area within a 1 km distance, including surface stone artefact scatters, shell middens with stone artefacts, and potential archaeological deposits (PADs) (Figure 3). The AHIMS sites are summarised in Table 2.

Table 2: Previously recorded AHIMS sites within 1 km of the Subject Area

AHIMS No.	Site Features
38-5-0121	Artefacts and shell
38-5-0198	Artefact
38-5-0223	Artefact and shell
38-5-0250	Artefacts and shell
38-5-0320	Shell
38-5-0321	Shell
38-5-0319	Shell
38-5-0312	Artefact
38-5-0310	Artefact and shell
38-5-0311	Potential Archaeological Deposit (PAD)
38-5-0327	Artefact
38-5-0324	Potential Archaeological Deposit (PAD)
38-5-0325	Potential Archaeological Deposit (PAD)
38-5-0331	Artefact

The frequencies of Aboriginal cultural heritage site types within the search area are consistent with regional trends identified during previous studies within close proximity to the current assessment (for example (McCardle Cultural Heritage, 2016; McCardle Cultural Heritage Pty Limited, 2015). Aboriginal cultural heritage sites are variable distances from permanent water sources throughout the AHIMS search area, with the majority located approximately 1 km from the ocean and approximately 2.5 km from Tilligerry Creek.

2.2.2 Aboriginal cultural heritage sites within the Subject Area

The previously recorded Aboriginal cultural heritage site, NBRd 4 (AHIMS ID#38-5-0320), was relocated in the northern part of the property during the site inspection. The Aboriginal cultural heritage site will not be impacted by the proposed haul road, as the section in close vicinity to the NBRd 4 (AHIMS ID#38-5-0320) has been already built and there are no significant modifications proposed for this road.

During the site survey, one area of archaeological potential was identified within the Subject Area — Anna Bay PAD 1 (AHIMS ID#38-5-0347) (Table 3). This was defined as the immediate vicinity and foreground of the sand dunes in the southern section of the property (Figure 3). An archaeological test excavation was completed over the Aboriginal cultural heritage site (see Appendix A). No Aboriginal objects were identified. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site and an Aboriginal Site Impact Recording Form (ASIRF) was submitted to BCD advising of the updated status “Not a Site”.

Table 3: Details of the previously and newly recorded Aboriginal cultural heritage sites within the Subject Area

Site name and number	Site Features	Status	Easting	Northing
NBRd 4 (AHIMS ID #3850320)	Shell, Potential Archaeological Deposit	Valid	412046	6373942
Anna Bay PAD 1 (AHIMS ID 38-5-0347)	Potential Archaeological Deposit	Not a site	412042	6373398

2.2.3 Other heritage registers

Searches of numerous heritage databases, as well as the Port Stephens Local Environmental Plan 2013 (LEP) and Port Stephens Development Control Plan (DCP), were undertaken by Niche on 31 January 2018.

No listed heritage items are located within the Subject Area (Table 4); however, a number of heritage items are located nearby (Figure 4). Further consideration of historic heritage items is provided in a separate Heritage Impact Assessment (Niche Environment and Heritage, 2018a).

Table 4: Heritage registers search results

Heritage Registers	Heritage Items in the Subject Area	Nearby Heritage Items
World Heritage List	None	None
National Heritage List	None	None
Commonwealth Heritage List	None	None
State Heritage Register	None	Birubi Point Aboriginal Place
State Heritage Inventory	None	Birubi Point Cemetery (Item ID:12)
Local Environmental Plans	None	Stockton Beach Dune System (Item ID: 134)

Heritage Registers	Heritage Items in the Subject Area	Nearby Heritage Items
Development Control Plans	None	DCP Controls apply to the above heritage items.

2.2.3.1 Birubi Aboriginal Place

Birubi Point, which is located 1.4 km the east of the Subject Area, is a registered Aboriginal Place due to its continued association with the Worimi people. It was registered as an Aboriginal Place 5062849 (file number 07/18962 & DOC 07/50249 & DOC1) under the NPW Act in 2007. It is a traditional Aboriginal ceremonial and burial site, which contains extensive archaeological material considered important to the teaching of the current and future generations about the local Aboriginal culture. This site is connected with the Worimi Conservation Lands, which are a joint management of a number of National Parks and Conservation Areas. This place provides valuable information regarding the archaeological potential of the Subject Area due to its proximity and context.

2.2.3.2 Birubi Point Cemetery

Birubi Point Cemetery is located approximately 2.3 km from the Subject Area. Birubi Point Cemetery was in use between 1876 and 1996 and contains the graves of early settlers to the area, as well as shipwrecked persons, some of who were unidentified. The cemetery is located adjacent to the original lot of land settled by the Blanch family in the 1950s (Plate 1). The point on which the cemetery is located was known as Cemetery Point, until the name was officially changed in 1976; it is now located within the lands of the Birubi Point Aboriginal Place. The first internment in 1876 was that of Lucy Blanch who was an Anna Bay pioneer. The cemetery contains a layout plan on a plaque and includes a list of all the known burials within the cemetery, numbering 88 internments.

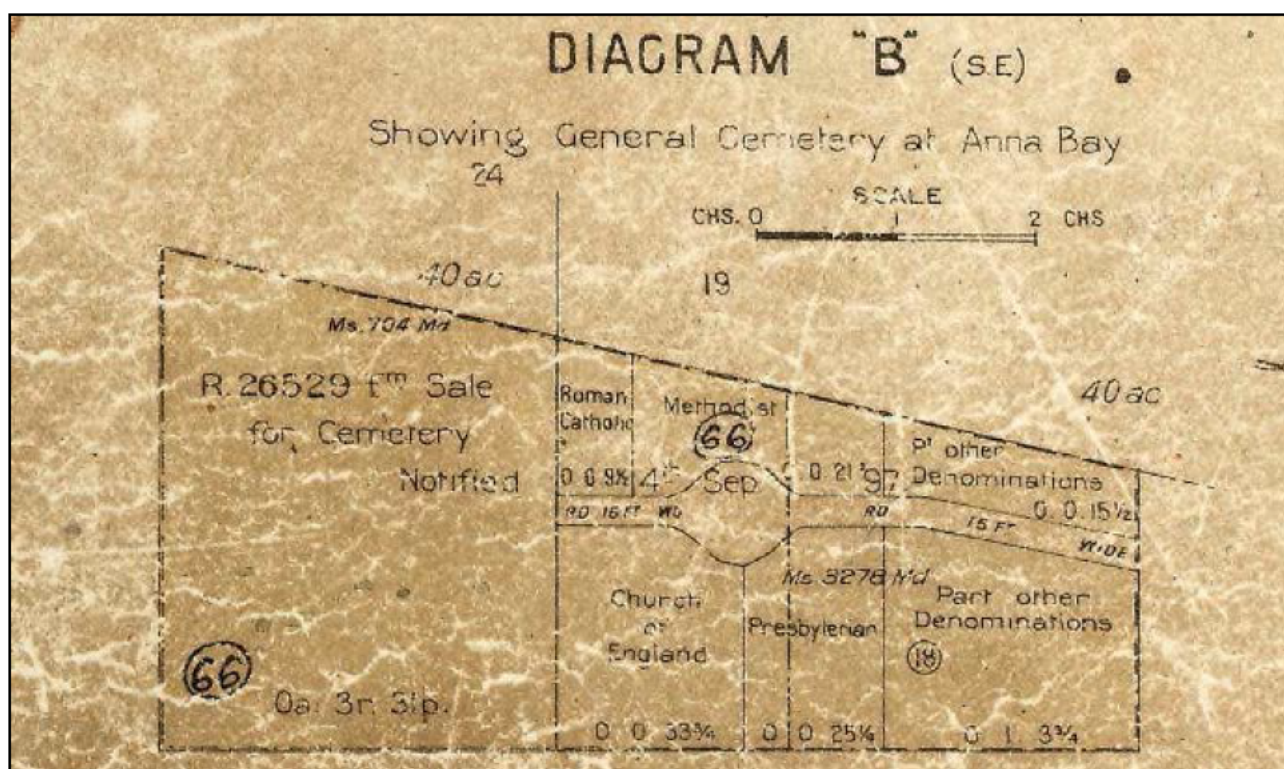


Plate 1: Insert from the 1967 Tomaree Parish map showing the layout of the Birubi Cemetery.

2.2.3.3 Stockton Beach Dune System

Stockton Beach dune system is the largest moving coastal land mass in the southern hemisphere, and stretches from Stockton to Anna Bay covering a distance of approximately 25 kilometres in length. The dunes are moving inland at a rate of about one metre per year, following their destabilisation in the nineteenth century by severe storms and cattle grazing. According to the Register of the National Estate, the entire bight (stretching from the Hunter River Estuary to Birubi Point in the north) is of significance for its unique natural ecosystem (RNE Place ID: 19510).

As a result of the shifting sand sheet, Aboriginal midden sites, burials and education sites important to the Worimi peoples, as well as World War II fortifications, are periodically covered and revealed by the moving sands. These sand dunes are directly adjacent to the Subject Area, and are encroaching northwards from the southern boundary of the Subject Area. Their dynamic nature means that archaeological material may exist within the Subject Area subsurface. The defence lines that were constructed on Stockton Beach during World War II were part of the Northern Defence Line, which was a part of the nationwide response to the Japanese attacks on Darwin and submarines entering Sydney and Newcastle harbours (OEH 2015:27). The defensive tank traps were set up along the entire line of the beach, and infantry-manned heavy and light artillery stations were established at the southern end of the beach at Fern Bay. Tank traps which were removed from their emplacements now form the boundaries of an overflow car park just below Birubi Point at the northern end of the beach. The northern end of the beach, located south of Birubi Point was used as a bombing and military training location during World War II (OEH 2015:27). The weapons range, which was established during the war with an area approximately totalling 400 hectares, including an area directly to the south of the Subject Area. The area continued to be used as a RAAF weapons range until at about 1965 (Plate 2). Unexploded ordinance is still recovered from the sand dunes and are subject to protocols from the NSW Police and Department of Defence (OEH 2015:27).

Located within the central section of the beach, behind the fore dune, are a group of eleven corrugated iron structures with gable or skillion roofs. They have been named “Tin City” by the locals. The original huts date to the 1940s and 50s and were constructed for use by recreational fishermen in the area. The majority of the huts that are currently standing were constructed in the 1970s and 1980s, with the most recent hut constructed in 1992. None of the original huts from the 1940s and 1950s are still standing, but those that remain continue to be used by fishermen (OEH 2015:28). The remains of destroyed huts on the southern and central areas of the beach remain under the shifting sand dune, subject to exposure by local sand drift.

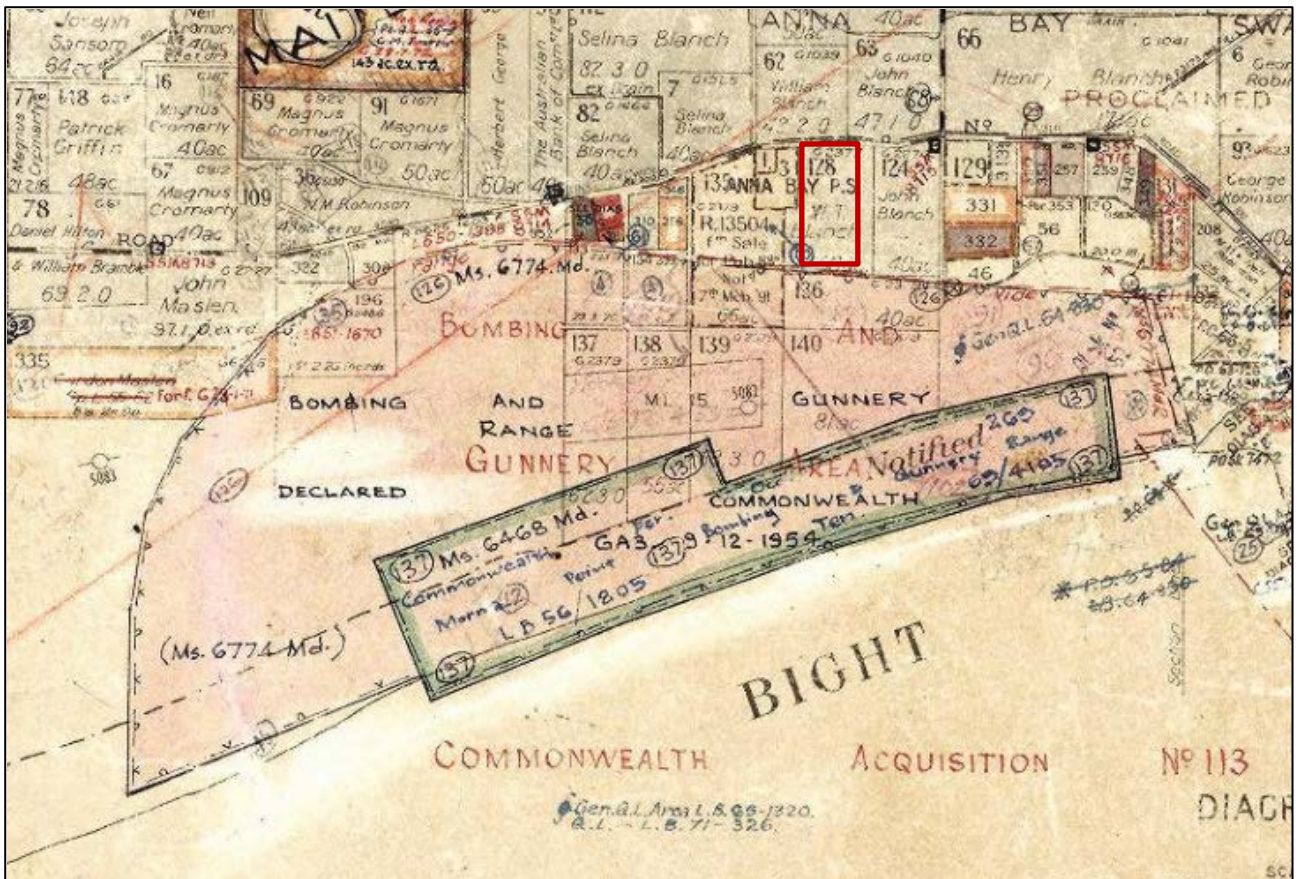


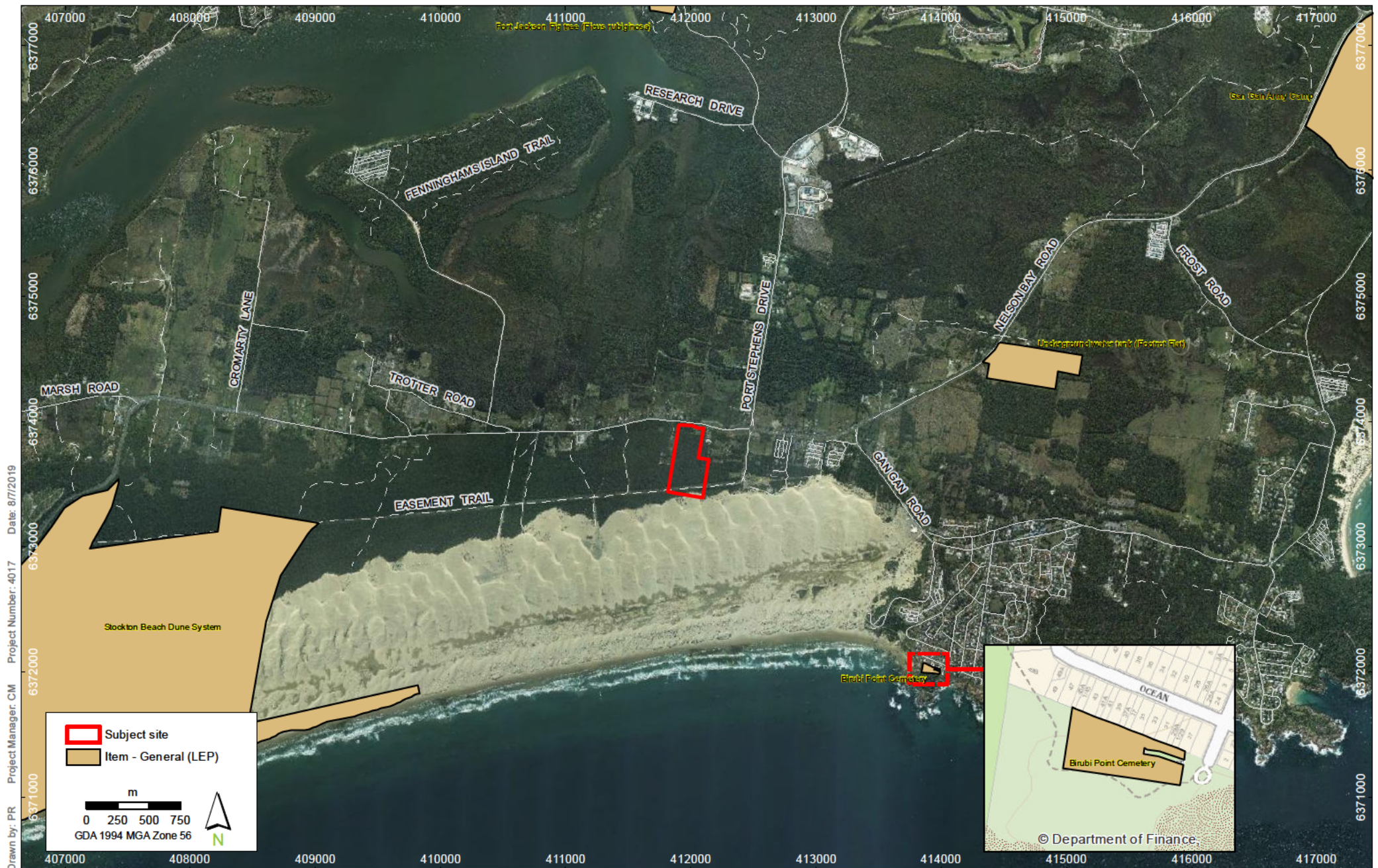
Plate 2: 1967 Tomaree parish map outlining "bombing and gunnery range" abutting onto the Subject Area (indicative location shown in red). (Source: LPI)



Aboriginal cultural heritage sites within proximity of the Subject Area
(Source: Tattersall Lander Pty Ltd, OEH and Niche)
4226 Nelson Bay Rd, Anna Bay, Sand Quarry – ACHA

FIGURE 3

Imagery: (c) Nearmap 2018-09-09



2.3 Environmental Context

2.3.1 Topography, geology and soils

The Subject Area is situated within a coastal region zone, situated in the outer Holocene dunes and located east of the Newcastle Bight sand barrier system with an extremely low local relief of less than 9 m (Matthei, 1995). The conventional coastal formation model establishes that the inner Pleistocene barrier was deposited during the last Inter Glacial period of high sea level (c. 120,000 years before present [BP]) and was later modified by erosion. After several sea level fluctuations the sea level rose (c. 18,000 BP) to form parallel sets of beach ridges in what is now the outer Holocene barrier (McCardle Cultural Heritage Pty Limited, 2015; Robson et al., 1993).

The Subject Area is located on Quaternary gravel, sand, silt, clay, and Waterloo rock, fresh and marine deposits (Newcastle Geological Sheet, 1966), lying in the outer Holocene barrier and sand dunes. These dunes are stable and have the potential to contain stratified deposits dating back to 4,500 BP (Dean-Jones, 1990).

Archaeological deposits may remain intact in subsurface areas as evidenced by a salvage excavation undertaken within 120 m of the Subject Area (McCardle Cultural Heritage Pty Limited, 2015).

The Shoal Bay soil landscape in the northern section of the Subject Area is characterised by gently inclined, well-drained Pleistocene sand sheets to rolling very low dunes. Slope gradients generally <5%, but on slopes of rolling dunes up to 15%. Local relief generally <5 m and elevation <15 m. Dunes are usually well drained. Soils are deep (>300 cm), well-drained Podzols (OEH 2019)

The Hawks Nest soli landscape in the southern section of the Subject Area is characterised by stable, gently undulating, Holocene sand sheets and beach ridges. Local relief <3 m, slope gradients <10%, elevation 3–12 m. Generally well drained apart from isolated low lying poorly drained swales. Vegetation typically comprises uncleared and extensively cleared dry shrubland, woodland and tall open-forest. Soils are deep (>300 cm), well-drained Podzols on dunes with deep (>300 cm) minor Acid Peats/ Siliceous Sands in swampy swales (OEH 2019).

2.3.2 Hydrology

There are no permanent fresh water sources within the Subject Area (see Figure 5). Based on climatic analysis, the investigation area will typically experience comparatively reliable rainfalls under normal conditions. The nearest permanent fresh water sources are available in the surrounding locality at Bobs Farm Creek (and swamp) (2.4 km to the northwest) and Fenninghams Island Creek (2.1 km to the northwest); however, ephemeral drainage lines, which were dry at the time of survey, were observed within the Subject Area. The southern boundary of the Subject Area is 1200 m north of the current coastline.

2.3.3 Ecology

A range of faunal populations including kangaroo, wallaby, goanna, snakes and a variety of birds is present in the Subject Area, with a wider variety of resources available in the nearby swamplands and on the beach front. The wide variety of available resources would have allowed for sustained occupation of the area. The most suitable area for Aboriginal occupation would have been the northern end of the Subject Area. This is due to its nearness to the inter barrier depression (within 60 m) that would have provided easy access to both fresh water, flora, fauna and estuary and marine resources.

2.3.4 Past land use and disturbance

The historic land use in the Subject Area is summarised here.

The degree of past land use and disturbance within the Subject Area is minimal. The Subject Area is located within a land grant belonging to a W. T. Blanch, who is likely John and Lucy Blanch's son William, born in 1863. The Blanch family owned much of the land within the Anna Bay area in the earliest days of European settlement, from at least the 1850s (Anna Bay Public School, 2014). It is unknown from documentary evidence what activities took place within the Subject Area, but it has remained predominately uncleared native vegetation until recent times.

Historical aerial imagery from 1963 (see Figure 6) shows two garage buildings and a gabled roof building present fronting the road on 4226 Nelson Bay Road. At this time, directly to the west of the building group, within the Subject Area, was a cleared and cultivated field. There were long, potentially farm-related, structures running east-west across the property, extending approximately to the house and barns fronting the road. An unformed, cleared track through the native vegetation, likely relating to the transmission line, ran near the southern boundary of the Subject Area at this time; it was most likely developed following the cessation of the RAAF activities to the south of the Subject Area.

Aerial imagery shows that by 1985, the east-west farm building located to the south of the main domestic building within the Subject Area has been demolished and the majority of the cleared farm paddock to the west of the domestic building has regrown vegetation. It should also be noted that in this imagery, the sand has encroached towards the transmission line from the south, where it was not visible before. The transmission line has also been cleared and a gravel road surface added.

In imagery from 2015, Nelson Bay Road has been widened and straightened. The original residential structure and swimming pool, which once existed in this roadside area, has been demolished during the resumption process. The remaining three garage buildings are now fronting the road. The current access track exists in the 2015 imagery.

During the site inspection, it was established that the Subject Area has been cleared at its northern extent. Current disturbances include ancillary structures, an access road, and clearing for a transmission line easement. The extent of clearing and disturbance reduces the likelihood for intact Aboriginal cultural heritage sites or objects to be preserved in this area.

2.4 Past Aboriginal land use

Past Aboriginal land use of the Subject Area can be re-traced using previously recorded archaeological resources, historical observations of early settlers and surveyors, and contemporary comments from Aboriginal people (though the inherent bias present in historical European observations must be recognised). While a detailed review of previously recorded archaeological resources in the area will be provided in the Archaeological Report, after test excavation are completed, it is succinctly summarised here.

The reconstruction of past land use by Aboriginal people in the Port Stephens area and the structure of their society is an extremely difficult task and, apart from the archaeological record, relies on documents written by non-Aboriginal people, including early surveyors, military officers and settlers. The inherent bias of the viewpoint, class and culture, and lack of exposure or understanding to Aboriginal culture of those people inevitably affected their observation and conclusions about the Aboriginal way of life. Historical accounts also make comment on a culture already disrupted by the European settlement and the effects of colonisation. The gaps in oral and written histories for the area in the early years of European occupation

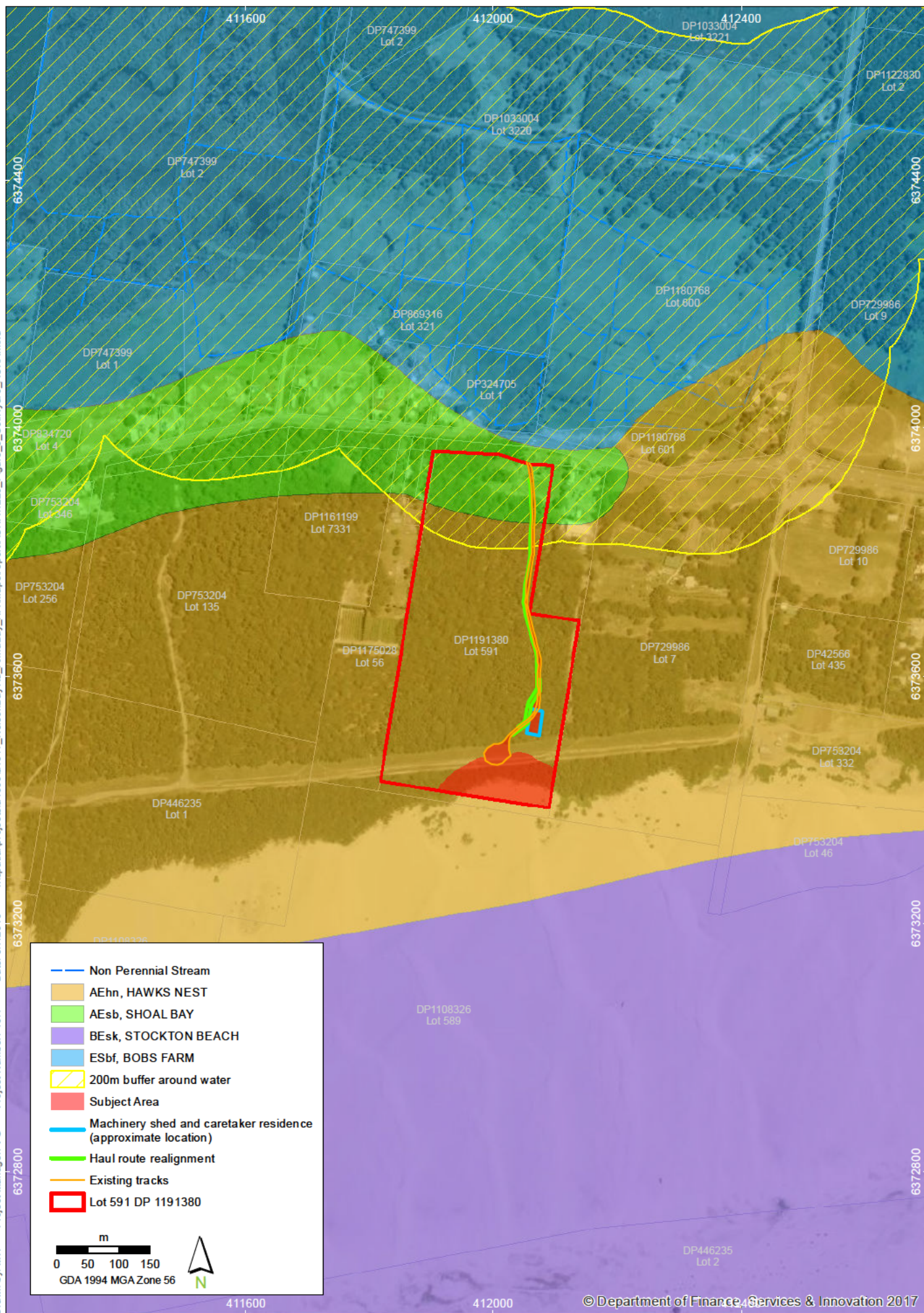
lead to a patchwork—at best—account of life before European arrival. It is also important to note that the behaviours and site activities that are recorded during the early years of European settlement do not typify the Aboriginal way of life going back millennia. One way to look at Aboriginal life with a longer view is to examine archaeological evidence, but this view does not give an indication of the changes in belief systems, social organisation or language that can occur over the long swathes of time that are encompassed by the archaeological record.

Traditionally, the Worimi people used the beaches to travel between Nelson Bay to the north and Stockton to the south, with Tilligerry Creek used as a route to the surrounding swamplands, creek lines and western areas. The area known as Stockton Bight has a special cultural significance to the Worimi people as it retains a large amount of cultural history. The land and waters have been used for thousands of years for hunting and gathering foods, fishing and the continuation of cultural, spiritual and sacred activities. Aboriginal cultural connections have always been strong in this area and continue today, as it is still a well-utilised fishing and recreational area used by today's Worimi people (McCardle Cultural Heritage Pty Limited, 2015).

Approximately 4.8% (3,325 people) of the population within the Port Stephens LGA identify as Aboriginal and/or Torres Strait Islander according to census data (Australian Bureau of Statistics).

Past Aboriginal land use is demonstrated in the Subject Area through the presence of the shell midden NBRd 4 (AHIMS ID# 3850320). Activities that are likely to have occurred within the Subject Area include:

- Hunting and gathering of foods (shellfish and other marine resources).
- Intermittent camping and occupation.



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Soil Landscapes and hydrology within proximity of the Subject Area
(Source: Tattersall Lander Pty Ltd, LPI and Niche)
4226 Nelson Bay Rd, Anna Bay, Sand Quarry – ACHA

T:\spatial\projects\4000\4017_NelsonBayRd_AnnaBay_HA Map\report\ACHA\4226_Figure_8_HistAP.mxd

Drawn by: GT Project Manager: VG Date: 8/7/2019 Project Number: 4017



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

niche
Environment and Heritage

Historical aerial photography (Source: Tattersall Lander Pty Ltd, LPI and Niche)
4226 Nelson Bay Rd, Anna Bay, Sand Quarry – ACHA

FIGURE 6

Imagery: (c) LPI 1966-2009, NearMap 2010-2018

3. The Consultation Process

In administering its statutory functions under Part 6 of the NPW Act, OEH requires that proponents consult with Aboriginal people about the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within any given development area, in accordance with Clause 80c of *NSW National Parks and Wildlife Regulation 2009* ('the Regulation').

The OEH maintains that the objective of consultation with Aboriginal communities about the cultural heritage values of Aboriginal objects and places is to ensure that Aboriginal people have the opportunity to improve ACHA outcomes (DECCW 2010a). This is ensured by:

- providing relevant information about the cultural significance and values of Aboriginal objects and /or places,
- informing the design of the methodology to assess cultural and significance of Aboriginal objects and/or places,
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal objects and/or places within the proposed Subject Area, and
- commenting on draft assessment reports before they are submitted by the Proponent to the OEH.

Consultation in the form outlined in the Consultation Requirements (DECCW 2010a) is a formal requirement in cases where a proponent is aware that their development activity has the potential to harm Aboriginal objects or places. The OEH also recommends that these requirements be used when the certainty of harm is not yet established but a proponent has, through some formal development mechanism, been required to undertake a cultural heritage assessment to establish the potential harm their proposal may have on Aboriginal objects and/or places.

The Consultation Requirements outline a four-stage consultation process that includes detailed step-by-step guidance as to the aim of the stage, how it should be proceed, and what actions are necessary for it to be considered successfully completed. The four stages are:

- Stage 1 – Notification of project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about the cultural significance of the project area.
- Stage 4 – Review of the draft Aboriginal Cultural Heritage Assessment report.

The Consultation Requirements also outline the roles and responsibilities of the OEH, Registered Aboriginal Parties (RAPs) including Local and State Aboriginal Land Councils, and proponents throughout the consultation process.

To meet the requirements of consultation it is expected that the Proponent will:

- Bring the RAPs (or their nominated representatives) together and be responsible for ensuring appropriate administration and management of the consultation process.
- Consider the cultural perspectives, views, knowledge and advice of the RAPs involved in the consultation process when they assess cultural significance and work together to develop any heritage management outcomes for Aboriginal object(s) and/or place(s).
- Provide evidence to the OEH of consultation by including information such as cultural perspectives, views, knowledge and advice provided by the RAPs.
- Accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report.

- Provide copies of their final cultural heritage assessment report to the RAPs who have been consulted.

The consultation process undertaken to seek active involvement from appropriate Aboriginal representatives for the project followed the current NSW statutory guidelines – the Consultation Requirements. Section 1.3 of the Consultation Requirements describes the guiding principles of the document, which have been derived directly from the Principles section of the Australian Heritage Commission’s *Ask First: A guide to respecting Indigenous heritage places and values* (Australian Heritage Commission, 2002). Both documents share the aim of creating a system where advice can be sought from the Aboriginal community.

The following sections outline the process and results of the consultation conducted during this assessment to ascertain and reflect the Aboriginal cultural heritage values of the Subject Area. Further detail in regards to the Aboriginal community consultation process is outlined in Appendix B.

3.1 Preliminary investigations

A due diligence assessment was completed over the Subject Area. The due diligence assessment included a field assessment completed by Viki Gordon (Heritage Consultant), Jamie Merrick (Sites Officer Worimi Local Aboriginal Land Council), Lennie Anderson (Nu-Run-Gee Pty. Ltd.) and Rebecca Young (Mur-Roo-Ma Incorporated) on 23rd January 2018. The field assessment was undertaken to determine whether the project design would impact any Aboriginal objects. The due diligence assessment recommended further investigation.

3.2 Stage 1 – Notification of project proposal and registration of interest

3.2.1 Notification of Agencies

Notification was initiated on 24 April 2018 to all relevant organisations named under Section 4.1.2 of the Consultation Requirements. This is done to identify Aboriginal people who may have cultural knowledge relevant to the subject Area and who may have an interest in the proposed project. The list of the contacted organisations is provided in Table 5 and a copy of the notification letter is provided in Appendix B.

Table 5: List of contacted organisations

Name of Organisation	Date of notification sent	Date of response received
Port Stephens Council	24 April 2018	2 May 2018
Local Land Services	24 April 2018	No response received
NSW Office of Environment and Heritage, Hunter Valley	24 April 2018	9 May 2018
National Native Title Tribunal	24 April 2018	26 April 2018
NTS Corp Limited	24 April 2018	26 April 2018
Office of the Registrar, Aboriginal Land Rights Act 1983	24 April 2018	1 May 2018
Worimi Local Aboriginal Land Council	24 April 2018	1 May 2018

3.2.2 Advertisement

In accordance with Section 4.1.3 of the guidelines, a newspaper advertisement was placed in the Bay, Myall Coast, Medowie and Tilligerry, and Raymond Terrace News of the Area on 26 April 2018 with a close date for responses from interested RAPs of 5 pm on the 9 May 2018 (14 days). This was done to provide additional

opportunity for Aboriginal people who may be interested in the project to come forward. A copy of the advertisement is included in Appendix B.

3.2.3 Notification of potential stakeholders

A list of potential cultural knowledge holders was compiled from submissions and information collected during the notification and registration periods. A copy of the contact letter is included in Appendix B. The following organisations and/or individuals were contacted:

- AGA Services
- Birubi Point Cultural Heritage Advisory Panel
- Cacatua Cultural Consultants
- Carol Ridgeway-Bissett
- Crimson Rosie
- Didge Ngunawal Clan
- Divine Diggers Aboriginal Cultural Consultants
- Gomeroi Namoi
- Hunters and Collectors
- Karuah Indigenous Corporation
- Kawul Pty Ltd trading as Wonn1 Sites
- Lakkari NCTG
- Lower Hunter Aboriginal Corporation
- Murra Bidgee Mullangari Aboriginal Corporation
- Mur-Roo-Ma Incorporated
- Nur-Run-Gee Pty Ltd
- Roger Matthews Consultancy
- Traditional Owner
- Wattaka Wonnarua CC Service
- Widescope Indigenous Group
- Wiradjuri Condobolin Corporation Ltd
- Wonnarua Elders Council
- Worimi Conservation Lands Board of Management
- Worimi Local Aboriginal Land Council
- Worimi Traditional Owners Indigenous Corporation

3.2.4 Registered Aboriginal Parties

As a result of the Stage 1 enquiries, the following organisations and/or individuals became RAPs for this project (see Table 6), and a consultation log of all correspondence is included in Appendix B.

Table 6: Registered Aboriginal Parties

Organisation	Contact Name
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll
Divine Diggers Aboriginal Cultural Consultants	Deidre Perkins
Gomeroi Namoi	Steve Talbott
Karuah Indigenous Corporation	David Feeney
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson, Darleen Johnson-Carroll
Mur-Roo-Ma Incorporated	Bec Young
Nur-Run-Gee Pty Ltd	Leonard Anderson
Widescope Indigenous Group	Steven Hickey
Worimi Local Aboriginal Land Council	Andrew Smith
Worimi Traditional Owners Indigenous Corporation	Candy Lee Towers
-	Jamie Merrick

3.2.5 Section 4.1.6 Notification to OEH and LALC

Notification of RAPS to the OEH and Worimi Local Aboriginal Land Council, as per Section 4.1.6 of the Consultation Requirements, was sent on 13 August 2018.

3.3 Stage 2 - Presentation of information about the proposed project

The RAPs were provided with a letter outlining information about the project, and an assessment methodology for the site inspection, in accordance with the Consultation Requirements and the Code of Practice. The project information was provided on 20 August 2018 (see also Section 3.4), with the statutory time frame for commenting on the methodology closing at 5 pm, 18 September 2018.

3.4 Stage 3 – Gathering information about the cultural significance of the Subject Area

3.4.1 Assessment Methodology – Site Inspection

As detailed in Section 3.3, the RAPs were provided with an assessment methodology for the initial site inspection in accordance with the Consultation Requirements and the Code of Practice.

The purpose of the provided documents was to:

- Describe the project, outline the project scope, time frame and proposed works.
- Describe the environment of the Subject Area and information relevant to the ACHA process.
- Provide an opportunity for the RAPs to understand the process and comment on the proposed methodology.
- Set a time frame for providing feedback and comments on the methodology and project information.

The draft methodology for the field survey was submitted to the RAPs on 20 August 2018; the closing date for comments was at 18 September 2018 (28 days). Copies of the cover letter and methodology are included in Appendix B.

A number of RAPs provided feedback on the project information and assessment methodology. Their comments and/or review are outlined in Table 7, and copies of all submissions made are included in Appendix B.

3.4.2 Assessment Methodology – Archaeological Test Excavations

As a result of the site inspection and preliminary investigation, the need for an archaeological test excavation was identified. An archaeological test excavation methodology was developed.

The purpose of the provided documents was to:

- Describe the project, outline the project scope, time frame and proposed works.
- Describe the environment of the Subject Area and information relevant to the ACHA process.
- Provide an opportunity for the RAPs to understand the process and comment on the proposed methodology.
- Set a time frame for providing feedback and comments on the methodology and project information.

The draft methodology for the test excavation was submitted to the RAPs on 08 March 2019; the closing date for comments was at 08 April 2019 (28 days). Copies of the cover letter and methodology are included in Appendix B.

A number of RAPs provided feedback on the project information and assessment methodology. Their comments and/or review are outlined in Table 7, and copies of all submissions made are included in Appendix B.

Table 7: Details of RAPs and feedback from Stages 2 and 3

Registered Aboriginal Party	Stakeholder	Comment made	Response from Niche
Site Inspection Phase			
Murra Bidgee Mullangari	Ryan Johnson	I have read the project information ACHA and methodology for the above project and endorse the recommendations made by Niche. My family and members have a long history in the Anna Bay area, my grandfather resided in Anna Bay for over 10 years.	None required
Mur-Roo-Ma Inc.	Anthony Anderson	<p>Murrooma have read and fully understand the ACHA/Methodology for the proposed Sand Quarry at Anna Bay.</p> <p>Murrooma has completed a due diligence of this proposed project area with Niche – Vicki Gordon previously, we discussed some recommendations whilst onsite. This included a Cultural Heritage Management Plan that is put in place in line with all other Sand Quarries within the Worimi area.</p> <p>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 Port Stephens/Anna Bay region. We are both Traditional Custodians of the Worimi area and are in a position to speak for country.</p> <p>The project area is located close to a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to our ancestors and storylines.</p> <p>We have previously been involved in the extensive salvage (Salvage AHIP excavation at 108 Nelson Bay Road, Bobs Farm to Anna Bay- McCardle Heritage) directly across the road from this proposed development and we believe that the midden material outlined in the AHIMS search (AHIMS ID#38-5-032) may be a continuation of this previous salvaged site.</p>	The information provided by Mr Anthony Anderson has been incorporated into the summary of background information and the significance assessments for the Subject Area. The recommendation for an ACHMP has been discussed further in Section 7

Registered Aboriginal Party	Stakeholder	Comment made	Response from Niche
		<p>We agree with the methodology for the archaeological and cultural heritage survey assessment and Murrooma will be able to discuss cultural values and collection of information further onsite.</p> <p>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 or engagement process.</p>	
Community Services Section Manager-Port Stevens Council on behalf of Birubi Point Cultural Heritage Advisory Panel	Steve Bernasconi	The information will be passed on to the advisory panel.	None required
Didge Ngunawal Clan	Lilly Carroll	DNC agrees to the proposed methodology @ Nelson Bay Rd, Anna Bay. Keep us posted for any further updates	None required
Nur-Run-Gee Pty Ltd	Leonard James Anderson	<p>Wasn't sure if our offices had passed on the information you required?</p> <p>We have read the Methodology agree with its recommendations etc., but would like to discuss some finer points onsite, as persons not engaged on the proposal can and will read any statements and utilize for their own intelligence gathering outside of the Project!</p>	Opportunity for discussions occurred during site survey
Widescope	Steven Hickey	Thank you, I have reviewed and support the Methodology Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3.	None required
Karuah Indigenous Corporation	Dave Feeney	The Project Methodology for 4226 Nelson Bay Road, Anna Bay Aboriginal Cultural Heritage Assessment is all good what I have read.	None required
Worimi Local Aboriginal Land Council	James Merrick	Worimi agrees with the methodology and would like to register our interest in the project please see the attachments	None required
Worimi Traditional Owners Indigenous Corporation	Candy Towers	The subject areas 4226 Nelson Bay Road, Anna Bay NSW, is culturally significant to the Worimi Tribe as this area is located not too far from the shore line. I could identify that the Worimi people would have used	This comment has been incorporated into the Summary and analysis of background information in

Registered Aboriginal Party	Stakeholder	Comment made	Response from Niche
		this area for generations. I have not inspected the area personally but the area does tell me that there is a lot of potential for Aboriginal objects to be present. Also members of Worimi TOIC claim the area to be significant to Worimi people.	Section 4 and the significance assessment in Section 5.

3.4.3 Archaeological Survey

A list of participants is provided in Table 8.

Table 8: Fieldwork attendance: Archaeological survey

Registered Aboriginal Party	Representative	Attendance
Nur-Run-Gee Pty Ltd	Lennie Anderson	11 October 2018
Karuah Indigenous Corporation	Dave Feeney	11 October 2018
Worimi Local Aboriginal Land Council	Jamie Merrick	11 October 2018
Worimi Traditional Owners Indigenous Corporation	Candy Towers	11 October 2018
	Tom Towers	11 October 2018
Mur-Roo-Ma Incorporated	Bec Young	11 October 2018

3.4.4 Archaeological Test Excavation

A list of participants is provided in Table 9.

Table 9: Fieldwork attendance: Archaeological test excavation

Registered Aboriginal Party	Representative	Attendance
Nur-Run-Gee Pty Ltd	Chris Collinson	23–25 July 2019
Karuah Indigenous Corporation	Dave Feeney	23–25 July 2019
Worimi Local Aboriginal Land Council	Brendan Lilley	23–25 July 2019
Worimi Traditional Owners Indigenous Corporation	Luke Knight	23–25 July 2019
Mur-Roo-Ma Incorporated	David Kirk	23–25 July 2019

3.5 Stage 4 – Review of draft cultural heritage assessment reports

A draft of the ACHA report that accompanied the AHIP application for testing was provided to the RAPs for their review and comment on 8 March 2019 in accordance with the Consultation Requirements (DECCW, 2010a). A statutory timeframe of a minimum of 28 days for responses was provided to all RAPs, with a request for comments to be provided by 5 pm 8 April 2019.

The responses in Table 10 detail the comments made by the RAPs, as well as Niche's response, and copies of all submissions made are included in Appendix B.

Following notification of the AHIP on 8 July 2019, a final copy of the ACHA and AHIP was sent to all RAPs in accordance with Section 4.4.5 of the Consultation Requirements (DECCW 2010a).

Following the test excavation, a draft of this ACHA report was provided to the RAPs for their review and comment on 20 August 2019 in accordance with the Consultation Requirements (DECCW, 2010a). A statutory timeframe of a minimum of 28 days for responses was provided to all RAPs, with a request for comments to be provided by 5 pm 17 September 2019.

The responses in Table 11 detail the comments made by the RAPs, as well as Niche's response, and copies of all submissions made are included in Appendix B.

Table 10: Feedback provided during Stage 4 (ACHAR and AHIP)

Registered Aboriginal Party	Stakeholder	Comment made	Response from Niche
Widescope Indigenous Group	Steven Hickey	I have reviewed and support the Anna Bay ACHA and test excavation methodology. Regards Steven Hickey	Thank you for your feedback.
Didge Ngunawal Clan	Paul Boyd	DNC agrees with the methodology for Anna Bay test excavation.	Thank you for your feedback.
Murra Bidgee Mullangari	Ryan Johnson	Hi Morgan, I have read the ACHA and test excavation methodology for the above project, I endorse the recommendations made by Niche, please feel free to contact me if you require further details.	Thank you for your feedback.
Mur-Roo-Ma Inc.	Bec Young	<p>Murrooma Incorporated has read and fully understands the draft Aboriginal Cultural Heritage and Archaeological Assessment from Niche, commissioned by Tattersall Lander for proposed project at Anna Bay.</p> <p>We agree with all aspects of this report and have viewed the draft methodology strategies and proposed test excavation methodology as outlined. Murrooma has previously discussed the importance of this area and significance to our people. We appreciate the use of Murrooma's idea to have a potential cultural heritage management plan in line with all other sand quarries locally and understand this will be discussed further into the assessment framework.</p> <p>Murrooma agrees with the test excavation methodology and agrees with the difficulty of testing the unstable land form/dune system but agree it definitely needs to be tested/sampled, due to the movement of the sand dunes and constantly changing conditions. E.g. there may be a visual site there one day and then with movement of the dune you can return to same area and not be able to see any sites.</p> <p>The recommendations and methodologies within this draft report meet our requirements as Traditional knowledge holders of this area and maintain the protection and best options for our local Aboriginal cultural heritage sites.</p> <p>Please contact if you have any questions, Thank you Bec Young- Murrooma -Operations Manager/Sites Officer Anthony Anderson - Murrooma- CEO.</p>	Thank you for your feedback.
Divine Diggers Aboriginal Cultural Heritage Consultants	Deidre Perkins	<p>Good morning Morgan,</p> <p>No comment it all seems good and I know if any issues came up on site it would be look after.</p> <p>Sincerely Deidre</p>	Thank you for your feedback.

Table 11: Feedback provided during Stage 4 (ACHAR and AR)

Registered Aboriginal Party	Comment made	Response from Niche
Divine Diggers Aboriginal Cultural Consultants	Hello Wade, I have read over the draft and it seems fine to me. Thank you Deidre	Thank you for your feedback.
Karuah Indigenous Corporation	Hi Wade; Firstly; thanks for the Draft report, I have read the report and understand all parts of the report also the including the archaeological survey report in which I found to be OK. I also agree to all recommendation of the report and happy to continue with any works around the Anna Bay Sand Quarry project Lot 4017_4226 Nelson Bay Road, Anna Bay NSW, and give and information as required around Cultural & Heritage with this project. Thank you	Thank you for your feedback.
Mur-Roo-Ma Inc	Murrooma Incorporated has read and fully understands the draft Aboriginal Cultural Heritage and Archaeological Assessment report for Anna Bay Sand Quarry. As per our phone discussion, no sand will be quarried from any part of the remnant dune and only drift sand will be utilised for proposed works- for the entirety of the sand mining contract . We agree with all aspects of this report including the results of the test excavation, proposed mitigation and recommendations and this meets our requirements as Traditional Knowledge Holders of the Worimi area and maintains the protection and best options for our local Aboriginal sites. Please contact if you have any questions, Thankyou	Thank you for your feedback

4. Summary and Analysis of Background Information

The Subject Area is located in the Coastal Zone of the Hunter Valley, in particular, it is situated within the outer Holocene barrier and sand dunes. The resources in this area would have been well utilised by Aboriginal people in the past, but modifications including residential developments are likely to have disturbed areas containing archaeological materials. The Outer Holocene Barrier contains stable dunes and the potential to contain stratified deposits dating back to 4,500PB (Dean-Jones, 1990).

The Stockton Bight is a unique coastal embayment and a well preserved example of a dual barrier system close to the major metropolitan centres of Newcastle and Sydney (Australian Heritage Database). The Newcastle Bight has some of the largest midden sites in NSW as well as burial and educational sites (Australian Heritage Database). The barrier dune system of the Stockton Bight is 31 km long and ranges from one to two kilometres in width.

Traditionally, the Worimi people used the beaches to travel between Nelson Bay to the north and Stockton to the south, with Tilligerry Creek used as a route to the surrounding swamplands, creek lines and western areas (McCardle Cultural Heritage Pty Limited, 2015). The area known as Stockton Bight has a special cultural significance to the Worimi people as it retains a large amount of cultural history. The Stockton Beach Dune System is the largest mobile dune in coastal Australia and represents an important area of cultural heritage (OEH, 2004).

The area was rich in resources, with direct access to marine (both ocean and estuarine), forest and stone resources from the neighbouring headlands. The history of the Worimi people and the connection with the area is abundantly evident in the extent and diversity of the cultural material present throughout the adjoining areas. For example, spears used for fishing were made from the flowering stem of the Grass Tree or Gynea Lily, with prongs of ironbark used on the tips.

Port Stephens was not entered by Europeans until late 1871 when the 'Salamander', docked, transporting convicts to Sydney. It appears that the earliest Europeans to live in the area were five escaped convicts, wrecked at Port Stephens in 1790 (McCardle Cultural Heritage Pty Limited, 2015). The Worimi were extremely accommodating, taking them into their tribe (McCardle Cultural Heritage Pty Limited, 2015). Five years later they were 'rescued' by Captain W.R. Broughton with the Reliance and Supply.

The frequencies of Aboriginal cultural heritage site types within the search area are consistent with regional trends identified during previous studies within close proximity to the current assessment. Aboriginal cultural heritage sites are variable distances from permanent water sources throughout the immediately surrounding region, with the majority (of those located in proximity to the Subject Area) located approximately 1 km from the ocean and approximately 2.5km from Tilligerry Creek (Figure 3).

The AHIMS search identified one Aboriginal cultural heritage site within the Subject Area, known as NBRd 4 (AHIMS ID# 38-50320). The Aboriginal cultural heritage site comprises shell fragments on the ground surface, with the high possibility of the presence of more shell in the area as part of an extensive shell-midden. Thirteen (13) additional Aboriginal cultural heritage sites were located outside the Subject Area within a 1 km distance, including surface stone artefact scatters, shell middens with stone artefacts, and potential archaeological deposits (PADs).

The Worimi people maintain a strong relationship with their traditional lands. Despite the social and cultural dislocation that would have occurred post-European settlement of the area, many Aboriginal

people continue to live within the Port Stephens region and its surrounds, and continue to care for country and make decisions on the management and maintenance of Aboriginal cultural heritage sites and matters.

“The project area is located close to a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to our ancestors and storylines”. (Anthony Anderson, Mur-Roo-Ma Incorporated).

5. Cultural Heritage Values and Statement of Significance

5.1 Methods of assessing heritage significance

Heritage significance is assessed by considering each Aboriginal cultural heritage site against the significance criteria set out in the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011).

Niche recognises that Aboriginal people are the determinants of the cultural significance of their heritage. If any culturally sensitive values of the Subject area were identified, their specifics would not be included in this report, or made publicly available, but would be documented and lodged with the knowledge holder providing the information.

5.2 Assessment framework

The Burra Charter (Australian ICOMOS, 1999) defines the basic principles and procedures to be observed in the conservation of important places. It provides the primary framework, within which decisions about the management of heritage sites in Australia should be made. The Burra Charter defines the cultural significance as being derived from the values listed below (Section 5.3.1 to 5.3.4).

5.3 Identifying values

The information collected during the background review of the project can be used to help identify social, historical, scientific and aesthetic values. The review of background information and knowledge gained through consultation with Aboriginal people should provide insight into past events. These include how the landscape was used and why the identified Aboriginal objects are in this location, along with contemporary uses of the land.

Information gaps are not uncommon and should be acknowledged. They may require further investigation to adequately identify the values present across the subject area. It may be helpful to prepare a preliminary value map that identifies, to the extent of information available, information such as:

- Known places of social, spiritual and/or cultural value including natural resources of significance.
- Known historic places.
- Known Aboriginal objects and/or declared Aboriginal places.
- Potential places/areas of social, spiritual and/or cultural value including natural resources, of places of historic or archaeological significance.

Places of potential value that are not fully identified or defined should be included as 'sensitive' areas to target further investigation.

5.3.1 Social or cultural value

Social or cultural value refers to the spiritual, traditional, historical or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them.

Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods or events. Communities and individuals can experience a sense of loss should a place of social or cultural value be damaged or destroyed.

There is not always consensus about a place's social or cultural value. When identifying values, it is not necessary to agree with or acknowledge the validity of each other's values, but it is necessary to document the range of values being identified.

Social or cultural value can only be identified through consultation with Aboriginal people. This could involve a range of methodologies such as cultural mapping, oral histories, archival documentation and/or specific information provided by Aboriginal people specifically for the investigation.

When recording oral history:

- Identify who was interviewed and why.
- Document the time, place and date the interview was conducted.
- Describe the interview arrangements (the number of people present, recording arrangements, information access arrangements).
- Summarise the information provided by each person interviewed.
- Provide a summary of the information provided to the person being interviewed.

More information on conducting oral history projects can be found in the OEH publication *Talking history: oral history guidelines* (Veale, 2004)

Occasionally information about social value may not be forthcoming. In these circumstances, documentation of the consultation process is required, making it clear in discussions and conclusions about social value, that this was the case.

5.3.2 Historic value

Historic value refers to the associations of a place with a historically important person, event, time period or activity in an Aboriginal community. Historic places do not always have evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' their historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historic themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain a sufficient understanding of the historic values.

5.3.3 Scientific (archaeological) value

This refers to the importance of a landscape, area, place or object because of its rarity, representativeness and the extent to which it may contribute to further understanding and information (Australia ICOMOS, 1988).

Information about scientific values is gathered through any archaeological investigation undertaken. Archaeological investigations must be carried out according to OEH's Code of Practice (DECCW, 2010b).

5.3.4 Aesthetic value

This refers to the sensory, scenic, architectural and creative aspects of the place, area, structure or object. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Australia ICOMOS, 1988).

5.4 Assessing values and significance

This stage is used to assess and discuss the cultural significance of the values recorded during the identification and assessment of cultural significance by the Aboriginal people consulted, and to prepare a statement of significance. The assessment of values is a discussion of what is significant and why. An assessment of values is more than simply restating the evidence collected during the background review and identification of value across each stage of the project. Rather, the assessment should lead to a statement of significance that sets out a succinct summary of the salient values that have been identified.

The assessment and justification in the statement of significance must discuss whether any value meets the following criteria (NSW Heritage Office, 2001):

- Does the subject area have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons? [Social value]
- Is the subject area important to the cultural or natural history of the local area and/or region and/or state? [Historic value]
- Does the subject area have potential to yield information that would contribute to an understanding of the cultural or natural history of the local area and/or region and/or state? [Scientific/Archaeological value]
- Is the subject area important in demonstrating aesthetic characteristics in the local area and/or region and/or state? [Aesthetic value]

Assessment of each of the criteria listed above should be graded in terms that allow the significance to be described and compared; for example, as high, moderate or low. In applying these criteria, consideration should also be given to:

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

5.5 Identified values of the subject area

No specific cultural heritage values, stories or memories the Aboriginal objects or Subject Area have been identified by the Registered Aboriginal Parties to date. The Registered Aboriginal Parties have; however, identified the following cultural values regarding Worimi land as a whole, of which the Subject Area forms part (see Table 12) for significance assessment of Anna Bay PAD 1):

“The project area is located close to a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to our ancestors and storylines. “

Mur-Roo-Ma Inc.

Table 12: Identified values of Aboriginal cultural heritage site Anna Bay PAD 1 (AHIMS ID 38-5-0347)

Site details	Anna Bay PAD 1 (AHIMS ID 38-5-0347)
Statement of significance	Not a Aboriginal cultural heritage site
Social or cultural values	Not a Aboriginal cultural heritage site
Historic value	Not a Aboriginal cultural heritage site
Scientific (Archaeological) value	Not a Aboriginal cultural heritage site
Aesthetic value	Not a Aboriginal cultural heritage site
Submissions	Full copies of the submissions made from the RAPs are presented in Appendix C.

Table 13: Identified values of Aboriginal cultural heritage site NBRd 4 (AHIMS ID#38-5-0320)

Site details	NBRd 4 (AHIMS ID#38-5-0320)
Statement of significance	The overall archaeological value of NBRd 4 AHIMS ID#38-5-0320 is considered to be low to moderate. Assessment of each of the criteria for archaeological (scientific) value and significance is presented below.

Social or cultural values	No specific cultural or social values have yet been attributed to the NBRd 4 site specifically, but the wider project area is located close to a noted Aboriginal Place and the broader areas are very significant to local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to their ancestors and storylines.
Historic value	The Subject Area has been used as a small-hold farm property since European settlement in the region in the mid nineteenth century. The Aboriginal cultural heritage site is located north of sand dunes, which are connected to the Port Stephens Local Environmental Plan (LEP) listed “Stockton Beach Dune System”, an item of local heritage significance. The heritage curtilage for this item terminates approximately 3 km to the west of the Subject Area. Also, a listed Aboriginal Place at Birubi Point, and a local heritage item, the Birubi Point Cemetery, are located within two kilometres of the Subject Area. The second site of the Hannah (later called Anna) Bay School building is located to the east of the Subject Area, but this is outside its boundaries. Despite the proximity of listed heritage items and places, no historic significance has been attributed to the NBRd 4 Aboriginal cultural heritage site.
Scientific (Archaeological) value	The Aboriginal cultural heritage site has unknown scientific (archaeological) value. It is comprised of surface shell scatters with the potential for subsurface deposit. It may provide additional information regarding Aboriginal life in the local or regional area; however, as it will not be harmed during the proposed works for this project, it has not been further assessed,
Aesthetic value	The Aboriginal cultural heritage site has low aesthetic value.
Submissions	Full copies of the submissions made from the RAPs are presented in Appendix C.

6. The Proposed Development

6.1 Summary of previous land use

The Subject Area contains a number of past land use disturbances which are likely to reduce the potential for any archaeological evidence to survive within the area. Disturbance such as clearing of native vegetation, construction of dwellings and associated buildings, excavation and levelling of the original surface, construction of roads and associated infrastructure, have had an impact on the original soil profile and environment in the northern part of the Subject Area. The southern part of the Subject Area has been bisected by the wide transmission corridor, and the sand dune system in this area is highly dynamic.

Historical aerial photos provide information about previous land use and impact on the ground surface. Details of the historical aerial photos are outlined in Section 2.3.4 and shown in Figure 6.

6.2 Proposed development

The Proponent intends to establish a sand quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. The main impacts of the development proposal are depicted in Figure 2 and include:

- The extraction of sand to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.
- This work will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

6.3 Potential for harm

The proposed activity will not harm any known Aboriginal objects or deposits likely to contain Aboriginal objects. The previously recorded Aboriginal cultural heritage site (NBRd 4 AHIMS ID#38-5-0320) will not be impacted by the proposed works, as the section in close vicinity to the Aboriginal cultural heritage site has been already built and there are no significant modifications proposed for this road. The dynamic aeolian sand comprising the dune in the southern extent of the Subject Area will be targeted by the quarrying activities. The area in front of the dune will not be excavated during the works, this area will only be impacted by the operation of equipment and machinery. The RAPs have not identified any heritage values that would be harmed by the proposed activity.

There were no other Aboriginal cultural heritage sites identified with the Subject Area.

Table 14: Impact assessment summary

Site name and number	Type of harm	Degree of harm	Consequence of harm
NBRd 4 (AHIMS ID#38-5-0320)	None	None	No loss of values

6.4 Likely impacted values

The proposed quarry would remove all of the sand within the PAD to ground level. The remainder of the Subject Area will either not be impacted during the proposed project, or has been disturbed to an extent where the likelihood of Aboriginal artefacts existing low. The proposed sand quarry will not have any impact on nearby Aboriginal objects or sites of significance. It is unlikely that changes in the landscape will be evident from those locations.

6.5 Project justification

The primary component of the proposed development comprises sand quarrying. Following the removal of vegetation along the northern face of the dunes within the Subject Area, the aeolian sand is now able to encroach upon the transmission line easement. The emergency extraction of sand from beneath the transmission lines is evidence of the danger this can pose. The quarrying of sand from the Subject Area will assist with keeping the dunes out of the transmission easement.

Given the fact that no Aboriginal objects, places or values will be harmed by the proposed works, there is no justification for redesigning the Project.

7. Avoiding and Minimising Harm

7.1 Conservation Principles and Management Framework

The two founding principles behind the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage, 2011) are ecologically sustainable development and intergenerational equity. These principles hold that “the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations”.

The strong emphasis, as in the Burra Charter, is to quantify and understand the heritage values of a place, a site, or an object and exhaust avenues of avoiding harm to those values. If harm cannot be avoided then there must be consideration and implementation of strategies to minimise harm (Office of Environment and Heritage, 2011).

It follows that the hierarchy for consideration in regards to management strategies available for surface stone artefacts and subsurface stone artefacts and areas of archaeological potential, fall into four general categories, in order of preference from a conservation perspective:

- avoidance and in-situ conservation;
- partial avoidance and partial in-situ conservation (includes partial harm);
- harm caused with mitigating circumstances such as collection or salvage; and
- unmitigated harm.

The four general categories (described above) have been considered in the following subsections with regard to both direct impacts (e.g. surface disturbance) and indirect impacts (e.g. monitoring activities).

The management and mitigation measures have been prepared in consideration of comments received from the RAPs during the consultation process. These comments include those related to cultural considerations surrounding salvage works and the handling of artefactual materials, as well as the cultural significance of all Aboriginal cultural heritage sites. All comments received from the RAPs are considered in Section 4.

7.2 Designing to avoid

The proposed design will not impact on any known Aboriginal objects, places or values.

7.3 Justifying harm

The proposed development, which involves the extraction of sand to ground level, removal of vegetation, minor haul road upgrades, and construction of buildings, would directly impact on the soil profile of the Subject Area, although the degree of impact would vary across it.

No harm to Aboriginal objects is proposed.

The archaeological test excavations of a potential area of high archaeological sensitivity, Anna Bay PAD 1 (AHIMS ID 38-5-0347) did not identify any Aboriginal objects. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site.

The following previously recorded AHIMS registered site that occurs within the Subject Area will not be adversely affected by the proposed works:

- NBRd 4 (AHIMS ID #38-5-0320).

7.4 Consideration of management and mitigation strategies

Though no harm to Aboriginal objects is proposed, the management and mitigation measures in Table 15 should be considered to ensure continued compliance with the National Parks and Wildlife Act 1974. It is considered that considering no Aboriginal objects, places or values will be harmed by the proposed works, an Aboriginal Cultural Heritage Management Plan as suggested by the RAPs in Section 3, is not warranted.

Table 15: Management and mitigation strategies

Management Risk / Impacted Value	Strategies considered	Response
Management Risk – Compliance and Unexpected Finds (excluding human remains)	Communication to employees, site visitors, contractors and landowners	<ul style="list-style-type: none"> • All workers should be inducted into the Subject Area so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of any future consent with respect to Aboriginal heritage prior and during and after construction activities. • In the unlikely event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately. • A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site. • In consultation with the RAPs for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material. • If the material is an Aboriginal object, the Proponent will notify: <ul style="list-style-type: none"> ○ the BCD's Enviroline on 131 555; and ○ Representatives of the RAPs. • Facilitate, in co-operation with the appropriate authorities and the RAPs: <ul style="list-style-type: none"> ○ The recording and assessment of the finds ○ Compliance with any legal requirements and BCD directions ○ The development and implementation of appropriate management strategies based on an assessment of significance of the finds.

Management Risk / Impacted Value	Strategies considered	Response
		<ul style="list-style-type: none"> • Recommencement of ground disturbance works may only resume once legal requirements are fulfilled
Management Risk – Unexpected Finds – human remains	Stop work and follow procedure for discovery of suspected human remains	<ul style="list-style-type: none"> • All workers should be inducted into the Subject Area so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of consent prior and during and after construction activities • In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately. • The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm. • The NSW Police must be contacted immediately. • No further action is to be undertaken until the NSW Police provide written notification to the Proponent. • If the skeletal remains are identified as Aboriginal, The Proponent or their agent must contact: <ul style="list-style-type: none"> ▪ the BCD's Enviroline on 131 555; and ▪ representatives of the RAPs. • No works are to continue until the BCD provides written notification to the proponent or their Agent. • An Aboriginal Heritage Impact Permit may be required to manage human remains.

7.5 Consideration of the principles of ecological sustainable development

Section 5(vii) of the EP&A Act requires proponents to consider the key principles of ESD in the design of their projects. The principles of ESD are defined within the NSW *Protection of the Environment Administration Act, 1991*. This Act defines the precautionary principle and the principles of inter-generational equity, conservation of biological diversity and ecological integrity. The precautionary principle is defined as:

"If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation".

Table 16 considers the key principles of ESD with respect to the results of the literature review, Aboriginal heritage survey results and significance assessment contained within this report.

Table 16: Preliminary consideration of the Environmental Impact Assessment and ESD Guidelines

Principles of Environmental Impact Assessment and ESD Guidelines	ESD Assessment
A fundamental consideration for conservation of biological diversity and ecological integrity.	The assessment has considered conservation of cultural heritage integrity by:

Principles of Environmental Impact Assessment and ESD Guidelines	ESD Assessment
Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment.	<ul style="list-style-type: none"> Utilising a previously formed haul road to access the sand deposit. Avoiding Aboriginal cultural heritage site NBRd 4 (AHIMS ID #38-5-0320).
Consideration of intergenerational equity.	<p>The assessment has considered intergeneration equity by:</p> <ul style="list-style-type: none"> Undertaking community consultation with RAPs regarding the cultural values within the Subject Area and the management of Aboriginal cultural heritage sites and Aboriginal heritage values.
Where risk of serious or irreversible harm and lack of scientific knowledge of the nature of environmental harm combine, the precautionary principle applies. Where there is risk of serious or irreversible harm, it is necessary to establish whether there is adequate scientific knowledge of the subject to evaluate the perceived threat.	<p>This assessment has undertaken an ACHA, which initially identified information gaps and sensitive areas where further information was required to evaluate the potential impacts of the project.</p> <p>Further investigation through archaeological test excavation and further Aboriginal community consultation within the Subject Area was undertaken through an AHIP to “acquire adequate scientific knowledge of the subject to evaluate the perceived threat.”</p> <p>As a result of these further investigations, no additional Aboriginal objects or cultural values were identified within the Subject Area.</p>
An assessment of the risk-weighted consequences of various options.	Management and mitigation are provided in Section 7.4.

8. Conclusions and recommendations

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd, to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to facilitate the development of the Anna Bay Sand Quarry at 4226 Nelson Bay Road, Anna Bay (the Project), a designated development, under Part 4 of the NSW Environmental Planning and Assessment Act, 1979 (EP&A Act). As a designated development, the Secretary's Environmental Assessment Requirements (SEAR 1172) require that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage be undertaken.

The ACHA was carried out in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (NSW Office of Environment and Heritage 2011). The survey program involved consultation with Registered Aboriginal Parties in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* and their participation in the field survey (details of which are in Appendix B). The survey resulted in the identification of a PAD within a sensitive landscape feature consisting of sand dune that was considered to potentially contain Aboriginal objects extending from surrounding midden sites.

An Aboriginal Heritage Impact Permit (AHIP) was applied for in April 2019 under s.90 of the *National Parks and Wildlife Act 1974* to allow harm to Aboriginal objects by test excavation at the Anna Bay PAD-1 (AHIMS ID#38-5-0347) Aboriginal cultural heritage site. The AHIP (C0004974) was issued on 8 July 2019.

The test excavation was carried out over three days from 23 to 25 July 2019. Sixteen test pits, measuring 50 cm x 50 cm, were excavated. No Aboriginal objects were identified. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site. An Aboriginal Site Impact Recording Form was submitted to BCD advising of the updated status "Not a Site" (Annex E in Appendix B)

No further investigation or impact assessment is required. Works may proceed with caution without an Aboriginal Heritage Impact Permit. Based on community consultation with the RAPs for the Project, and with the completion of this ACHA by Niche, the following recommendations have been made:

Recommendation One

- All workers should be inducted into the Subject Area so they are made aware of their obligations under the *National Parks and Wildlife Act 1974* and any conditions of any future consent with respect to Aboriginal heritage prior and during and after construction activities.

Recommendation Two

- In the unlikely event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately.
- A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site.
- In consultation with the RAPs for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material.
- If the material is an Aboriginal object, the Proponent will notify:
 - the BCD's Enviroline on 131 555; and
 - representatives of the RAPs.
- Facilitate, in co-operation with the appropriate authorities and the RAPs:

- The recording and assessment of the finds
- Compliance with any legal requirements and BCD directions
- The development and implementation of appropriate management strategies based on an assessment of significance of the finds.
- Recommencement of ground disturbance works may only resume once legal requirements are fulfilled

Recommendation Three

- All workers should be inducted into the Subject Area so they are made aware of their obligations under the *National Parks and Wildlife Act 1974* and any conditions of consent prior and during and after construction activities
- In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately.
- The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm.
- The NSW Police must be contacted immediately.
- No further action is to be undertaken until the NSW Police provide written notification to the Proponent.
- If the skeletal remains are identified as Aboriginal, The Proponent or their agent must contact:
 - the BCD's Enviroline on 131 555; and
 - representatives of the RAPs.
- No works are to continue until the BCD provides written notification to the proponent or their Agent.
- An Aboriginal Heritage Impact Permit may be required to manage human remains.

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Appendix A: Archaeological Report



Anna Bay Sand Quarry

4226 Nelson Bay Road, Anna Bay NSW

Archaeological Report

Prepared for Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd

Port Stephens Council Local Government Area

Authors: Dr Morgan Disspain, Balazs Hansel, Renee Regal and Clare Anderson

Consultancy: Niche Environment and Heritage

20 September 2019

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Cover photograph: Looking east towards proposed sand quarry area (Niche 2018)

Executive Summary

Niche Environment and Heritage (Niche) was commissioned by Tattersalls Lander Pty (the Proponent), to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to facilitate the development of the Anna Bay Sand Quarry at 4226 Nelson Bay Road, Anna Bay (the Subject Area). The sand quarry is a designated local development, under Part 4 of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act) (the Project). As a designated local development, the Secretary's Environmental Assessment Requirements (SEAR 1172) provide that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage, should be undertaken.

This document, the Archaeological Report (AR), forms a supporting attachment to the ACHA Report. It provides an assessment of the archaeological values and potential archaeological impacts of the proposed activity. It has been carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water NSW, 2010) (Code of Practice).

The ACHA process and the AR the assessment included background archaeological and historical investigation, ongoing consultation with the Registered Aboriginal Parties (RAPs), and an archaeological survey that included representatives from Mur-roo-ma Incorporated, Worimi Traditional Owners Indigenous Corporation, Karuah Indigenous Corporation, Worimi Local Aboriginal Land Council, and Nur-Run-Gee Pty Ltd.

During the survey, it was determined that the southern section of the Subject Area contains an area of high sensitivity within a sand dune system, which may be a continuation of a previously recorded Aboriginal cultural heritage site within the Subject Area... The area of sensitivity was named Anna Bay PAD-1 (AHIMS ID#38-5-0347) and would be impacted by the proposed activity.

Subsequently, an Aboriginal Heritage Impact Permit (AHIP) was applied for in April 2019 under s.90 of the *National Parks and Wildlife Act 1974* to allow harm to Aboriginal objects by test excavation at the Anna Bay PAD-1 (AHIMS ID#38-5-0347) Aboriginal cultural heritage site. The AHIP (C0004974) was issued on 8 July 2019.

The test excavation was carried out over three days from 23 to 25 July 2019. Sixteen test pits, measuring 50 cm x 50 cm, were excavated. No Aboriginal objects were identified. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site. An Aboriginal site impact recording form has been lodged to indicate the locations status as "Not a site".

Summary of potential impacts

The proposed activity will not harm any Aboriginal objects or deposits likely to contain Aboriginal objects. The Registered Aboriginal Parties have not identified any heritage values that would be harmed by the proposed activity.

Conclusion and recommendations

No further investigation or impact assessment is required. Works may proceed with caution without an Aboriginal Heritage Impact Permit. Based on community consultation with the RAPs for the Project, and with the completion of this ACHA by Niche, the following recommendations have been made:

- All workers should be inducted into the Subject Area so they are made aware of their obligations under the *National Parks and Wildlife Act 1974* prior and during and after construction activities.
- The following Find Procedure should be put in place as a minimum response in the unlikely event of the identification of artefacts within the Subject Area:
 - work in the surrounding area is to stop immediately;
 - a temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site;
 - in consultation with the RAPs for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material; and
- Should the material be confirmed as an Aboriginal object or archaeological site, Facilitate, in co-operation with the appropriate authorities and the RAPs:
 - The recording and assessment of the finds
 - Compliance with any legal requirements and BCD directions
 - The development and implementation of appropriate management strategies based on an assessment of significance of the finds.
 - Recommencement of ground disturbance works may only resume once legal requirements are fulfilled and an Aboriginal Heritage Impact Permit will be required
- In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately and:
 - The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm.
 - The NSW Police must be contacted immediately.
 - No further action is to be undertaken until the NSW Police provide written notification to Tattersalls Lander Pty Ltd.
 - If the skeletal remains are identified as Aboriginal, Tattersalls Lander Pty Ltd or their agent must contact:
 - the Biodiversity and Conservation Division ((BCD), of the Department of Planning, Industry and Environment (DPIE), previously known as the Office of Environment and Heritage (OEH)) Enviroline on 131 555; and
 - Representatives of the RAPs.
 - No works are to continue until the BCD provides written notification to the proponent or their Agent.

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1. Introduction

Hay Enterprises NSW Pty Ltd (the Proponent) intends to establish the Anna Bay Sand Quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period (the Project). The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380) (the Subject Area) within the coastal, semi-rural locality of Anna Bay. It is situated 12 km southwest of Nelson Bay and 25 km northeast of Newcastle Airport in the Port Stephens region of NSW, in the Parish of Tomaree, in the County of Gloucester, in the Port Stephens Council Local Government Area (LGA) (Figure 1, Figure 2).

The proposed Anna Bay Sand Quarry will be assessed as a Designated Development as per Schedule 3 subclauses 19(1) (c) (iii) and 19(1) (c) (VI) of the *NSW Environmental Planning and Assessment Act, 1979* (EP&A Act) and is being considered by Port Stephens Council under Part 4 of the EP&A Act. Secretary's Environmental Assessment Requirements (SEARs) (SEAR #1172) were issued on 23 October 2017 for the project and required that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological) should be conducted. This included evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage. This cultural heritage assessment was undertaken to inform an Environmental Impact Statement (EIS).

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty Ltd on behalf the Proponent to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform the EIS for the Project. This Archaeological Report (AR) presents the results of an Aboriginal archaeological assessment for the proposed development. The AR is an integral part of the ACHA and will be included as an Appendix in the ACHAR.

Niche has prepared this archaeological report in accordance with the following guidelines as per the SEARs:

- *Aboriginal cultural heritage consultation requirements for proponents 2010* (OEH 2010).
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (Department of Environment, Climate Change and Water (DECCW) NSW 2011).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010).
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (OEH).
- *The Burra Charter (The Australia ICOMOS charter for places of cultural significance)*.

The objectives of the archaeological report were to identify whether Aboriginal sites, objects or places are present within the Subject Area. If present, the assessment aimed to determine whether these would be impacted by the proposed works and provide appropriate mitigation and management recommendations in accordance with the *National Parks and Wildlife Act 1974 (NSW)* (NPW Act). This report fulfils requirement for a test excavation report to be written as set out in the Aboriginal Heritage Impact Permit (AHIP) number: C0004974 (Annex D).

2. Investigators and contributors

The contributors to this archaeological report and their project roles are listed in Table 1.

Table 1: Contributors-affiliations and roles (in alphabetical order)

Contributor	Affiliation	Role	Qualification
Niche Staff			
Clare Anderson	Niche	Heritage Consultant, Author	BA (Hons)
Dr Morgan Disspain	Niche	Senior Heritage Consultant, Project Manager post-January 2019, Excavation director, Author	BArch. (Hons), PhD
Wade Goldwyer	Niche	Heritage Technical Advisor, Test excavation	
Viki Gordon	Niche	Heritage Consultant, Field survey supervisor	(BA Anc Hist Grad Dip Arch),
Balazs Hansel	Niche	Heritage Consultant, Project Manager pre-January 2019, Author	MArch, MHist
Matt Harris	Niche	GIS and mapping	
Dr Ross Jenkins	Niche	GIS and Mapping	
Renee Regal	Niche	Heritage Consultant, Author	BA (Hons)
Registered Aboriginal Parties			
Leonard Anderson	Nur-Run-Gee Pty Ltd	Survey, Review of documents	
Paul Boyd	Didge Ngunawal Clan	Review of documents	
Lilly Carroll	Didge Ngunawal Clan	Review of documents	
Chris Collinson	Nur-Run-Gee Pty Ltd	Test Excavation	
David Feeney	Karuah Indigenous Corporation	Survey, Test Excavation. Review of documents	
Steven Hickey	Widescope Indigenous Group	Review of documents	
Darleen Johnson-Carroll	Murra Bidgee Mullangari Aboriginal Corporation	Review of documents	
Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Review of documents	
David Kirk	Mur-Roo-Ma Incorporated	Test excavation	
Luke Knight	Worimi Traditional Owners Indigenous Corporation	Test Excavation	
Brendann Lilley	Worimi Local Aboriginal Land Council	Test Excavation	
Jamie Merrick	-	Review of documents	
Deidre Perkins	Divine Diggers Aboriginal Cultural Consultants	Review of documents	

Contributor	Affiliation	Role	Qualification
Andrew Smith	Worimi Local Aboriginal Land Council	Survey, Review of documents	
Steve Talbott	Gomeroi Namoi	Review of documents	
Candy Lee Towers	Worimi Traditional Owners Indigenous Corporation	Survey, Review of documents	
Bec Young	Mur-Roo-Ma Incorporated	Survey, Review of documents	

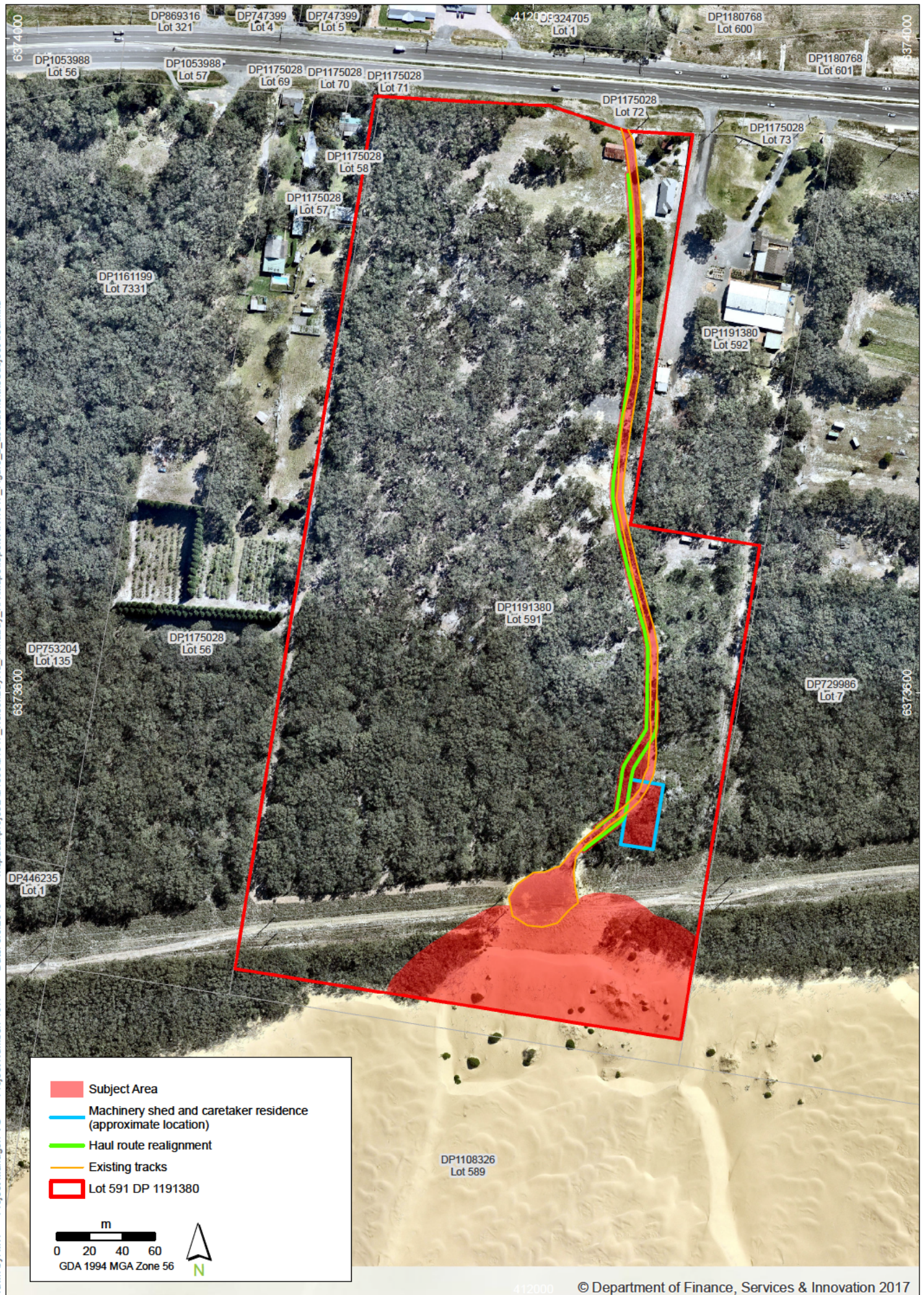
3. Description of development proposal

The Proponent intends to establish a sand quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. The main impacts of the development proposal will be:

- The extraction of sand from the dunes to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.

This work will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.





4. Previous archaeological work

4.1 Heritage Registers

4.1.1 Aboriginal Heritage Information Management System (AHIMS)

An extensive Aboriginal Heritage Information Management System (AHIMS) search was conducted on 18 January 2018 (AHIMS Client ID: 322781) centred on the Subject Area (Figure 4, Annex A).

The AHIMS search identified one Aboriginal site within the Subject Area, known as NBRd 4 (AHIMS ID# 385-0320). The Aboriginal cultural heritage site comprises shell fragments on the ground surface, with the high possibility of the presence of more shell in the area as part of an extensive shell-midden. The registered site card for this Aboriginal cultural heritage site is attached at Annex A. Thirteen (13) additional Aboriginal cultural heritage sites were located outside the Subject Area within a 1 km distance, including surface stone artefact scatters, shell middens with stone artefacts, and potential archaeological deposits (PADs). The AHIMS sites are summarised in Table 2.

Table 2: Previously recorded AHIMS sites within 1 km of the Subject Area

AHIMS No.	Site Name	Eastings	Northings	Status	Site Features
38-5-0121	Anna Bay 1	411400	6372400	Valid	Midden: Artefacts and shell
38-5-0198	Anna Bay	412500	6372550	Valid	Artefact
38-5-0223	Tomaree 7	412454	6373889	Partially Destroyed	Artefacts and shells
38-5-0250	Anna Bay 1, NBR	411480	6373850	Valid	Artefacts and shell
38-5-0320	NBRd 4	412046	6373942	Valid	Shell
38-5-0321	NBRd 5	411292	6373875	Valid	Shell
38-5-0319	OFOC5	412500	6373988	Partially Destroyed	Shell
38-5-0312	NBR3/2 artefact scatter	412210	6373957	Valid	Artefact
38-5-0310	NBR3/3 shell midden	412111	6373980	Valid	Artefact and shell
38-5-0311	NBR3/ PAD1	412110	6373980	Valid	Potential Archaeological Deposit (PAD)
38-5-0327	Ausgrid Anna Bay IF1	412517	6373648	Valid	Artefact
38-5-0324	NRB3/PAD3	411750	6373780	Valid	Potential Archaeological Deposit (PAD)
38-5-0325	NBR3/PAD4	411800	6373784	Valid	Potential Archaeological Deposit (PAD)
38-5-0331	WCL1403	412543	6372831	Valid	Artefact

The frequencies of Aboriginal cultural heritage site types within the search area are consistent with regional trends identified during previous studies within close proximity to the current assessment (for example (McCardle Cultural Heritage, 2016; McCardle Cultural Heritage Pty Limited, 2015). Aboriginal cultural heritage sites are variable distances from permanent water sources throughout the AHIMS search

area, with the majority located approximately 1 km from the ocean and approximately 2.5 km from Tilligerry Creek (Figure 3).

4.1.2 Other heritage registers

Searches of the following databases were undertaken by Niche on 31 January 2018.

- Australian Heritage Database – provides a list of items on the World Heritage List
- National Heritage List (NHL) - provides protection to places of cultural significance to the nation of Australia.
- Commonwealth Heritage List (CHL) - comprises natural, Aboriginal and historic heritage places owned and controlled by the Commonwealth.
- State Heritage Register (SHR) - items that have been assessed as being of State Significance to New South Wales and includes Aboriginal Places.
- State Heritage Inventory (SHI) - contains items that are listed on Local Environmental Plans and/or on a State Government Agency's s.170 registers.

The following documents were also considered:

- Port Stephens Local Environmental Plan (LEP)
- Port Stephens Development Control Plan (DCP) 2014

The Port Stephens DCP outlines detailed local provisions for all land within the Port Stephens LGA. These guidelines are in addition to the provisions of the Port Stephens LEP. Section B8 of the DCP states requirements that apply to all development within heritage items and heritage conservation areas and also specific, unique requirements for development within each particular area. The DCP contains controls for any developments that may impact on a heritage item.

No listed heritage items are located within the Subject Area (Table 3); however, a number of heritage items are located nearby. Further consideration of historic heritage items is provided in a separate Heritage Impact Assessment (Niche 2018).

Table 3: Heritage registers search results

Heritage Registers	Heritage Items in the Subject Area	Nearby Heritage Items
World Heritage List	None	None
National Heritage List	None	None
Commonwealth Heritage List	None	None
State Heritage Register	None	Birubi Point Aboriginal Place
State Heritage Inventory	None	Birubi Point Cemetery (Item ID:12)
Local Environmental Plan	None	Stockton Beach Dune System (Item ID: 134)
Development Control Plan	None	DCP Controls apply to the above heritage items.

4.1.2.1 Birubi Aboriginal Place

Birubi Point, which is located 1.4 km the east of the Subject Area, is a registered Aboriginal Place due to its continued association with the Worimi people. It was registered as an Aboriginal Place 5062849 (file number 07/18962 & DOC 07/50249 & DOC1) under the NPW Act in 2007. It is a traditional Aboriginal ceremonial and burial site, which contains extensive archaeological material considered important to the teaching of the current and future generations about the local Aboriginal culture. This site is connected

with the Worimi Conservation Lands, which are a joint management of a number of National Parks and Conservation Areas. This place provides valuable information regarding the archaeological potential of the Subject Area due to its proximity and context.

4.1.2.2 Birubi Point Cemetery

Birubi Point Cemetery (Plate 1) is located approximately 2.3 km from the Subject Area. Birubi Point Cemetery was in use between 1876 and 1996 and contains the graves of early settlers to the area, as well as shipwrecked persons, some of who were unidentified. The cemetery is located adjacent to the original lot of land settled by the Blanch family in the 1950s. The point on which the cemetery is located was known as Cemetery Point, until the name was officially changed in 1976; it is now located within the lands of the Birubi Point Aboriginal Place. The first internment in 1876 was that of Lucy Blanch who was an Anna Bay pioneer. The cemetery contains a layout plan on a plaque and includes a list of all the known burials within the cemetery, numbering 88 internments.

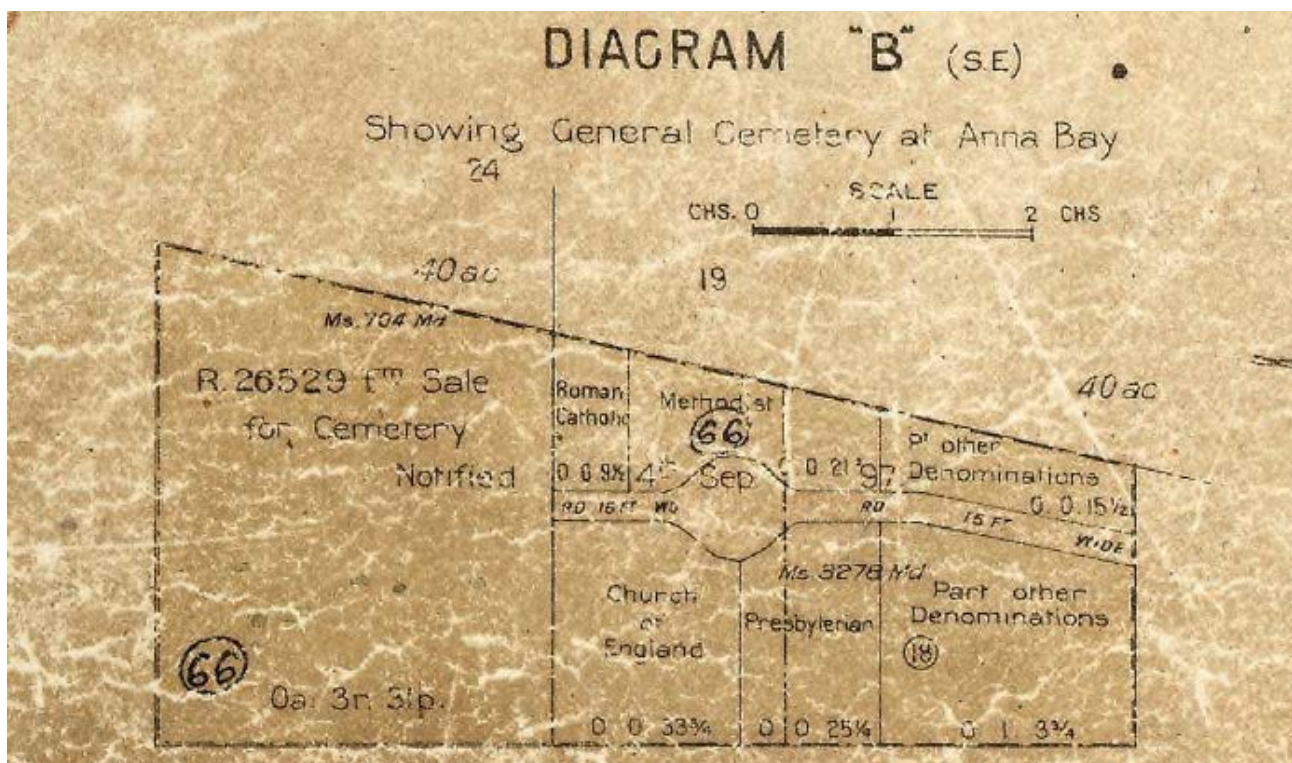


Plate 1: Insert from the 1967 Tomaree Parish map showing the layout of the Birubi Cemetery.

4.1.2.3 Stockton Beach Dune System

Stockton Beach dune system is the largest moving coastal land mass in the southern hemisphere, and stretches from Stockton to Anna Bay covering a distance of approximately 25 kilometres in length. The dunes are moving inland at a rate of about one metre per year, following their destabilisation in the nineteenth century by severe storms and cattle grazing. According to the Register of the National Estate, the entire bight (stretching from the Hunter River Estuary to Birubi Point in the north) is of significance for its unique natural ecosystem (RNE Place ID: 19510).

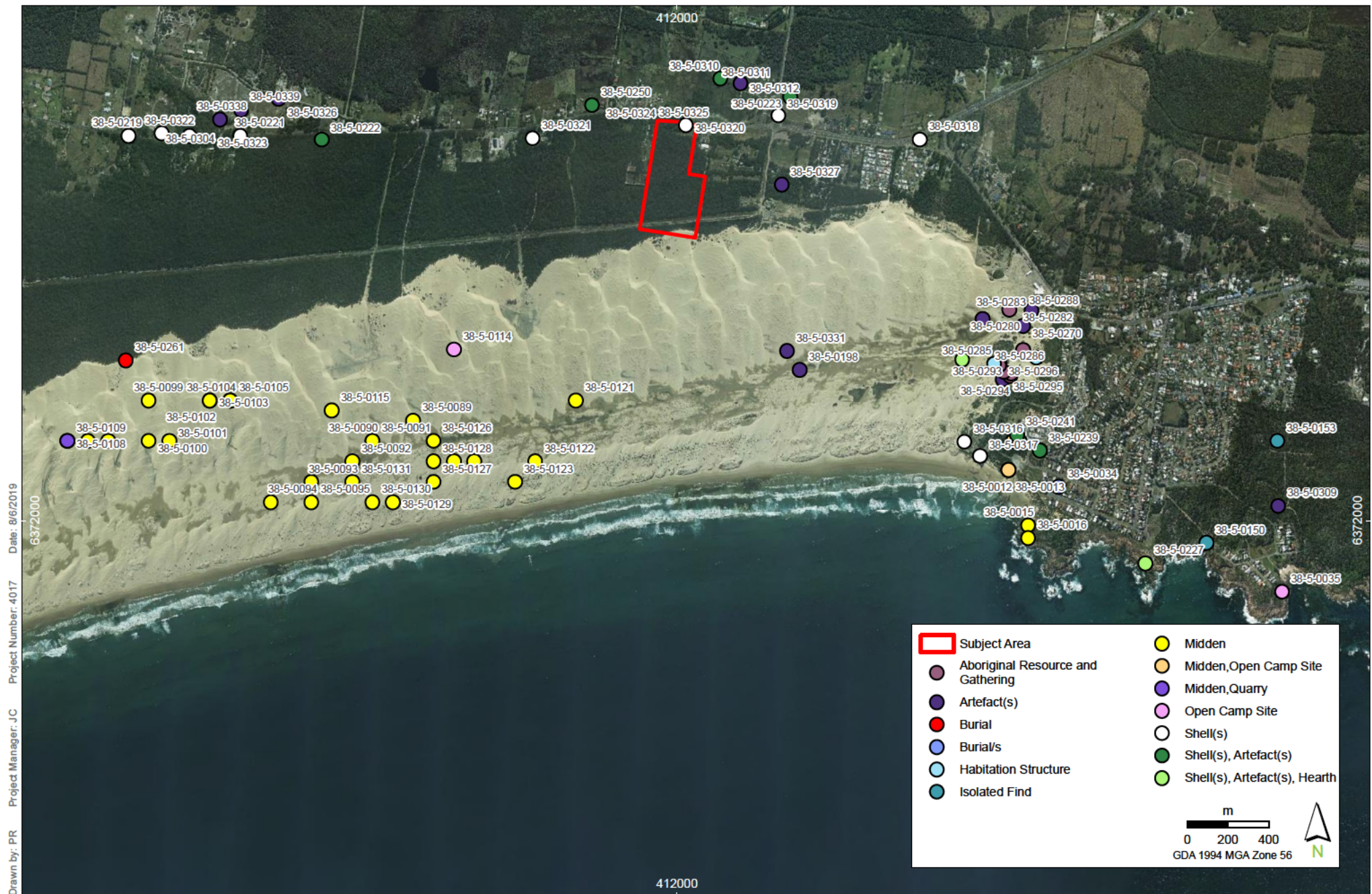
As a result of the shifting sand sheet, Aboriginal midden sites, burials and education sites important to the Worimi peoples, as well as World War II fortifications, are periodically covered and revealed by the moving sands. These sand dunes are directly adjacent to the Subject Area, and are encroaching northwards from the southern boundary of the Subject Area. Their dynamic nature means that archaeological material may exist within the Subject Area subsurface. The defence lines that were constructed on Stockton Beach during

World War II were part of the Northern Defence Line, which was a part of the nationwide response to the Japanese attacks on Darwin and submarines entering Sydney and Newcastle harbours (OEH 2015:27). The defensive tank traps were set up along the entire line of the beach, and infantry-manned heavy and light artillery stations were established at the southern end of the beach at Fern Bay. Tank traps which were removed from their emplacements now form the boundaries of an overflow car park just below Birubi Point at the northern end of the beach. The northern end of the beach, located south of Birubi Point was used as a bombing and military training location during World War II (OEH 2015:27). The weapons range, which was established during the war with an area approximately totalling 400 hectares, including an area directly to the south of the Subject Area. The area continued to be used as a RAAF weapons range until at about 1965 (Plate 2). Unexploded ordinance is still recovered from the sand dunes and are subject to protocols from the NSW Police and Department of Defence (OEH 2015:27).

Located within the central section of the beach, behind the fore dune, are a group of eleven corrugated iron structures with gable or skillion roofs. They have been named "Tin City" by the locals. The original huts date to the 1940s and 50s and were constructed for use by recreational fishermen in the area. The majority of the huts that are currently standing were constructed in the 1970s and 1980s, with the most recent hut constructed in 1992. None of the original huts from the 1940s and 1950s are still standing, but those that remain continue to be used by fishermen (OEH 2015:28). The remains of destroyed huts on the southern and central areas of the beach remain under the shifting sand dune, subject to exposure by local sand drift.



Plate 2: 1967 Tomaree parish map outlining "bombing and gunnery range" abutting onto the Subject Area (indicative location shown in red). (Source: LPI)



4.2 Previous archaeological assessments of the Subject Area

4.2.1 Niche (2017)

A field survey of the Subject Area was undertaken by Niche in 2017 and forms part of the ongoing assessment of this report. The area contains landscape features which suggest a potential for archaeological deposits (proximity to a waterway and containing a ridgeline within 200 m of waters).

4.2.2 Aboriginal Objects Due Diligence Assessment (Niche 2018)

A field assessment was completed by Viki Gordon (Senior Heritage Consultant), Jamie Merrick (Sites Officer Worimi Local Aboriginal Land Council), Lennie Anderson (Nu-Run-Gee Pty. Ltd.) and Rebecca Young (Mur-Roo-Ma Incorporated) on 23rd January 2018. The field assessment was undertaken to determine whether the project design would impact any Aboriginal objects.

Though the field assessment did not locate any surface Aboriginal objects it is the conclusion of the assessment that subsurface Aboriginal objects may be present and that further background research and inspection will need to be carried out. This conclusion is drawn due to:

- the close proximity to the proposed works to a number of Aboriginal cultural heritage sites (Figure 1) registered on the Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS),
- the presence of a sand dune system which has the potential to comprise Aboriginal objects,
- cultural information for Aboriginal representatives in relation to large shell middens in the general vicinity of the Subject Area,
- the relatively undisturbed nature of the vegetation,
- the close proximity of fresh water sources, and
- the undisturbed nature of the sand dune.

The above features, where relatively undisturbed, are identified in the Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW as requiring further investigation and impact assessment if they cannot be avoided. Consequently, the recommendation is made that Tattersalls Lander Pty Ltd complete an Aboriginal Cultural Heritage Assessment with the possibility to apply for an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974* as outlined in the Secretary's Environmental Assessment Requirements (SEARs).

4.2.3 Historical Impact Assessment (Niche 2018)

Niche Environment and Heritage (2018) completed a historic impact assessment for the Subject Area. The assessment concluded that:

- There were no listed heritage items within, or directly adjacent to, the Subject Site.
- The subject site had been employed as a small farm-holding since the mid-nineteenth century, although no heritage significant built fabric has been identified at the site;
- No areas of archaeological potential for the recovery of heritage significant relics were identified at the subject site.
- The proposed works were therefore assessed not to have impact on any heritage significant items or archaeological relics. No further non-Aboriginal (historic) heritage constraints for the proposed works were identified.

4.3 Regional overview of previous archaeological investigations within the Port Stephens Council Local Government Area

Previous investigations with relevance to the Subject Area are summarised in Table 4 below.

Table 4: Previous archaeological investigations relevant to the Subject Area

Assessment author and year	Summary of assessment
Dean-Jones (1990)	The most significant study carried out in the Newcastle Bight was carried out by Pam Dean-Jones. Although the hard copy could not be accessed among the archaeological literature. Dean-Jones (1990) identified numerous sites across the Port Stephens geomorphic zone. This project is relevant to the Subject Area in that it contributes to the predictive model for the region.
OEH, Board of Management for the Worimi Conservation Lands (2015)	In 2015, the Plan of Management was jointly adopted by the Minister of the Environment and the Minister for Lands and Water. The report was prepared by the Board of Management for the Worimi Conservation Lands with staff of the Lower North coast Region of the NPWS. This project is relevant to the Subject Area in that it contributes to the predictive model for the region and it provides background information about cultural values of the surrounding area.
Eric Martin and Associates (2002)	A Conservation Management Plan (CMP) was commissioned by the NSW National Parks and Wildlife Service (NPWS) in 2002 to provide a basis for the ongoing conservation and management of Tomaree Head. Tomaree Head is situated at the southern entrance to Port Stephens and is of significance to Aboriginal people. The CMP concludes that the NPWS as the custodian and landlord of Tomaree, is responsible for the conservation, management of Tomaree Head, and to increase public access to it as a state significant prominent landmark with WWII fortifications. This project is relevant to the Subject Area in that it contributes to the predictive model for the region.
McCardle Cultural Heritage (2015a)	A due diligence assessment of 781 Marsh Rd, Port Stephens was undertaken by McCardle Cultural Heritage in 2015. It included both a desktop assessment and a field survey (which included the Subject Area). The subject area was situated within a floodplain and was assessed as having low sensitivity due to clearing and past land use impacts. This project is relevant to the Subject Area in that it contributes to the predictive model for the region.
McCardle Cultural Heritage (2015b)	Additionally McCardle Cultural Heritage (2015b) conducted a Salvage AHIP excavation at 108 Nelson Bay Rod, Bobs Farm to Anna Bay (Cromarty Lane to Port Stephens Drive). They concluded that the archaeological evidence recovered from within the study area, can be interpreted in relation to the traditional way of life that was practiced by Aboriginal people. They also concluded that Aboriginal cultural heritage site 38-5-0310, which may extend into the Subject Area, was extremely complex with numerous locations with few pieces of shell with high stone artefact densities. This project is relevant to the Subject Area because it is located within a similar landform, but is closer to permanent water sources. It contributes to the predictive model for the region.
Australian Museum Business Services (AMBS) (1997)	The AMBS study aimed to examine and assess the concept of representativeness for known Aboriginal archaeological resources on the Port Stephens Council Plain, assess the planning framework to achieve better outcome for heritage management and to produce guidelines for the recognition of silcrete artefacts recorded in high numbers around the Port Stephens Council Plain. AMBS provided an overview of the archaeological works completed and also raised problems and issues in relation to techniques to identify archaeological site patterns and understanding the nature and frequency of past human occupation of the area. The assessment concluded that there is a lack of a satisfactory systems for defining the representativeness and modelling of the spatial distribution of archaeological sites on the Port Stephens Council Plain. Consequently, it concludes that research models and methodologies should be developed, and adequately

Assessment author and year	Summary of assessment
	tested, to ensure that the archaeological patterns of the area are systematically developed and would be comparable to others within the Port Stephens Council Plain. This project is relevant to the Subject Area in that it contributes to the predictive model for the region.

5. Landscape context

Consideration of the landscape is essential to the definition and interpretation of past Aboriginal land use across a landscape and is a requirement of any Aboriginal archaeological and cultural heritage investigation (DECCW, 2010a). The landscape may provide clues as to those areas of land that may have been more intensively used by Aboriginal people in the past due to the presence of resources such as water, stone, plants and animals and other raw materials or landscape features associated with sustenance, shelter, tool manufacture and cultural activities.

5.1 Environmental Context

5.1.1 Topography, geology and soils

The Subject Area is situated within a coastal region zone, situated in the outer Holocene dunes and located east of the Newcastle Bight sand barrier system with an extremely low local relief of less than 9 m (Matthei, 1995). The conventional coastal formation model establishes that the inner Pleistocene barrier was deposited during the last Inter Glacial period of high sea level (c. 120,000 years before present [BP]) and was later modified by erosion. After several sea level fluctuations the sea level rose (c. 18,000 BP) to form parallel sets of beach ridges in what is now the outer Holocene barrier (McCardle Cultural Heritage Pty Limited, 2015; Robson et al., 1993).

The Subject Area is located on Quaternary gravel, sand, silt, clay, and Waterloo rock, fresh and marine deposits (Newcastle Geological Sheet, 1966), lying in the outer Holocene barrier and sand dunes. These dunes are stable and have the potential to contain stratified deposits dating back to 4,500 BP (Dean-Jones, 1990).

Archaeological deposits may remain intact in subsurface areas as evidenced by a salvage excavation undertaken within 120 m of the Subject Area (McCardle Cultural Heritage Pty Limited, 2015).

The Shoal Bay soil landscape in the northern section of the Subject Area is characterised by gently inclined, well-drained Pleistocene sand sheets to rolling very low dunes. Slope gradients generally <5%, but on slopes of rolling dunes up to 15%. Local relief generally <5 m and elevation <15 m. Dunes are usually well drained. Soils are deep (>300 cm), well-drained Podzols. (OEH 2019)

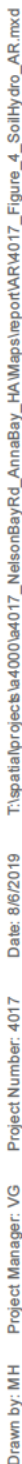
The Hawks Nest soli landscape in the southern section of the Subject Area is characterised by stable, gently undulating, Holocene sand sheets and beach ridges. Local relief <3 m, slope gradients <10%, elevation 3–12 m. Generally well drained apart from isolated low lying poorly drained swales. Vegetation typically comprises uncleared and extensively cleared dry shrubland, woodland and tall open-forest. Soils are deep (>300 cm), well-drained Podzols on dunes with deep (>300 cm) minor Acid Peats/ Siliceous Sands in swampy swales (OEH 2019)

5.1.2 Hydrology

There are no permanent fresh water sources within the Subject Area (see Figure 4). Based on climatic analysis, the investigation area will typically experience comparatively reliable rainfalls under normal conditions. The nearest permanent fresh water sources are available in the surrounding locality at Bobs Farm Creek (and swamp) (2.4 km to the northwest) and Fenninghams Island Creek (2.1 km to the northwest); however, ephemeral drainage lines, which were dry at the time of survey, were observed within the Subject Area. The southern boundary of the Subject Area is 1200 m north of the current coastline.

5.1.3 Ecology

A range of faunal populations including kangaroo, wallaby, goanna, snakes and a variety of birds is present in the Subject Area, with a wider variety of resources available in the nearby swamplands and on the beach front. The wide variety of available resources would have allowed for sustained occupation of the area. The most suitable area for Aboriginal occupation would have been the northern end of the Subject Area. This is due to its nearness to the inter barrier depression (within 60 m) that would have provided easy access to both fresh water, flora, fauna and estuary and marine resources.



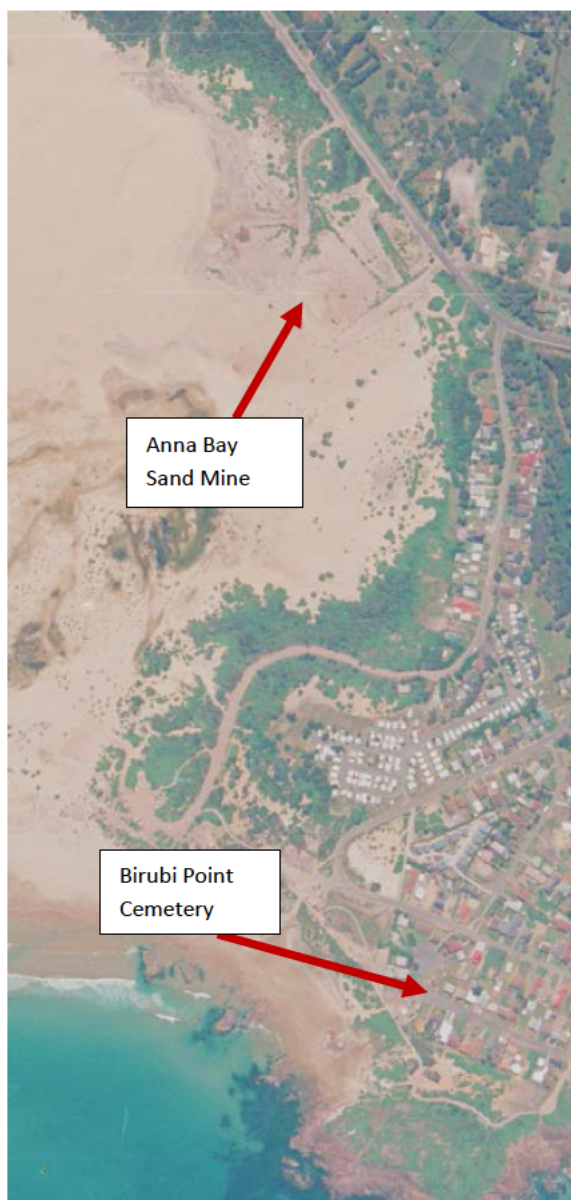
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5.2 Past land use and disturbance

The degree of past land use and disturbance within the Subject Area is minimal. The Subject Area has been cleared at its northern extent, with the initial street frontage to Nelson Bay Rd being resumed in 2015 in order to widen Nelson Bay Road. The original residential structure and swimming pool, which once existed in this area, has been demolished during this resumption process. Current disturbances include ancillary structures, an access road and clearing for a transmission line easement. Historical aerial photography from 1963 and 1988 confirms that the greater majority of the Subject Area was previously undisturbed natural bushland, excepting the part that has been previously developed and fronts the Nelson Bay roadway.

The following subsections present a detailed description of the historical development of the Subject Area and Anna Bay more broadly.

5.2.1 Anna Bay and surrounds



The Stockton Bight was first noted by Captain James Cook in 1770 and later mapped by Lieutenant John Shortland in 1797. The settlement of Anna Bay is located at the north-eastern end of Stockton Beach in the Hunter Region of New South Wales. It is located on the southern side of Port Stephens, which is located to the south of the one million acre land grant to the Australian Agricultural Company (AA Co) (Plate 4). William Cromarty, who was involved with the AA Co settled outside of the Company's holding at Soldier's Point to the north of Anna Bay (ABPS 2014).

The first European settlement in the area involved the establishment of dairy farms, which were constrained to the low-lying areas of Anna Bay in the 1830s (HLA 1995). An unsealed government road, which became the current Nelson Bay Road, was established to link Stockton with Nelson's Bay in the mid nineteenth century, but regular use of the road by cars did not occur until the 1920s (OEH 2015:26).

During World War II, the road between Stockton and Anna Bay was improved, with easier access encouraging more activity to occur in the area, such as holiday accommodation and residential and tourism development (OEH 2015: 26). Sand mining for heavy minerals commenced in 1968 at Anna Bay (located to the east of the Subject Area; see Plate 3), with other mines opening in Salamander, Bobs Farm, Tanilba, Oyster Cove, Williamstown and Medowie from the 1950s (Bartlett 1980).

Plate 3: 1985 aerial photo showing the sand quarry and Birubi Point Cemetery (Source LPI)

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5.2.2 Historic land use in the Subject Area

The degree of past land use and disturbance within the Subject Area is minimal. The Subject Area is located within a land grant belonging to a W. T. Blanch, who is likely John and Lucy Blanch's son William, born in 1863. The Blanch family owned much of the land within the Anna Bay area in the earliest days of European settlement, from at least the 1850s (Anna Bay Public School, 2014). It is unknown from documentary evidence what activities took place within the Subject Area, but it has remained predominately uncleared native vegetation until recent times.

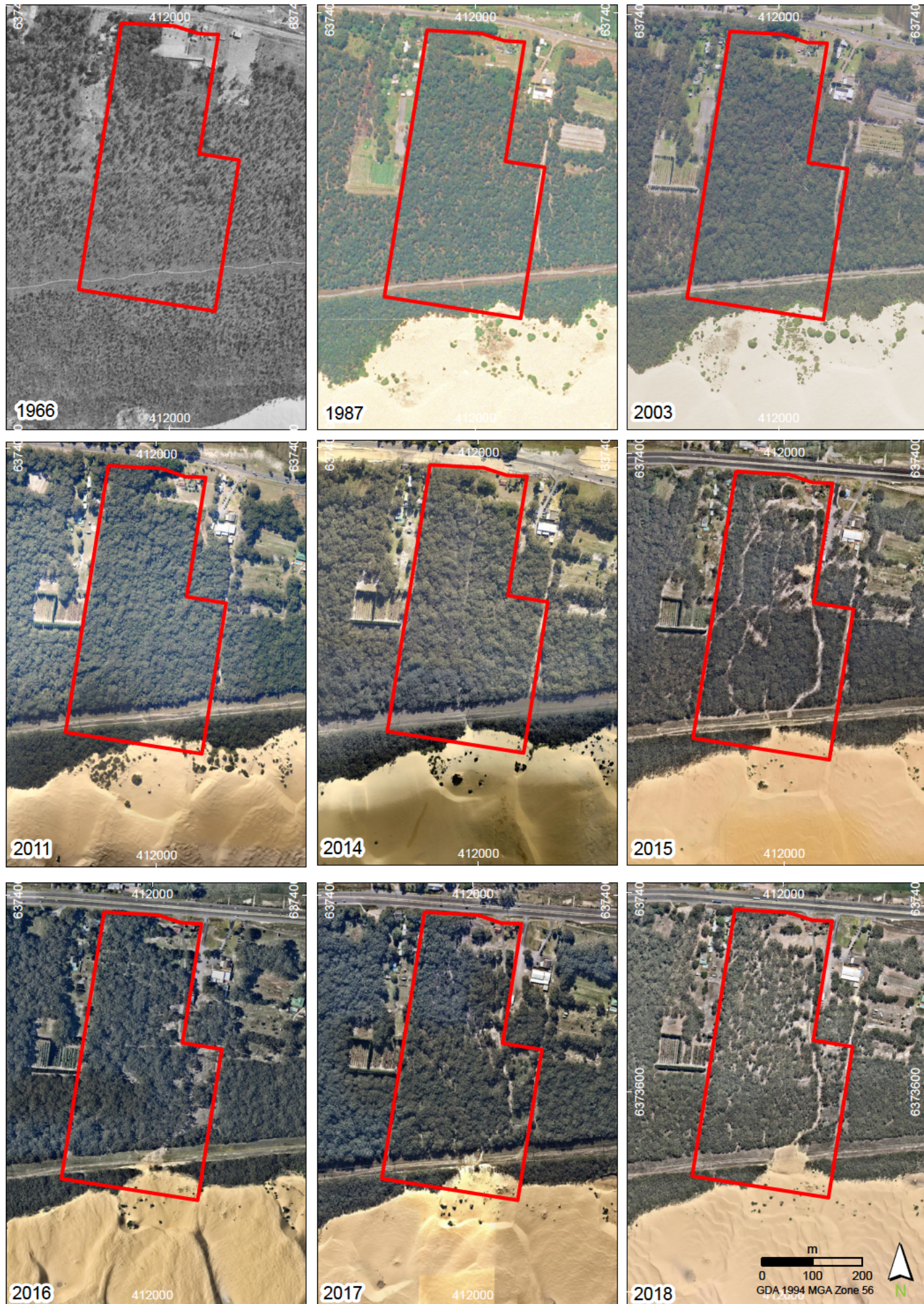
The Subject Area is also located adjacent to the second (and third) Anna Bay Public School buildings (known until 1896 as Hannah Bay Public School). The first school was gazetted in September 1879 and the proposed structure was a slab and bark hut capable of holding twenty pupils. The school was located within William Blanch's land fronting the government road on the northern side of the current Nelson Bay Road (Joe Robinson 1907 quoted in ABPS 2014:23). Construction of the first school was completed in November 1879. When this primitive structure was outgrown, a new plot of land was purchased south of the government road a new school was constructed in 1884. The school was a rounded roof structure made of corrugated iron. It had a verandah and an internal stepped floor with long bench desks which allowed the pupils and teachers to see each other more clearly. This school was demolished and replaced by a new structure in 1910 within the same plot. The newer building consisted of a 21 feet squared hipped roof building with a verandah with a flat floor. The remains of the second school were used to construct a lean-to within the school grounds (ABPS 2014). The school building is visually separated from the Subject Area by a later subdivision.

Historical aerial imagery from 1963 (see Figure 5) shows two garage buildings and a gabled roof building present fronting the road on 4226 Nelson Bay Road. At this time, directly to the west of the building group, within the Subject Area, was a cleared and cultivated field. There were long, potentially farm-related, structures running east-west across the property, extending approximately to the house and barns fronting the road. An unformed, cleared track through the native vegetation, likely relating to the transmission line, ran near the southern boundary of the Subject Area at this time; it was most likely developed following the cessation of the RAAF activities to the south of the Subject Area.

Aerial imagery shows that by 1985, the east-west farm building located to the south of the main domestic building within the Subject Area has been demolished and the majority of the cleared farm paddock to the west of the domestic building has regrown vegetation. It should also be noted that in this imagery, the sand has encroached towards the transmission line from the south, where it was not visible before. The transmission line has also been cleared and a gravel road surface added.

In imagery from 2015, Nelson Bay Road has been widened and straightened. The original residential structure and swimming pool, which once existed in this roadside area, has been demolished during the resumption process. The remaining three garage buildings are now fronting the road. The current access track exists in the 2015 imagery.

During the site inspection (see Section 10.1), it was established that the Subject Area has been cleared at its northern extent. Current disturbances include ancillary structures, an access road, and clearing for a transmission line easement. The extent of clearing and disturbance reduces the likelihood for intact Aboriginal cultural heritage site s or objects to be preserved in this area.



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

6. Regional character

The Worimi people are the traditional custodians of a large area of land known as ‘Worimi country’. Worimi Country was generally bounded by the four rivers: the Hunter River to the south, Manning River to the north, and the Allyn and Patterson rivers to the west, and included the adjoining ocean and waterways. It included 18 clan groups or ‘ngurras’, with the Subject Area falling within the area of the Maiangal ngurra. All spoke the Gathang language. (OEH 2015).

Traditionally, the Worimi people used the beaches to travel between Nelson Bay to the north and Stockton to the south, with Tilligerry Creek used as a route to the surrounding swamplands, creek lines and western areas (McCardle Cultural Heritage, 2015:14). The area known as Stockton Bight has a special cultural significance to the Worimi people as it retains a large amount of cultural history. The Stockton Beach Dune System is the largest mobile dune in coastal Australia and represents an important area of cultural heritage (OEH, 2004).

The area was rich in resources, with direct access to marine (both ocean and estuarine), forest and stone resources from the neighbouring headlands. The history of the Worimi people and the connection with the area is abundantly evident in the extent and diversity of the cultural material present throughout the adjoining areas. The flora and fauna of the region provide traditional foods and medicines and raw materials for a variety of traditional tools and implements. At least 50 plant species are known to be significant in terms of their cultural use associated with traditional tools and implements, food or medicine (Bell & Driscoll 2010).

In April 1770, James Cook sighted the Port and named it in honour of Sir Phillip Stephens, Secretary to the Admiralty, noting in his log book that it appeared “to be sheltered from all winds” and that “there might be a sufficient depth for shipping water in the bay” (NSW Education, unknown:1).

Port Stephens was not entered by Europeans until late 1871 when the ‘Salamander’, docked, transporting convicts to Sydney. It appears that the earliest Europeans to live in the area were five escaped convicts, wrecked at Port Stephens in 1790 (McCardle Cultural Heritage 2015:18). The Worimi, were extremely accommodating taking them into their tribe (McCardle Cultural Heritage 2015:19). Five years later they were ‘rescued’ by Captain W.R. with the Reliance and Supply.

In 1797, Lieutenant John Shortland sailed the narrow inlet around 30km to the south of Port Stephens, finding coal. The settlement of Newcastle soon followed, on Port hunter, initially a convict settlement. By 1822 the town was prospered as free settlement and became the gateway to the Hunter Valley (NSW Education, unknown: 2).

In 1830 a historical account by Robert Dawson described the Worimi Tribe as “utilising spears and shields, wearing belts of opossum fur and using combs formed from the leg bones of kangaroos” (Dawson, 1830:115 in McCardle Cultural Heritage, 2015:17).

Much of the land has changed drastically since 1788, and dispossession has had significant impacts on Worimi people and their culture.

Nevertheless, the land and waters have been used for thousands of years for the hunting and gathering of foods, fishing and the continuation of cultural, spiritual and sacred activities. Aboriginal cultural connections have always been strong in this area and continue today, as it is still a well-utilised fishing and recreational area used by today's Worimi people (MCH 2015).

The Worimi Country can be mapped archaeologically and with traditional knowledge of areas/sites including sacred sites, meeting places, burial ground(s), and travel routes of a large society. There has been a considerable amount of archaeological investigation and reporting throughout the area, with large numbers of Aboriginal cultural heritage sites identified. Dean-Jones (1990, 1992) and Umwelt (2000) have done extensive work in the Worimi Conservation Land. Investigations of a smaller section of the area were Comber (1990) and ERM (1995, 2001). Additionally, Umwelt (1997), Hall (1928), MCH (2004, 2005) and Dyll (2004) have conducted archaeological investigations at Birubi Point.¹

Following the initial period of dune formation and mobility between 6,000 and 4,500 years ago, there have been periods in time when the dunes have been stable. During these periods of prolonged stability, the dunes were vegetated. After each period of stability, mobile dunes developed and buried the vegetated dunes.

Shell middens are quite extensive in the area, with shell deposits consisting predominately of pipi (*Plebidonax deltoids*) shell. Some also contain mud whelk (*Pyrazus ebininus*) and cockle (*Anadara trapezia*) shells; stone artefacts, bird, fish and animal bones (McCardle Cultural Heritage, 2015:17). Additionally, burial sites are recorded within the Worimi Conservation Land and are difficult to predict within the landscape.

6.1 Synthesis of regional character and Aboriginal land use

The Subject Area is located in the Coastal Zone of the Hunter Valley, in particular, it is situated within the outer Holocene barrier and sand dunes. The resources in this area would have been well utilised by Aboriginal people in the past, but modifications including residential developments are likely to have disturbed areas containing archaeological materials. The Outer Holocene Barrier contains stable dunes and the potential to contain stratified deposits dating back to 4,500PB (Dean-Jones, 1990).

The Stockton Bight is a unique coastal embayment and a well preserved example of a dual barrier system close to the major metropolitan centres of Newcastle and Sydney (Australian Heritage Database). The Newcastle Bight has some of the largest midden sites in NSW as well as burial and educational sites (Australian Heritage Database). The barrier dune system of the Stockton Bight is 31 km long and ranges from one to two kilometres in width.

Traditionally, the Worimi people used the beaches to travel between Nelson Bay to the north and Stockton to the south, with Tilligerry Creek used as a route to the surrounding swamplands, creek lines and western areas (McCardle Cultural Heritage Pty Limited, 2015). The area known as Stockton Bight has a special cultural significance to the Worimi people as it retains a large amount of cultural history. The

¹ References were taken from McCardle Cultural Heritage, 2015:17)

Stockton Beach Dune System is the largest mobile dune in coastal Australia and represents an important area of cultural heritage (OEH, 2004).

The area was rich in resources, with direct access to marine (both ocean and estuarine), forest and stone resources from the neighbouring headlands. The history of the Worimi people and the connection with the area is abundantly evident in the extent and diversity of the cultural material present throughout the adjoining areas. For example, spears used for fishing were made from the flowering stem of the Grass Tree or Gynea Lily, with prongs of ironbark used on the tips.

Port Stephens was not entered by Europeans until late 1871 when the 'Salamander', docked, transporting convicts to Sydney. It appears that the earliest Europeans to live in the area were five escaped convicts, wrecked at Port Stephens in 1790 (McCardle Cultural Heritage Pty Limited, 2015). The Worimi were extremely accommodating, taking them into their tribe (McCardle Cultural Heritage Pty Limited, 2015). Five years later they were 'rescued' by Captain W.R. Broughton with the Reliance and Supply.

The Worimi people maintain a strong relationship with their traditional lands. Despite the social and cultural dislocation that would have occurred post-European settlement of the area, many Aboriginal people continue to live within the Port Stephens region and its surrounds, and continue to care for country and make decisions on the management and maintenance of cultural heritage sites and matters.

"The project area is located close to a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to our ancestors and storylines". (Anthony Anderson, Mur-Roo-Ma Incorporated).

7. Predictive model

Predictive modelling has been developed for the area utilising data from the archaeological, geological and geomorphic research presented in the ACHAR. Previous archaeological studies undertaken throughout the area provide a good indication of Aboriginal cultural heritage site types and Aboriginal cultural heritage site patterning in the area. These studies have shown that shell middens associated with stone artefacts and middens with only shell fragments are the most predominate Aboriginal cultural heritage site types within the area. The most common Aboriginal cultural heritage site location is the seaward area of active transgressive dunes/ active blowout. This is then followed by the beach fore dune and outer basin (Eric Martin and Associates, 2002:34). The Subject Area lies in the Outer Holocene barrier and sand dunes.

The general predictions and key trends are listed below:

- The most common Aboriginal cultural heritage site types are open Aboriginal cultural heritage site s containing shell with artefacts, followed by isolated finds.
- Aboriginal cultural heritage site s are usually located within 50 metres of reliable water source.
- Aboriginal cultural heritage site s are located both on the Holocene and Pleistocene dunes overlooking the interbarrier depression.
- Aboriginal cultural heritage site s are not usually found in the interbarrier depression.
- Aboriginal cultural heritage site types are predominately shell middens, stone tools and may also contain charcoal.
- Artefact scatters, isolated finds, scarred trees, burials and ceremonial sites may also be found along the dunes.
- Larger Aboriginal cultural heritage site s with higher densities of artefacts are more likely to be found close to stream confluences and permanent water sources, such as Tillegerry Creek (approximately two kilometres from the Subject Area).
- Artefacts typically date to the Holocene.
- Both middens (including estuarine shell species, rock oysters and mud whelk) and open camp sites are located on the inner landward margin of the Holocene dunes.
- Stone artefact types include flakes, flaked pieces, broken flakes, cores and tools.
- ***Artefact scatters are most commonly linked in close proximity to permanent water sources including creeks, swamps, the inter barrier depression and the coast.***
- ***Frequency and density of artefacts are directly related to location within the landscape.***
- ***Large Aboriginal cultural heritage site s increase markedly with proximity to permanent water sources.***
- ***The majority of Aboriginal cultural heritage site s will be subject to disturbances including human and natural.***
- ***High concentrations of artefacts are more likely to be located within resource rich areas.***

A site specific predictive model was developed and is described below. This predictive model has been developed based on a review of landscape context and individual landforms, ethno historical evidence of traditional land use, distribution of natural resources, the results of previous archaeological work in the vicinity of the study area and the predictive modelling proposed in previous investigations.

- Shell artefacts and stone artefacts will be the most common Aboriginal cultural heritage site type across the landscape and are the most likely Aboriginal cultural heritage site type to occur within the Subject Area.
- The unconsolidated sand at the top of the dune within the Subject Area is predicted to have lower archaeological integrity owing to the mobility of the dunes, than the stable sediment at the base of the dune, which has a higher likelihood of containing in situ archaeological deposits.
- Aboriginal cultural heritage sites will most commonly be low density artefact scatters or isolated finds, although high density scatters may also be present.
- Relatively undisturbed soils have potential to contain subsurface archaeological deposits.
- Excavations within the region suggest that high densities of artefacts are present around 50 m from water sources, and that subsurface material may be much greater than indicated by surface numbers of artefacts. Densities of artefacts are likely to be lower within the Subject Area due to its distance from water sources.
- Given the environmental context of the sand dunes, and the proximity to Birubi Aboriginal Burial Ground, it is possible that burials may occur in the sand dunes though such an occurrence would be rare. Burial sites can occur anywhere but generally in significant landform locations and generally in soft soils.
- The following Aboriginal cultural heritage site types are **unlikely** to occur in the Subject Area:
 - Stone quarry sites, axe grinding grooves, stone engravings/art and shelter sites due to the lack of suitable geology.
 - Scarred or carved trees due to the extent of vegetation clearing in the region.

8. Sampling Strategy

8.1 Archaeological survey

The aim of the survey was to inspect the impact footprint of the Subject Area to identify and ground-truth any Aboriginal cultural heritage site s that were already registered, and to identify Aboriginal cultural heritage site s that may be present within the Subject Area. It also aimed to provide further information on the Aboriginal cultural heritage values of the Subject Area. The field survey covered the entire Subject Area with an additional buffer around the entire extent of the proposed impact footprint including the manager's residence/site office as well as the sand quarry. All data was recorded in accordance with the Code of Practice.

8.2 Archaeological test excavation

The purpose of this section is to describe the method that was used to conduct archaeological test excavation of the area identified as having potential for archaeological deposits (PAD), Anna Bay PAD-1 (AHIMS ID#38-5-0347), and would be impacted by the proposed sand extraction. The aim of the test excavation was to provide further information on the presence, nature, significance and extent of sub-surface archaeological deposit within the Subject Area, and the Aboriginal archaeological values of the Subject Area.

The environmental context of the PAD, being an unconsolidated sand dune, means that test excavation methodology suitable for the unstable landform does not follow the conditions and methodology set out in the Code of Practice. As such, it was proposed to implement alternate excavation methods, as outlined in the test excavation methodology. Owing to these factors, an AHIP was sought from the OEH to complete an archaeological testing program to test the area identified as Anna Bay PAD-1 (AHIMS ID#38-5-0347). The AHIP (C0004974) was issued on 8 July 2019 (see Annex D).

The test excavations targeted Anna Bay PAD 1, as it would be directly impacted by the proposed development, and has been assessed as having the potential to contain Aboriginal artefacts. The proposed quarry would remove all of the sand within the PAD to ground level, destroying any in situ Aboriginal cultural heritage site s. The remainder of the Subject Area will either not be impacted during the proposed project, or has been disturbed to an extent where the likelihood of Aboriginal artefacts existing is significantly lower than the Anna Bay PAD 1.

10–20 non-stratigraphic shovel test pits were planned to be excavated along the top of the sand dune, within the impact footprint and AHIP area. The purpose of these trenches would be to:

- identify the presence or absence of Aboriginal objects within the highly dynamic area of the sand dune; and
- collect soil samples for pH test, and munsell colour determination.

Additionally, 10–20 stratigraphic trenches measuring 50 cm x 50 cm were planned to be excavated by hand at the base of the dune, within the AHIP area. The purpose of the test pits was to:

- Establish the stratigraphy of potential subsurface deposits.
- Identify the presence or absence of Aboriginal objects.
- Collect radiocarbon dating samples, if present.
- Collect soil samples.
- Assist in the identification of archaeologically sterile unit should that occur within the impact footprint.

It was anticipated that a maximum of 20 m² would be excavated during the test excavations. This is less than 0.3% of the total area of Anna Bay PAD 1, being 6793 m². Expansion test pits, triggered by the criteria in Section 4.4.3 would be limited to an additional 40 m².

A methodology for the test excavation was developed in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW 2010* and provided to the RAPs as part of the Stage 2 and 3 consultation process, documented in Section 3 of the Aboriginal Cultural Heritage Assessment Report.

9. Assessment and field methods

The following methods were used to identify archaeological resources, heritage values and significant cultural themes for the Subject Area:

- Aboriginal community input – this was sought throughout the project via the consultation process, participation in archaeological fieldwork and other correspondence (see Section 3 of the ACHA).
- Archaeological research, including landscape characterisation, analysing previous archaeological works in the region and field survey (Attachment 2, Section 4, Section 5, Section 6, Section 7).
- Archaeological test excavation (Section 10).

9.1 Archaeological survey

The visual inspection of the Subject Area was undertaken on 11 October 2018 by Balazs Hansel (Senior Heritage Consultant; Niche) and a groups of six RAPs representatives (Table 5) The field survey covered the entire Subject Area with an additional buffer on around the entire extent of the proposed impact footprint including the haul road, machinery shed and caretaker residence and sand mine.

The survey methodology is outlined below:

- A hand held GPS unit was used to record all tracks and appropriate Aboriginal cultural heritage site data for the survey.
- Representative photographs were taken of survey units, different visibility levels, exposures and disturbed areas.
- Different types and level of exposure was recorded, defined as an estimate of the area which has a likelihood of revealing buried artefacts or deposits. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground, i.e. visibility refers to what reveals (Burke and Smith 2004:78-80).
- Archaeological visibility was recorded, defined as the amount of bare ground on the exposures which might reveal artefacts or other archaeological materials, i.e. visibility refers to what conceals (Burke and Smith 2004:78-80).
- Effective survey coverage area was also recorded (the area of the survey unit multiplied by the visibility percentage and exposure percentage).

9.2 Archaeological test excavation

The archaeological test excavation of the Subject Area determined whether Aboriginal objects and archaeological potential exist within the Subject Area and was conducted in accordance with conditions set out in AHIP C0004974.

The methodology for the test excavation was agreed by the RAPs during Stage 2 of the consultation process, and a copy of it is included in Appendix B of the ACHAR.

The test excavations was carried out from 23 to 25 July 2019, and focused on areas of potential sensitivity that would be impacted by the proposed works.

It was predicted that it would be too difficult to test the sand body within Anna Bay PAD 1 using traditional methods without a significant safety risk due to the very loose nature of the sand. Owing to this, it was proposed to use two different methods of excavation within the PAD.

On top of the sand dune, where the sand is extremely loose and soft, test excavations were:

- Carried out using a shovel to dig test pits measuring approximately 50 cm x 50 cm over two 5 m x 5 m grids. Figure 7 depicts the positioning of the test pits.
- Test Pits were hand excavated.
- Excavation ceased:
 - Where it was considered that digging any deeper would be unsafe without the aid of benching or shoring; or
 - where sufficient information was recovered to understand the extent, nature and significance of the archaeological deposit, if any.
- All excavated material was dry sieved through 3 mm mesh screens. These test pits were not dug in controlled spits, owing to the unconsolidated nature of the sediment profile.
- Photographic recording of each hole was taken, as well as GPS locations.

The test excavation methodology for the stable ground surface at the base of the sand dune is outlined below:

- Test excavation pits measured 50 cm x 50 cm and were laid out over two 10 m x 10 m grids. Figure 7 depicts the positioning of the test pits.
- The excavation pits were hand excavated.
- Excavation was carried out using 5 cm spits for the first spit, and 10 cm spits for each test pit thereafter to:
 - the base of artefact bearing layers;
 - a viable B horizon indicating a base of artefact layer;
 - where it would be considered that digging any deeper would be unsafe; or
 - where sufficient information has been recovered to understand the extent, nature and significance of the archaeological deposits
- Should it have been necessary, test excavation pits would have been expanded using 50 cm x 50 cm pits to document archaeological features or areas of relatively high artefact density. These areas would not exceed 3 m² in surface area.
- All excavated material was weighed prior to sieving to allow for the provision of proportional weights for analysis of shell or faunal bone if it was identified within the PAD.
- All excavated material was dry sieved through 3 mm mesh.
- Soil was retained for backfilling of test pits.
- All excavation units (spits, contexts, stratigraphic units etc.) were assigned a unique identifier.
- If specific archaeological features such as hearths were identified the feature would have been excavated stratigraphically and been photographed and drawn.
- Photographic recording of each pit and spit as well as large scale photos of transects were taken.

- Scaled drawings of one section of each test pit were completed.
- Non-differential GPS readings were taken at each test pit location.

Altogether 10 test pits were dug on the top of the dune, and six were dug at the base of the dune. None of the test pits were expanded as they did not:

- contain cultural layers;
- high numbers of artefacts;
- archaeological features; or
- dateable material.

9.3 Artefact analysis and cataloguing

No artefacts were identified during the test excavations.

9.4 Shell attribute recording and analysis

No shell material was identified during the test excavations.

9.5 Faunal remains attribute recording and analysis

No faunal material was identified during the test excavations.

9.6 Sensitive cultural information- Management protocol

During the consultation process the proponent and Niche provided the opportunity for the RAPs to provide cultural information, including a statement of the value of identified Aboriginal cultural heritage sites and other matters. The input points were listed within the excavation methodology that has been included in Attachment 2 of the ACHAR, information would have been accepted at any point during the project prior to the finalisation of the Aboriginal Cultural Heritage Assessment and Archaeological Report.

RAPs were made aware that the proponent or Niche staff would seek cultural information and supporting evidence in regard to matters of cultural value.

In the event that a stakeholder had sensitive or restricted public access information it was proposed that the proponent and Niche would manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It was anticipated that the protocol would include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- any restrictions on access to the material
- any restrictions on communication of the material (confidentiality)
- any restrictions on the location/storage of the material
- any cultural recommendations on handling the material
- any names and contact details of persons authorised within the relevant Aboriginal stakeholder to make decisions concerning the Aboriginal material and the degree of authorisation.

- any details of any consent given in accordance with customary law
- any access and use by the registered Aboriginal stakeholders of the cultural information in the material.

No sensitive material was provided by the RAPs to the proponent or Niche to be included within the ACHA assessment or report.

10. Results

10.1 Archaeological survey

The archaeological survey of the Subject Area was carried out on the 11 October 2018. Details of the participants are provided in Table 5 below.

Table 5: Details of field survey participants

Name	Organisation
Balazs Hansel	Niche
Bec Young	Mur-roo-ma Incorporated
Candy Towers	Worimi Traditional Owners Indigenous Corporation
Dave Feeney	Karuah Indigenous Corporation
Jamie Merrick	Worimi Local Aboriginal Land Council
Laurie Anderson	Nur-Run-Gee Pty Ltd
Tamara Towers	Worimi Traditional Owners Indigenous Corporation

The field survey covered the entire Subject Area with an additional 10 m buffer around the entire extent of the proposed impact footprint including the haul road, machinery shed, caretaker residence and sand mine.

A summary of survey coverage and landform coverage is provided in Figure 6.

Ground surface visibility was low to moderate across the subject area with 50% exposure, mostly along the already existing haul road and around the sand dune and powerline easement. Exposure was significantly lower on both sides of the haul road and the proposed location of the machinery shed and caretaker residence. Effective survey coverage was 20%.

The already recorded Aboriginal cultural heritage site 'NBRd 4 AHIMS ID#38-5-0320' was relocated in the northern part of the property. The Aboriginal cultural heritage site will not be impacted by the proposed haul road, as the section in close vicinity of the Aboriginal cultural heritage site has been already built and there are no modifications proposed.

No additional Aboriginal cultural heritage sites were identified, however the survey identified areas of archaeological potential within the following areas:

- Anna Bay PAD 1 (AHIMS ID 38-5-0347): The immediate vicinity and foreground of the sand dunes in the southern section of the property.

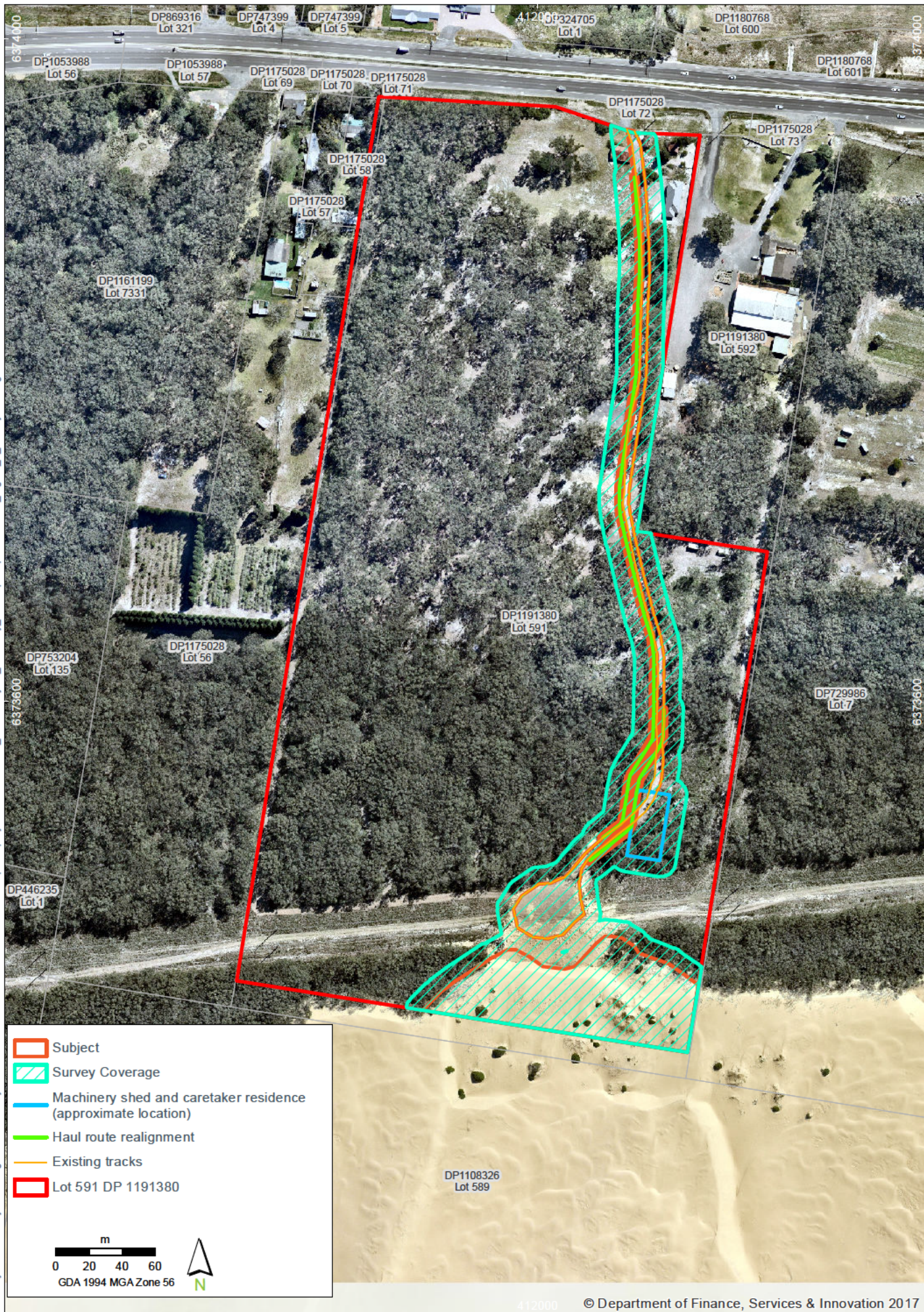
The survey recommended further investigation in the form of test excavation to increase archaeological exposure and visibility and to test the potential of the landform for archaeological resources.

Table 6: Surface survey coverage

Landform	Survey Unit (m ²)	Visibility %	Exposure %	Effective Survey coverage area (m ²)	Effective coverage %
Outer dunes	25905	40%	50%	5181	20

Table 7: Landform summary

Landform	Landform area (m ²)	Area effectively surveyed (m ²)	% of landform effectively surveyed	Number of Aboriginal cultural heritage sites	Number of artefacts or features
Outer dunes	25905	5181	20	2	1



10.2 Test excavation results

No Aboriginal objects were identified during the test excavation. A summary of test pits, depths and finds is provided in Table 8. The locations of the test pits within the Subject Area are depicted in Figure 7.

Table 8: Summary of excavation results

Test Pit ID	Depth excavated	Excavation ceased at	Aboriginal objects summary
Top of Dune			
DT-TP-01	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-02	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-03	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-04	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-05	0-500 mm	Unstable depth in A2 horizon	None
DT-TP-06	0-600 mm	Unstable depth in A2 horizon	None
DT-TP-07	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-08	0-650 mm	Unstable depth in A2 horizon	None
DT-TP-09	0-550 mm	Unstable depth in A2 horizon	None
DT-TP-10	0-650 mm	Unstable depth in A2 horizon	None
Base of Dune			
DB-TP-01	0-350 mm	B1 Horizon	None
DB-TP-02	0-350 mm	B1 Horizon	None
DB-TP-03	0-1150 mm	B2 Horizon	None
DB-TP-04	0-550 mm	B2 Horizon	None
DB-TP-05	0-550 mm	B2 Horizon	None
DB-TP-06	0-750 mm	B2 Horizon	None

10.2.1 Soil profiles

The soil profile of Anna Bay PAD 1 is that of a sand dune with loose surface conditions and a rapidly draining profile. Soil horizon A1 consists of a dry, coarse-grained, sand with charcoal or gravel fragments. Soil horizon A2 consists of a moist, coarse sand with no charcoal or gravel fragments evident. Both A-horizon sediments were well sorted. Soil horizon B1 contains a finely grained, well sorted, very dark grey sand with high levels of decomposing organic material. Soil horizon B2 consists of grey coarse-grained sand with few inclusions; this sand is noticeably less compacted than horizon B1. See Annex B for detailed test pit data

10.2.1.1 Top of Dune

The A Horizon was present in all pits and comprised a clean loose sand that became damper and more compacted with increasing depth as it transitioned from A1 to A2. The test pits at the top of the dune all contained sand with minimal inclusions. On top of the dune, excavation ceased at approximately 600–650 mm deep when the pits became too unstable to continue digging safely.

10.2.1.2 Base of Dune

Spit 1 from the test pits at the base of the dune contained A1 horizon sand with small pieces of introduced material such as broken glass, ceramics, gravel and fill material. This transitioned to A2 at approximately 15cm below the surface. Small amounts of decomposing organic material started to appear in the test pits at approximately 200 – 300mm below the surface (a2 transitioning to B1). The sand then transitioned to a finer very dark grey sand with increasing amounts of decomposing organic material between 200 – 400 mm below the surface. This layer became increasingly darker with higher organic content and compaction with depth. It then gave way to a loose, coarse grained, grey sand (B Horizon) with no organic material at depths between 500 and 800 mm below the surface. At the base of the dune, excavation ceased in the B Horizon.

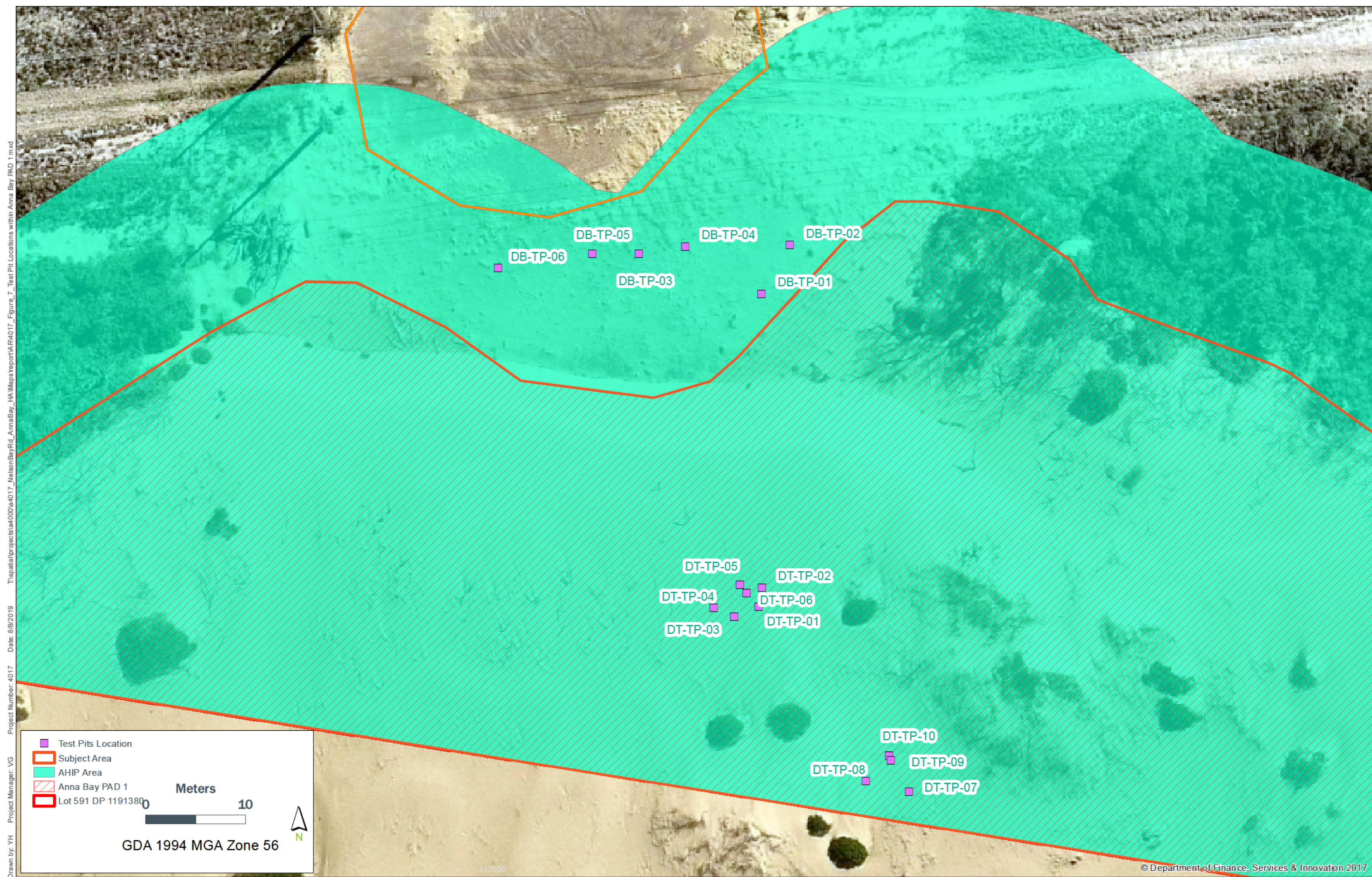


Plate 5: Typical section of a test pit at the top of the dune (DT-TP-06)



Plate 6: Typical section of a test pit at the base of the dune (DB-TP-04).

Drawn by: YH Project Manager: VG Project Number: 4017 Date: 8/8/2019 T:\spatial\projects\4000\4017_NelsonBayRd_AnnBay_HA Maps\report\AR4017_Figure_7_Test Pit Locations within Anna Bay PAD 1.mxd



Suburb : Anna Bay, LGA: Port Stephens Council, Parish: Tom area

11. Analysis and discussion

One Aboriginal cultural heritage site (NBRd 4 AHIMS ID#38-5-0320) was relocated, and an area of high archaeological sensitivity, Anna Bay PAD 1 (AHIMS ID 38-5-0347) was identified during the field survey.

Aboriginal cultural heritage site NBRd 4 AHIMS ID#38-5-0320 will not be harmed by the development.

The archaeological test excavation of Anna Bay PAD 1 did not identify any Aboriginal objects. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site. An Aboriginal Site Impact Recording Form was submitted to BCD advising of the updated status “Not a Site” (Annex E)

During the test excavation, discussions with the owner of the neighbouring property informed the field team that the previous owner of the Subject Area had cleared all of the vegetation that grew along the dunes in Anna Bay PAD 1 approximately 3 years ago. The previous owner also brought in introduced material including roadbase and gravel to construct tracks. The proponent advised that the removal of the vegetation allowed the dunes to move northward to such an extent that emergency extraction of sand was required to be carried out approximately 1 year ago to remove sand from a dangerous height beneath the transmission lines. The loose nature of the aeolian sand on the dunes, and the presence of foreign material at the base of the dunes support these accounts.

The RAPs discussed that during the construction of Nelson Bay Road, the vegetation was mulched and deposited in the Subject Area. They suggested that this could be what is evidenced by the layer of sediment containing decomposing organic material that was identified during the test excavation.

Based on the above, it can be deduced that no known Aboriginal objects or deposits likely to contain Aboriginal objects will be harmed by the development.

12. Scientific values and significance assessment

12.1 Assessment framework

The Burra Charter (Australia ICOMOS 2013) defines the basic principles and procedures to be observed in the conservation of important places. It provides the primary framework within which decisions about the management of heritage sites in Australia should be made.

The NSW Aboriginal cultural heritage regulatory framework supports the significance assessment of Aboriginal archaeological sites and provides guidelines for this ACHA within the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) outlines two main themes in the overall Aboriginal cultural heritage significance assessment process, namely, the identification of the cultural/social significance of Aboriginal objects and/or places to Aboriginal people and the identification of the scientific (archaeological) significance to the scientific/research community. These themes encapsulate those aspects of the Burra Charter that are of particular relevance to Aboriginal objects and places.

12.1.1 Cultural significance

The Burra Charter defines cultural significance as being derived from the following values: aesthetic value, historic value, scientific value and social value however, more precise categories may be developed as an understanding of a particular place or site increases.

Table 9: Values from which cultural significance is derived

Value type	Description
Aesthetic Value	Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use.
Historic Value	Historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the setting are substantially intact, than where it has been changed or evidence does not survive. However, some events or association may be so important that the place retains significance regardless of subsequent treatment
Scientific Value	The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness (conservation value), and on the degree to which the place may contribute further substantial information.
Social Value	Social or cultural value refers to the spiritual, traditional, historical or contemporary associations and attachments the place or area has for Aboriginal people. Social or

Value type	Description
	<p>cultural value is how people express their connection with a place and the meaning that place has for them.</p> <p>Places of social or cultural value have associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods or events. Communities and individuals can experience a sense of loss should a place of social or cultural value be damaged or destroyed.</p>

12.1.2 Scientific significance

The Guidelines specify that information about scientific values will be gathered through archaeological investigation carried out according to the Code of Practice. The Code of Practice itself does not specify criteria for assessment of Aboriginal objects, but rather suggests to “identify the archaeological values and assess their significance.” The assessment must be supportable and the assessment criteria must reflect best practice assessment processes as set out in the Burra Charter. The scientific values described in the Burra Charter were considered further by the then NSW National Parks and Wildlife Service in their *Aboriginal Cultural Heritage Standards and Guidelines Kit* (DEC 1997). In lieu of specific criteria, the advice from the *Aboriginal Cultural Heritage Standards and Guidelines Kit* (DEC 1997) is summarised and paraphrased below to provide guidance to the assessment of scientific values.

Table 10: Criteria for assessing scientific value

Scientific value	Description
Research potential	It is the potential to elucidate past behaviour which gives significance under this criterion rather than the potential to yield collections of artefacts. Matters considered under this criterion include the intactness of a site, the potential for the site to build a chronology and the connectedness of the site to other sites in the archaeological landscape.
Representativeness	As a criterion, representativeness is only meaningful in relation to a conservation objective. Presumably all sites are representative of those in their class or they would not be in that class. What is at issue is the extent to which a class of sites is conserved and whether the particular site being assessed should be conserved in order to ensure that we retain a representative sample of the archaeological record as a whole. The conservation objective which underwrites the ‘representativeness’ criteria is that such a sample should be conserved.
Rarity	This criterion cannot easily be separated from that of representativeness. If a site is ‘distinctive’ then by definition, it will be part of the variability which a representative sample would represent. The criteria might best be approached as one which exists within the criteria of representativeness, giving a particular weighting to certain classes of site. The main requirement for being able to assess rarity is to determine what is common and what is unusual in the archaeological record, but also the way that archaeology confers prestige on certain sites because of their ability to provide certain information. Items may be common, uncommon or rare. The criterion of rarity may be assessed at a range of levels including local, regional, state, national, and global.
Educational potential	This criterion relates to the ability of the cultural heritage item or place to inform and/or educate people about one or other aspects of the past. It incorporates notions of

Scientific value	Description
	intactness, relevance, interpretative value and accessibility. Where archaeologists or others carrying out cultural heritage assessments are promoting/advocating the educational value of a cultural heritage item or place it is imperative that public input and support for this value is achieved and sought. Without public input and support the educative value of the items/places is likely to not ever be fully realised.
Aesthetics	In relation to heritage places, aesthetic significance is generally taken to mean the visual beauty of the place. Aesthetic value is not inherent in a place but arises in the sensory response people have to it. The guidelines provide no expectation for archaeologists to consider aesthetic values, it is often the case that the aesthetics including the physical setting of an archaeological site or a landscape contributes to its cultural heritage significance. Examples of archaeological sites that may have high aesthetic values include rock art sites or sites located in environments that evoke strong sensory responses.

12.1.2.1 Grading scientific values

The following gradations, where a site or zone satisfies at least one criterion, have been applied to provide a measure of the values/significance for Aboriginal objects identified within the Subject Area, and to provide an overall assessment of the significance of each of the zones used that define the Subject Area.

Table 11: Criteria for grading significance

Gradation	Description
Low	The site or object contains only a single or limited number of features, and has no potential to meaningfully inform our understanding of the past beyond what it contributes through its current recording (i.e. no or low research potential). The site or object is a representative but unexceptional example of the most common class of sites or objects in the region. Many more similar examples can be confidently predicted to occur within the Subject Area, and in the region.
Moderate	The site or object derives value because it contains features, both archaeological and contextual, which through further investigation may contribute to our understanding of the local past. These features include, but are not limited to: the relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a relatively large assemblage of stone artefacts. The presence of a diverse artefact and feature assemblage, and connectedness with landscape features and other notable sites provide relatively higher representative and rarity values than sites of low significance.
High	The site or object has value because it contains archaeological and/or contextual features which through further investigation may significantly contribute to our understanding of the past, both locally and on a regional scale. These features include, but are not limited to: Aboriginal ancestral remains; the site's relationship with landscape features or other Aboriginal archaeological sites or areas of identified heritage importance; diagnostic archaeological or landscape features that inform a chronology; and a very large assemblage of stone artefacts associated with other features such as oven remains or shell midden. Such sites will be relatively rare, and will be representative of a limited number of similar sites that make up this class; hence they derive high representative and rarity values.

12.2 Assessment of archaeological significance

Assessments of the Aboriginal cultural heritage site s identified within the Subject Area are presented below in Table 12 and Table 13.

Table 12: Identified values of Aboriginal cultural heritage site Anna Bay PAD 1 (AHIMS ID 38-5-0347)

Aboriginal cultural heritage site details	Anna Bay PAD 1 (AHIMS ID 38-5-0347)
Statement of significance	Not an Aboriginal cultural heritage site.
Submissions	Full copies of the submissions made from the RAPs are presented in Appendix C.

Table 13: Identified values of Aboriginal cultural heritage site NBRd 4 (AHIMS ID#38-5-0320)

Aboriginal cultural heritage site details	NBRd 4 (AHIMS ID#38-5-0320)
Statement of significance	The overall archaeological value of NBRd 4 AHIMS ID#38-5-0320 is considered to be low to moderate. Assessment of each of the criteria for archaeological (scientific) value and significance is presented below.
Social or cultural values	No specific cultural or social values have yet been attributed to the NBRd 4 Aboriginal cultural heritage site specifically, but the wider project area is located close to a noted Aboriginal Place and the broader areas are very significant to local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to their ancestors and storylines.
Historic value	The Subject Area has been used as a small-hold farm property since European settlement in the region in the mid nineteenth century. The Aboriginal cultural heritage site is located north of sand dunes, which are connected to the Port Stephens Local Environmental Plan (LEP) listed “Stockton Beach Dune System”, an item of local heritage significance. The heritage curtilage for this item terminates approximately 3 km to the west of the Subject Area. Also, a listed Aboriginal Place at Birubi Point, and a local heritage item, the Birubi Point Cemetery, are located within two kilometres of the Subject Area. The second site of the Hannah (later called Anna) Bay School building is located to the east of the Subject Area, but this is outside its boundaries. Despite the proximity of listed heritage items and places, no historic significance has been attributed to the NBRd 4 Aboriginal cultural heritage site.

Scientific (Archaeological) value	The Aboriginal cultural heritage site has unknown scientific (archaeological) value. It is comprised of surface shell scatters with the potential for subsurface deposit. It may provide additional information regarding Aboriginal life in the local or regional area; however, as it will not be harmed during the proposed works for this project, it has not been further assessed,
Aesthetic value	The Aboriginal cultural heritage site has low aesthetic value.
Submissions	Full copies of the submissions made from the RAPs are presented in Appendix C.

13. Impact assessment

The Proponent intends to establish a sand quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. The main impacts of the development proposal include:

- The extraction of sand to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.
- This work will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

The *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) requires that both direct and indirect harm to Aboriginal objects and Aboriginal places be considered. Generally direct harm refers to occasions where an activity physically impacts an Aboriginal cultural heritage site or objects and therefore affects the heritage values possessed by the Aboriginal cultural heritage site or objects. Indirect harm is usually taken to mean harm stemming from secondary consequences of the activity, and may affect Aboriginal cultural heritage sites or objects as an indirect consequence of the activity. Examples of such indirect harm are increased visitors to an Aboriginal cultural heritage site, or increased erosion in an area as a result of an activity.

The proposed activity will not harm any known Aboriginal objects or deposits likely to contain Aboriginal objects. The previously recorded Aboriginal cultural heritage site (NBRd 4 AHIMS ID#38-5-0320) will not be impacted by the proposed works, as the section in close vicinity to the Aboriginal cultural heritage site has been already built and there are no significant modifications proposed for this road. The dynamic aeolian sand comprising the dune in the southern extent of the Subject Area will be targeted by the quarrying activities. The area in front of the dune will not be excavated during the works, this area will only be impacted by the operation of equipment and machinery. The archaeological test excavation of Anna Bay PAD 1 did not identify any Aboriginal objects. As a result, the investigations concluded that Anna Bay PAD 1 is not an Aboriginal cultural heritage site.

The RAPs have not identified any heritage values that would be harmed by the proposed activity.

Table 14: Impact assessment summary

ACHsite name and AHIMS ID	Type of harm	Degree of harm	Consequence of harm
NBRd 4 (AHIMS ID#38-5-0320)	None	None	No loss of values

14. Management and mitigation measures

14.1 Conservation Principles and Management Framework

The two founding principles behind the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011:12) are ecologically sustainable development and intergenerational equity. These principles hold that “the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations”.

The strong emphasis, as in the Burra Charter, is to quantify and understand the heritage values of a place, a site, or an object and exhaust avenues of avoiding harm to those values. If harm cannot be avoided then there must be consideration and implementation of strategies to minimise harm (OEH 2011:13).

It follows that the hierarchy for consideration in regards to management strategies available for surface stone artefacts and subsurface stone artefacts and areas of archaeological potential, fall into four general categories, in order of preference from a conservation perspective:

- avoidance and in-situ conservation;
- partial avoidance and partial in-situ conservation (includes partial harm);
- harm caused with mitigating circumstances such as collection or salvage; and
- unmitigated harm.

The four general categories (described above) have been considered in the following subsections with regard to both direct impacts (e.g. surface disturbance) and indirect impacts (e.g. monitoring activities).

The management and mitigation measures have been prepared in consideration of comments received from the RAPs during the consultation process. All comments received from the RAPs are considered in Section 3 of the ACHAR.

14.2 Designing to avoid

No harm to Aboriginal objects is proposed.

14.3 Mitigating harm

Though no harm to Aboriginal objects is proposed, the management and mitigation measures in Table 15 should be considered to ensure continued compliance with the NPW Act.

Table 15: Consideration of management and mitigation strategies

Management Risk / Impacted Value	Strategies considered	Response
Management Risk – Compliance and Unexpected Finds (excluding human remains)	Communication to employees, site visitors, contractors and landowners	<ul style="list-style-type: none"> All workers should be inducted into the Subject Area so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of any future consent with respect to Aboriginal heritage prior and during and after construction activities. In the unlikely event of the identification of artefacts within the Subject Area, work in the surrounding area is to stop immediately. A temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site. In consultation with the RAPS for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material. If the material is an Aboriginal object, the Proponent will notify: <ul style="list-style-type: none"> the BCD's Enviroline on 131 555; and representatives of the RAPS. Facilitate, in co-operation with the appropriate authorities and the RAPS: <ul style="list-style-type: none"> The recording and assessment of the finds Compliance with any legal requirements and BCD directions The development and implementation of appropriate management strategies based on an assessment of significance of the finds. Recommencement of ground disturbance works may only resume once legal requirements are fulfilled
Management Risk – Unexpected Finds – human remains	Stop work and follow procedure for discovery of suspected human remains	<ul style="list-style-type: none"> All workers should be inducted into the Subject Area so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> and any conditions of consent prior and during and after construction activities In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately. The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm. The NSW Police must be contacted immediately.

Management Risk / Impacted Value	Strategies considered	Response
		<ul style="list-style-type: none"> • No further action is to be undertaken until the NSW Police provide written notification to the Proponent. • If the skeletal remains are identified as Aboriginal, The Proponent or their agent must contact: <ul style="list-style-type: none"> ▪ the BCD's Enviroline on 131 555; and ▪ representatives of the RAPs. • No works are to continue until the BCD provides written notification to the proponent or their Agent. • An Aboriginal Heritage Impact Permit may be required to manage human remains.

15. Recommendations

The ACHA was carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water NSW, 2010). The assessment involved consultation with RAPs in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* and their participation in the field survey and test excavation (details of which are in Section 3 and Appendix C of the ACHAR). One Aboriginal cultural heritage site was relocated during the field survey, but no Aboriginal Objects were identified during the test excavation.

Based on the results of the investigation, and with consideration to community consultation with the RAPs for the Project, Niche provides the following recommendations to assist with the management of Aboriginal objects and their associated values during future development of the Subject Area:

Table 16: Recommendations

Recommendations	
1.	All workers should be inducted into the Subject Area so they are made aware of their obligations under the <i>National Parks and Wildlife Act 1974</i> prior and during and after construction activities
2.	<p>The following 'Find Procedure' should be put in place as a minimum response in the unlikely event of the identification of artefacts within the Subject Area:</p> <ul style="list-style-type: none"> • work in the surrounding area is to stop immediately; • a temporary fence is to be erected around the Aboriginal cultural heritage site, with a buffer zone of at least 10 metres around the known edge of the Aboriginal cultural heritage site; • in consultation with the RAPs for the project, an appropriately qualified archaeological consultant is to be engaged to identify the material; and • If the material is an Aboriginal objects, the Proponent will notify: <ul style="list-style-type: none"> ○ the BCD's Enviroline on 131 555; and ○ representatives of the RAPs. • Facilitate, in co-operation with the appropriate authorities and the RAPs: <ul style="list-style-type: none"> ○ The recording and assessment of the finds ○ Compliance with any legal requirements and BCD directions ○ The development and implementation of appropriate management strategies based on an assessment of significance of the finds. • Recommencement of ground disturbance works may only resume once legal requirements are fulfilled
3.	<p>In the unlikely event that suspected human remains are encountered during construction, all work in the area that may cause further impact, must cease immediately and:</p> <ul style="list-style-type: none"> • The location, including a 20 m curtilage, should be secured using barrier fencing to avoid further harm. • The NSW Police must be contacted immediately. • No further action is to be undertaken until the NSW Police provide written notification to the Proponent. • If the skeletal remains are identified as Aboriginal, the Proponent or their agent must contact:

Recommendations

- the BCD's Enviroline on 131 555; and
- representatives of the RAPs.
- No works are to continue until the BCD provides written notification to the proponent or their Agent.

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Annex A: AHIMS search results and site cards

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0074	Lemon Tree Passage; Contact	AGD	56	409750	6375150	Open site	Valid	Shell : -, Artefact : -	Midden	233,102218
38-5-0090	B F 2; Contact	AGD	56	410400	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0091	B F 3; Contact	AGD	56	410400	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0092	B F 4; Contact	AGD	56	410300	6372100	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0093	B F 5; Contact	AGD	56	410100	6372000	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0094	B F 7; Contact	AGD	56	409900	6371900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0095	B F 6; Contact	AGD	56	410100	6371900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0099	B F 11; Contact	AGD	56	409300	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0100	B F 12; Contact	AGD	56	409300	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0101	B F 13; Contact	AGD	56	409400	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0102	B F 14; Contact	AGD	56	409600	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0103	B F 15; Contact	AGD	56	409600	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0104	B F 16; Contact	AGD	56	409700	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0105	B F 17; Contact	AGD	56	409700	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0106	B F 18; Contact	AGD	56	409100	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0107	B F 19; Contact	AGD	56	409000	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0122	Anna Bay 2; Contact	AGD	56	411200	6372100	Open site	Valid	Shell : -, Artefact : -	Midden	1845,102128

Report generated by AHIMS Web Service on 09/08/2018 for Jess Cuskelly for the following area at Lat, Long From : -32.7869, 152.0326 - Lat, Long To : -32.7509, 152.0897 with a Buffer of 1000 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 105

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0123	Anna Bay 3; Contact	AGD	56	411100	6372000	Open site	Valid	Shell : -, Artefact : -	Midden	1845,102128
38-5-0124	Anna Bay 4; Contact	AGD	56	410900	6372100	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0125	Anna Bay 5; Contact	AGD	56	410800	6372100	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0126	Anna Bay 6; Contact	AGD	56	410700	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0127	Anna Bay 7; Contact	AGD	56	410700	6372000	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0128	Anna Bay 8; Contact	AGD	56	410700	6372100	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0129	Anna Bay 9; Contact	AGD	56	410500	6371900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0130	Anna Bay 10; Contact	AGD	56	410400	6371900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0131	Anna Bay 11; Contact	AGD	56	410300	6372000	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0153	Isolated Artefact Fishermans Bay 1; Contact	AGD	56	414850	6372200	Open site	Valid	Artefact : -	Isolated Find	3184
38-5-0108	B F 20; Contact	AGD	56	408900	6372200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0109	B F 21; Contact	AGD	56	408900	6372200	Open site	Valid	Shell : -, Artefact : -, Stone Quarry : -	Midden,Quarry	1845
38-5-0110	Mona Point 1; Contact	AGD	56	415600	6375400	Open site	Valid	Artefact : -	Open Camp Site	1845,102128,1 02218
38-5-0114	NB1 Contact	AGD	56	410800	6372650	Open site	Valid	Artefact : -	Open Camp Site	2078,4645
38-5-0115	NB2; Contact	AGD	56	410200	6372350	Open site	Valid	Shell : -, Artefact : -	Midden	2078,2978
38-5-0116	Fenninghams Island 1; Contact	AGD	56	408900	6375900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-5-0117	Fenninghams Island 2;	AGD	56	409200	6375600	Open site	Valid	Shell : -, Artefact : -	Midden	1845

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0012	Morna Point;Birubi Point;	AGD	56	413527	6372058	Open site	Valid	Shell : -, Artefact : -	Midden	102128,102382
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	747	
38-5-0013	Birubi point;Morna Point;	AGD	56	413527	6372058	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0014	Birubi Point/Annabay;Morna Point;Birubi point;	AGD	56	413550	6372200	Open site	Valid	Shell : -, Artefact : -	Midden,Open Camp Site	1845,102128,102382
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	1026,1054,1058	
38-5-0015	Morna Point;Birubi Point;	AGD	56	413624	6371786	Open site	Valid	Shell : -, Artefact : -	Midden	102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0016	Morna Point;Birubi Point; Headland Midden	AGD	56	413624	6371724	Open site	Valid	Shell : -, Artefact : -	Midden	309,315,1457,102128,102218,102382
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0034	Morna Point;Cemetery Point;	AGD	56	413775	6371975	Open site	Valid	Burial : -	Burial/s	102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0118	Fenninghams Island 3;	AGD	56	408920	6375700	Open site	Valid	Shell : -, Artefact : -	Midden	1845
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0119	Fenninghams Island 4;	AGD	56	408920	6375700	Open site	Valid	Shell : -, Artefact : -	Midden	1845,102218
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0120	Fenninghams Island 5;	AGD	56	408980	6375300	Open site	Valid	Shell : -, Artefact : -	Midden	1845,102218
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0121	Anna Bay 1;	AGD	56	411400	6372400	Open site	Valid	Shell : -, Artefact : -	Midden	1845,102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0196	STOCKTON BIGHT	AGD	56	413500	6372500	Open site	Valid	Artefact : -		102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0198	ANNA BAY	AGD	56	412500	6372550	Open site	Valid	Artefact : -		1845,102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0210	Stockton Bight Anna Bay 4wd access	AGD	56	413400	6372800	Open site	Valid	Artefact : -		102128
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	3575	
38-5-0219	Tomaree 3	AGD	56	409200	6373700	Open site	Valid	Shell : 1		102218
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
38-5-0220	Tomaree 4	AGD	56	409500	6373700	Open site	Valid	Shell : 1		
	<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 : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0211	A1 - Stockton Bight	AGD	56	413300	6372600	Open site	Valid	Shell : -, Artefact : -, Hearth : -		102128
	<u>Contact</u>	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>		
38-5-0221	Tomaree 5	AGD	56	409750	6373700	Open site	Valid	Shell : 1		102218
	<u>Contact</u>	<u>Recorders</u>	Mrs.Angela Besant,Doctor.Tim Owen					<u>Permits</u>		
38-5-0222	Tomaree 6	AGD	56	410150	6373680	Open site	Valid	Artefact : 2, Shell : 2		
	<u>Contact</u>	<u>Recorders</u>	Mrs.Angela Besant					<u>Permits</u>		
38-5-0223	Tomaree 7	AGD	56	412454	6373889	Open site	Partially Destroyed	Artefact : 2, Shell : 2		102128,10221 8
	<u>Contact</u>	<u>Recorders</u>	Mrs.Angela Besant,Miss.Nicola Roche					<u>Permits</u>	3621	
38-5-0227	Iris Moore Reserve	AGD	56	414200	6371600	Open site	Valid	Shell : -, Hearth : -, Artefact : -		102128
	<u>Contact</u>	<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>		
38-5-0239	AB1	AGD	56	413682	6372154	Open site	Valid	Artefact : -, Shell : -		98595,102128
	<u>Contact</u>	<u>Recorders</u>	MCH - McCardle Cultural Heritage Pty Ltd					<u>Permits</u>		
38-5-0240	AB2	AGD	56	413580	6372200	Open site	Valid	Artefact : -, Shell : -		98595,102128
	<u>Contact</u>	<u>Recorders</u>	MCH - McCardle Cultural Heritage Pty Ltd					<u>Permits</u>		
38-5-0241	AB3	AGD	56	413570	6372230	Open site	Valid	Artefact : -, Shell : -		98595,102128
	<u>Contact</u>	<u>Recorders</u>	MCH - McCardle Cultural Heritage Pty Ltd					<u>Permits</u>		
38-5-0246	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<u>Contact</u>	<u>Recorders</u>	Ms.Penny McCardle					<u>Permits</u>	2260	
38-5-0245	Upton Midden	AGD	56	408644	6373823	Open site	Valid	Shell : 16		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Tim Owen,Mr.Andy Collis					<u>Permits</u>		
38-5-0250	Anna Bay 1, NBR	AGD	56	411480	6373850	Open site	Valid	Artefact : 2, Shell : 1		102128
	<u>Contact</u>	<u>Recorders</u>	Mr.Peter Kuskie					<u>Permits</u>		
38-5-0248	GAN GAN 5	AGD	56	415449	6373282	Open site	Valid	Artefact : -		102128
	<u>Contact</u> Searle	<u>Recorders</u>	Stedinger Associates					<u>Permits</u>		
38-5-0261	Worimi Ancesral Remains Repatriation Site. Worimi Conservation Lands	AGD	56	409188	6372597	Open site	Valid	Burial : -		
	<u>Contact</u> Worimi Local Aboriginal Land	<u>Recorders</u>	Mr.Steve Brereton					<u>Permits</u>		
38-5-0268	Cec Dee open campsite2	AGD	56	413664	6372608	Open site	Valid	Habitation Structure : 15		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>		
38-5-0272	Anna Bay access track open campsite	AGD	56	413640	6372841	Open site	Valid	Artefact : 50		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson					<u>Permits</u>	3437	

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0269	Cec Dee open campsite 3	AGD	56	413598	6372647	Open site	Valid	Aboriginal Resource and Gathering : 6		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0270	Cec Dee open campsite 4	AGD	56	413598	6372765	Open site	Valid	Artefact : 3		102128
	<u>Contact</u>	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0291	Birubi open campsite	AGD	56	413479	6372580	Open site	Valid	Aboriginal Resource and Gathering : 100		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0292	Birubi open campsite transport corridor	AGD	56	413485	6372585	Open site	Valid	Aboriginal Resource and Gathering : 50		
	<u>Contact</u> Mr.Peter Anderson	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0293	Birubi transport corridor campsite	AGD	56	413536	6372520	Open site	Valid	Aboriginal Resource and Gathering : 50		
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0294	Birubi access campsite	AGD	56	413540	6372530	Open site	Valid	Aboriginal Resource and Gathering : 60		
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0295	Gan Gan road beach access	AGD	56	413505	6372540	Open site	Valid	Aboriginal Resource and Gathering : 71		
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0296	Gan Gan Road Site	AGD	56	413482	6372570	Open site	Valid	Aboriginal Resource and Gathering : 37		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u>							
38-5-0280	Robinson's Quarry open campsite 5	AGD	56	413531	6372845	Open site	Valid	Aboriginal Resource and Gathering : 5		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u> 3437,3575							
38-5-0035	Morna Point Fisherman's Bay	AGD	56	414872	6371460	Open site	Valid	Artefact : -	Open Camp Site	315,102128
	<u>Contact</u>	<u>Recorders</u>	Unknown Author <u>Permits</u>							
38-5-0089	B F 1;	AGD	56	410600	6372300	Open site	Valid	Shell : -, Artefact : -	Midden	1845
	<u>Contact</u>	<u>Recorders</u>	Pam Dean-Jones,Bonhomme Craib & Associates <u>Permits</u>							
38-5-0281	Robinsons Quarry open campsite 4	AGD	56	413596	6372853	Open site	Valid	Aboriginal Resource and Gathering : 7		
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u> 3437							
38-5-0282	Robinsons quarry open campsite 3	AGD	56	413590	6372820	Open site	Valid	Aboriginal Resource and Gathering : 5		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u> 3437							
38-5-0283	Robinson Quarry open campsite 2	AGD	56	413616	6372854	Open site	Valid	Aboriginal Resource and Gathering : 7		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	Mr.Leonard (Lennie) Anderson <u>Permits</u> 3437							

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Extensive search - Site list report

Your Ref/PO Number : 4017_Basic Search

Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0284	Birubi access open campsite	AGD	56	413468	6372600	Open site	Valid	Aboriginal Resource and Gathering : 6		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	<u>Permits</u>							
38-5-0285	Birubi swail entrance	AGD	56	413457	6372580	Open site	Valid	Habitation Structure : 8		
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	<u>Permits</u>							
38-5-0286	Buruibi Track	AGD	56	413451	6372590	Open site	Valid	Aboriginal Resource and Gathering : 15		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	<u>Permits</u>							
38-5-0288	Robinsons Sand Quarry campsite 1	AGD	56	413620	6372860	Open site	Valid	Aboriginal Resource and Gathering : 20		102128
	<u>Contact</u> Mr.Leonard (Lennie) Andersor	<u>Recorders</u>	<u>Permits</u> 3437							
38-5-0303	NBR PAD 02	GDA	56	409790	6373866	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0304	NBR PAD 01	GDA	56	409538	6373846	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0150	Fishermans Bay 1	AGD	56	414500	6371700	Open site	Valid	Artefact : -	Isolated Find	102128
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u> 1065							
38-5-0309	Landcom FB1	GDA	56	414959	6372070	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0098	B F 10;	AGD	56	408600	6371800	Open site	Valid	Shell : -, Artefact : -	Midden	1845
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0320	NBRd 4	GDA	56	412046	6373942	Open site	Valid	Shell : 1		103447
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0321	NBRd 5	GDA	56	411292	6373875	Open site	Valid	Shell : 1		103447
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0322	NBRd 6	GDA	56	409468	6373900	Open site	Valid	Shell : 1		103447
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0317	RPS Birubi Pt Midden 1	GDA	56	413492	6372316	Open site	Valid	Shell : -		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
38-5-0318	OFOC4	GDA	56	413195	6373870	Open site	Partially Destroyed	Shell : 1		
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u> 3621,3758							

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Client Service ID : 363187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-5-0319	OFOC5	GDA	56	412500	6373988	Open site	Partially Destroyed	Shell : 1		
	<u>Contact</u>	<u>Recorders</u>	Umwelt (Australia) Pty Limited, Miss. Nicola Roche, Miss. Nicola Roche							<u>Permits</u> 3621,3758
38-5-0316	Surf Club Midden - Birubi Pt	GDA	56	413415	6372385	Open site	Partially Destroyed	Shell : 1		103888
	<u>Contact</u>	<u>Recorders</u>	Miss. Philippa Sokol, RPS East Australia Pty Ltd - Echuca Victoria							<u>Permits</u> 3607
38-5-0312	NBR3/2 artefact scatter	AGD	56	412210	6373957	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	MCH - McCardle Cultural Heritage Pty Ltd, Ms. Penny McCardle							<u>Permits</u>
38-5-0310	NBR3/3 shell midden	AGD	56	412111	6373980	Open site	Valid	Artefact : -, Shell : -		103447
	<u>Contact</u>	<u>Recorders</u>	Ms. Penny McCardle							<u>Permits</u> 3528,3564
38-5-0311	NBR3/ PAD1	AGD	56	412110	6373980	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	<u>Contact</u>	<u>Recorders</u>	MCH - McCardle Cultural Heritage Pty Ltd, Ms. Penny McCardle							<u>Permits</u>
38-5-0326	RPS NBR AS1	GDA	56	410044	6374068	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr. Jeremy Hill							<u>Permits</u> 4226
38-5-0327	Ausgrid Anna Bay IF1	GDA	56	412517	6373648	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Miss. Stephanie Howden							<u>Permits</u>
38-5-0323	NBR3/PAD2	AGD	56	409632	6373635	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms. Penny McCardle							<u>Permits</u>
38-5-0324	NRB3/PAD3	AGD	56	411750	6373780	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms. Penny McCardle							<u>Permits</u>
38-5-0325	NBR3/PAD4	AGD	56	411800	6373784	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms. Penny McCardle							<u>Permits</u>
38-5-0331	WCL1403	GDA	56	412543	6372831	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms. Nadine Russell							<u>Permits</u>
38-5-0338	4011 Nelson Bay Road A1	GDA	56	409756	6373969	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Ms. Tessa Boer-Mah, RPS Australia East Pty Ltd - Hamilton							<u>Permits</u>
38-5-0339	4011 Nelson Bay Road A2	GDA	56	409859	6374015	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Ms. Tessa Boer-Mah, RPS Australia East Pty Ltd - Hamilton							<u>Permits</u>

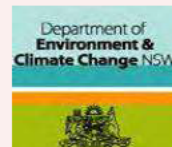
Report generated by AHIMS Web Service on 09/08/2018 for Jess Cuskelly for the following area at Lat, Long From : -32.7869, 152.0326 - Lat, Long To : -32.7509, 152.0897 with a Buffer of 1000 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 105

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



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220



Office Use Only

Site Number 3 8 5 0 3 2 0

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

For Further Information Contact:

☐ Nominated Trustee

Title Surname First Name Initials

Organisation

Address

Phone number Fax

☐ Knowledge Holder

Title Surname First Name Initials

Organisation

Address

Phone number Fax

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Office Use Only

Client on system

Client on system

Geographic Location

Site Name N B R d 4

Easting 4 1 2 0 4 6 Northing 6 3 7 3 9 4 2 AGD/GDA GDA

Mapsheet N c a s t l e , P o r t S t e p h

Zone 56

Location Method Non-Differential GPS

Other Registration

Primary Recorder

Title Surname First Name Initials

M s M c C a r d l e P e n n y

Organisation M c C a r d l e C u l t u r a l H e r i t a g e

Address P O B o x 1 6 6 A d a m s t o w n N S W 2 2 8

Phone number 0 4 1 2 7 0 2 3 9 6 Fax 5 9 5 2 5 5 0 1

Date recorded 29/05/2013

Client on system

Open Site

Landform

Slope

degrees

☐ Beach
☐ Coastal rock platform
☒ Dune
☐ Intertidal flat
☐ Lagoon
☐ Tidal Creek

☐ Tidal Flat
☐ Cliff
☐ Crest
☒ Flat
☐ Lower slope
☐ Mid slope

- ☐ Upper slope
- ☐ Plain
- ☐ Ridge
- ☐ Tor
- ☐ Valley flat
- ☐ Levy

- ☐ Stream bank
- ☐ Stream channel
- ☐ Swamp
- ☐ Terrace
- ☐ Terrace flat

<input type="checkbox"/>	Closed forest
<input checked="" type="checkbox"/>	Grasslands
<input checked="" type="checkbox"/>	Isolated clumps of trees
<input type="checkbox"/>	Open forest
<input type="checkbox"/>	Open woodland
<input type="checkbox"/>	Scrub
<input type="checkbox"/>	Woodland
<input type="checkbox"/>	Cleared
<input type="checkbox"/>	Revegetated
<input type="checkbox"/>	N/A

- ☐ Conservation
- ☐ Established urban
- ☐ Farming-intensive
- ☐ Farming-low intensity
- ☐ Forestry
- ☐ Industrial
- ☐ Mining
- ☒ Pastoral/grazing
- ☐ Recreation
- ☐ Semi-rural
- ☐ Service corridor
- ☐ Transport corridor
- ☐ Urban expansion
- ☐ N/A

Distance to permanent water source

10 metres

Distance to temporary water source

metres

Name of nearest permanent water source

Name of nearest temporary water

Directions for Relocation

A 10x10 grid map with compass directions (N, NE, E, SE, S, SW, W, NW) and a north arrow.

<input type="checkbox"/> Public	National Park / other Government Dept.
<input type="checkbox"/> Private	

I.D. (I.D. Office Use only)

[illegible]

General Site Information

Closed Site

Shelter/Cave Formation

- ☐ Boulder
☐ Wind erosion
☐ Water erosion
☐ Rock collapse

Rock Surface Condition

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Condition of Ceiling

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Shelter Aspect

- ☐ North
☐ North East
☐ East
☐ South East
☐ South
☐ South West
☐ West
☐ North West

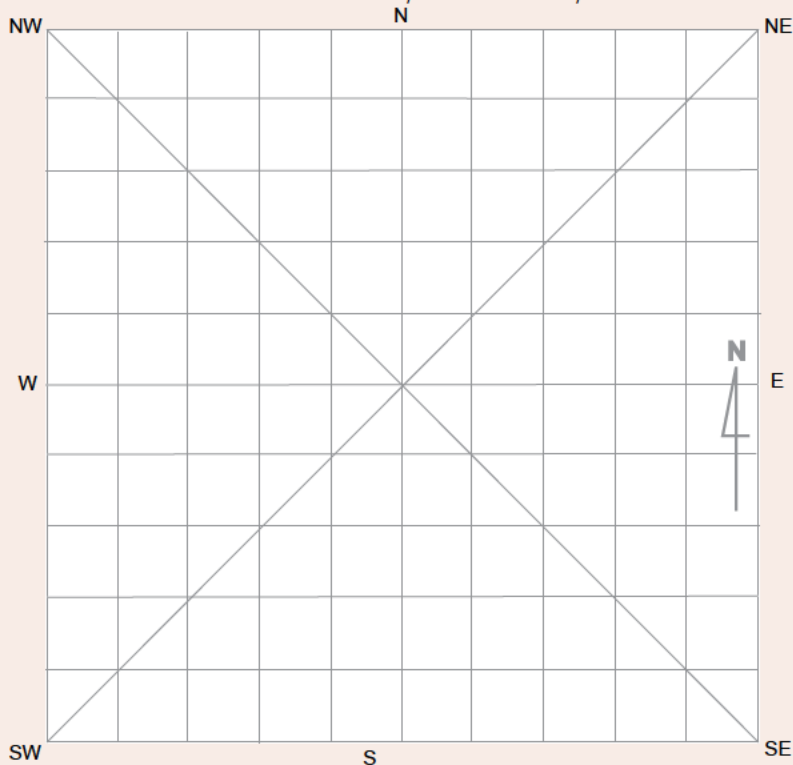
Open Site

Site Orientation

- ☒ N-S
☐ NE-SW
☐ E-W
☐ SE-NW
☐ N/A

Features

- ☐ 1. Aboriginal Ceremony & Dreaming
☐ 2. Aboriginal Resource & Gathering
☐ 3. Art
☐ 4. Artefact
☐ 5. Burial
☐ 6. Ceremonial Ring
☐ 7. Conflict
☐ 8. Earth Mound
☐ 9. Fish Trap
☐ 10. Grinding Groove
☐ 11. Habitation Structure
☐ 12. Hearth
☐ 13. Non Human Bone & Organic Material
☐ 14. Ochre quarry
☐ 15. Potential Archaeological Deposit
☐ 16. Stone Quarry
☒ 17. Shell
☐ 18. Stone Arrangement
☐ 19. Modified Tree
☐ 20. Water Hole

Site Plan Indicate scale, boundaries of site, features

Site Dimensions

Closed Site Dimensions (m)

- Internal length
 Internal width
 Shelter height
 Shelter floor area

Open Site Dimensions (m)

- 1.5m Total length of visible site
 1.5m Average width of visible site
 Estimated area of visible site
 Length of assessed site area

culturally significant

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

1) E0412046 N6373942 Shell midden is approx. 15 x 15mtrs and is situated on the current cleared driveway area (not surfaced) approx. 2 metres from the NW corner of existing garage structure, adjoining and continuing to the south of a centred and raised garden bed and approx. 35 metres from northern boundary adjoining Nelson Bay Rd. Ground surface is flat and there is potential for subsurface deposits. Surface expression is low potential and subsurface is unknown.

2) E412038 N6373912 shell midden is approx. 35 x 35 mtrs located from the NE corner of the most southern rear shed (collapsed structure); in a direct northerly line to midden site 1 and existing unsurfaced driveway; to the SW of the garage structure and E of a large old growth tree. A small scattering of surface shell is visible in exposed surface areas. Some whole shell as well as broken shell. Surface expression is low potential and subsurface is unknown.

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Attachments (No.)

Comments

[illegible]

AHIMS site ID: 38-5-0347

Date recorded: 18-02-2019

Site Location Information

Site name: Anna Bay PAD 1

Easting: 412042

Northing: 6373398

Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

25

Zone: 56

Location method:

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Disspain

Morgan

Organisation:

Niche Environment and Heritage

Address:

Phone: 0488774566

E-mail:

mdisspain@niche-eh.com

Site Context Information

Land Form
Pattern:

Dune Field

Land Use:

Mining

Land Form
Unit:

Dune

Vegetation:

Isolated clumps of trees

Distance to
Water (m):

1.23

Primary
Report:

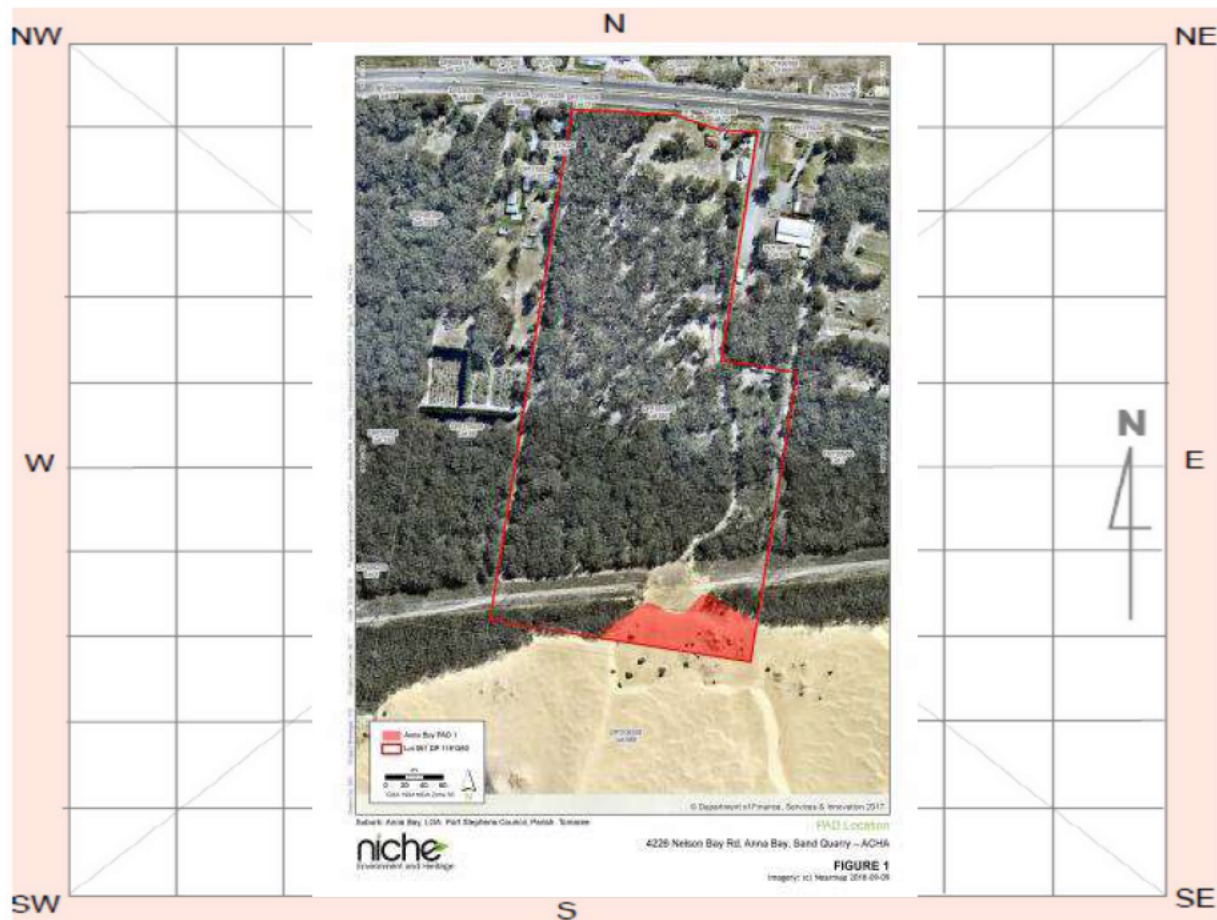
How to get
to the site:

The PAD is located within the southern portion of Lot591 DP1191380.
Access is through the lot, which is private property and requires
access permission. Address is 4226 Nelson Bay Road.

Other site
information:

A large, cleared and maintained transmission line easement is located
directly north of the PAD. Pad likely to have experienced disturbance
during easement construction, clearing of vegetation and aeolian
movement of dune system.

Site location map



Site contents information

open/closed site:

Open

Site condition:

Unstable Struct

Features:

1.

Potential Archaeological Deposit

Number of
features

1

Length of
feature(s)
extent (m)

180

Width of
feature (s)
extent (m)

60

Scarred Trees

Scar Depth
(cm)

1

Regrowth
(cm)

1

Scar shape

1

Tree Species

1

Description:

The PAD encompasses the immediate vicinity and foreground of a dynamic sand dune. The boundaries are determined by the Subject Area under assessment, and the PAD could extend beyond. The current coastline is located approx. 1.1 km to the south across a highly dynamic dune field.

Features:

2.

Number of
features

1

Length of
feature(s)
extent (m)

1

Width of
feature (s)
extent (m)

1

Scarred Trees

Scar Depth
(cm)

1

Regrowth
(cm)

1

Scar shape

1

Tree Species

1

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
3. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
4. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

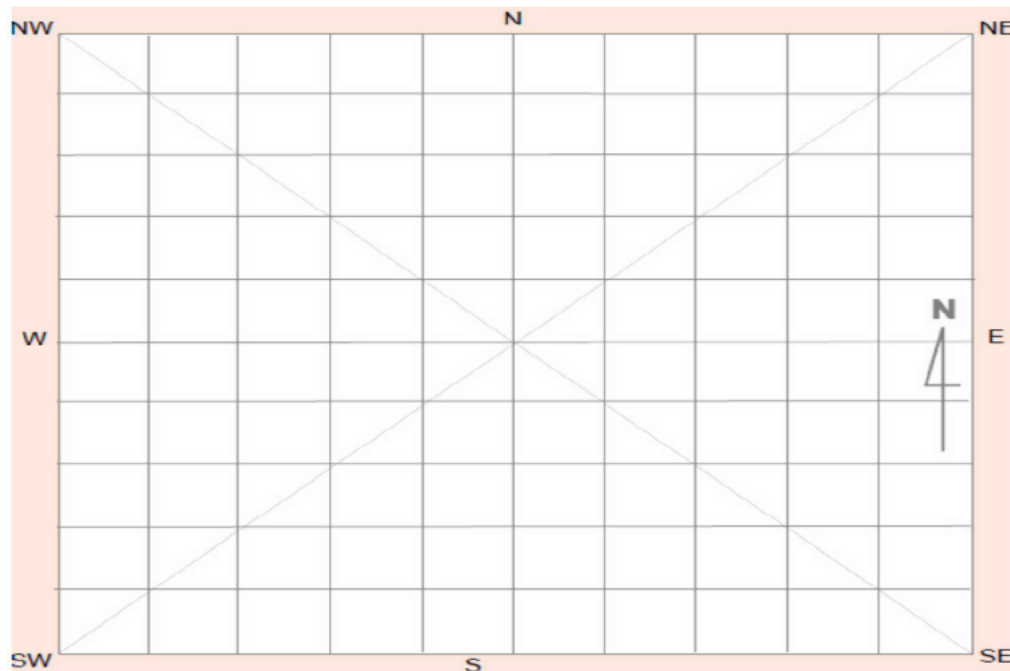
	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
5. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

A large, cleared and maintained transmission line easement is located directly north of the PAD. Pad likely to have experienced disturbance during easement construction, clearing of vegetation and aeolian movement of dune system.

Site plan

Site photographs



Description: Anna Bay PAD1 dune surface facing west



Description: Anna Bay PAD1 dune surface facing east



Description: Anna Bay PAD1 transmission easement



Description: Ann Bay PAD dune ground surface

Site restrictions

Do you want to
Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:

Annex B: Test excavation data

Top of Dune Test Pit DT-TP-01

Table 17: Spit and soil descriptions for DT-TP-01

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 7: DT-TP-01



Plate 8: Section View of DT-TP-1

Top of Dune Test Pit DT-TP-02

Table 18: Spit and soil descriptions for DT-TP-2

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 9: DT-TP-2

Top of Dune Test Pit DT-TP-03

Table 19: Spit and soil descriptions for DT-TP-3

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 10: DT-TP-3

Top of Dune Test Pit DT-TP-04

Table 20: Spit and soil descriptions for DT-TP-4

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow

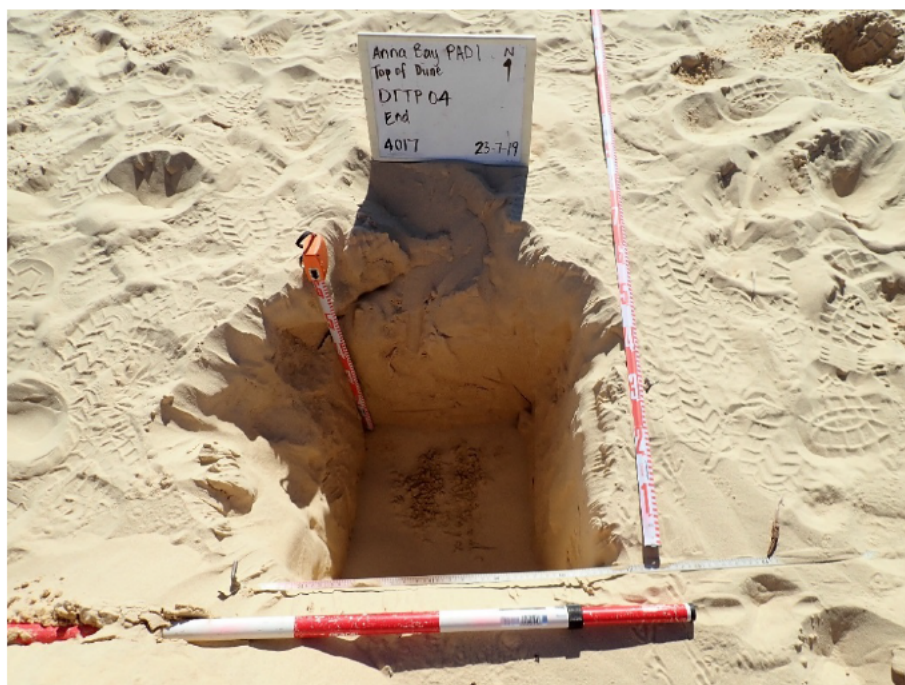


Plate 11: DT-TP-4



Plate 12: Section View of DT-TP-4

Top of Dune Test Pit DT-TP-05

Table 21: Spit and soil descriptions for DT-TP-5

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 13: DT-TP-5

Top of Dune Test Pit DT-TP-06

Table 22: Spit and soil descriptions for DT-TP-6

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean and slightly damp sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 14: DT-TP-6



Plate 15: Section View of DT-TP-6

Top of Dune Test Pit DT-TP-07

Table 23: Spit and soil descriptions for DT-TP-7

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-60 cm	Loose and clean sand (loose consistency).	None	10YR/7/4	8	Very pale brown
2	60-65 cm	Loose, finely grained, clean and slightly damp sand up to approximately 600mm (loose consistency). Darker brown sediment throughout (humic soil). Disturbed by roots.	None	10YR/6/3	7.5	Pale brown



Plate 16: DT-TP-7



Plate 17: Section View of DT-TP-7

Top of Dune Test Pit DT-TP-08

Table 24: Spit and soil descriptions for DT-TP-8

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose, finely grained, clean sand (loose consistency).	None	10YR/8/6	7	Yellow



Plate 18: DT-TP-8



Plate 19: Section View of DT-TP-8

Top of Dune Test Pit DT-TP-09

Table 25: Spit and soil descriptions for DT-TP-9

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Clean and slightly damp sand (loose consistency). Disturbances include small roots on the northern wall.	None	10YR/8/6	7	Yellow



Plate 20: DT-TP-9

Top of Dune Test Pit DT-TP-10

Table 26: Spit and soil descriptions for DT-TP-10

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-65 cm	Loose and clean sand (loose consistency).	None	10YR/8/6	7	Yellow

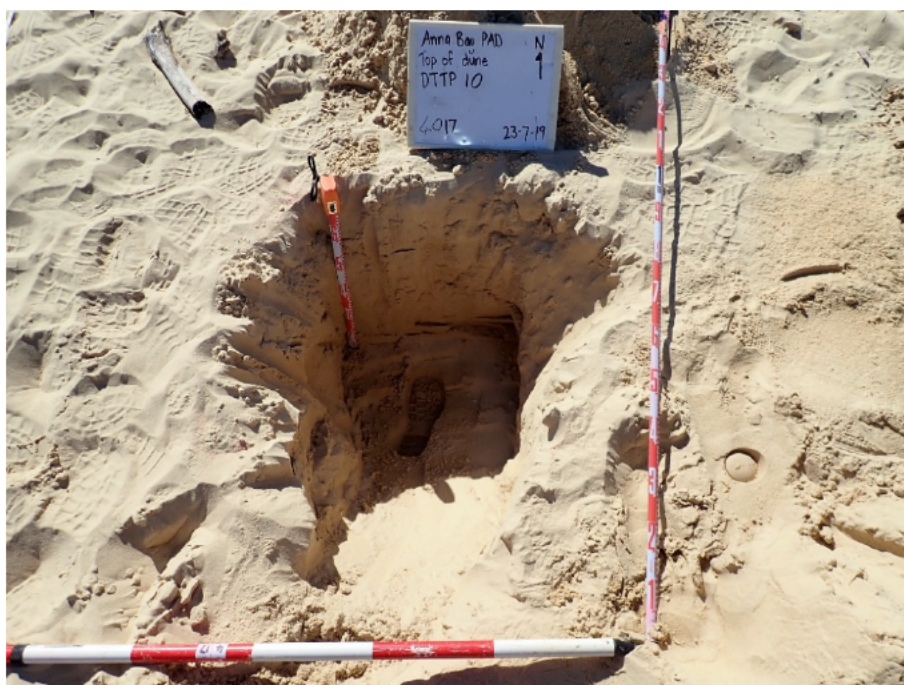


Plate 21: DT-TP-10

Bottom of Dune Test Pit DT-TP-01

Table 27: Spit and soil descriptions for DT-TP-01

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Loose, finely grained, dry sand (loose consistency).	None	10YR/8/6	7	Yellow
2	5-15 cm	Damp humic sand (loose consistency). Disturbed by roots and decomposed wood/vegetation.	None	10YR/5/2	7.5	Greyish brown
3	15-25 cm	Sand with high amount of humic material (loose to compact consistency). Disturbed by roots and decomposed wood/vegetation.	None	N/A	N/A	N/A
4	25-35 cm	Dark brown humic deposit (loose consistency).	None	10YR/3/1	7	Very dark grey

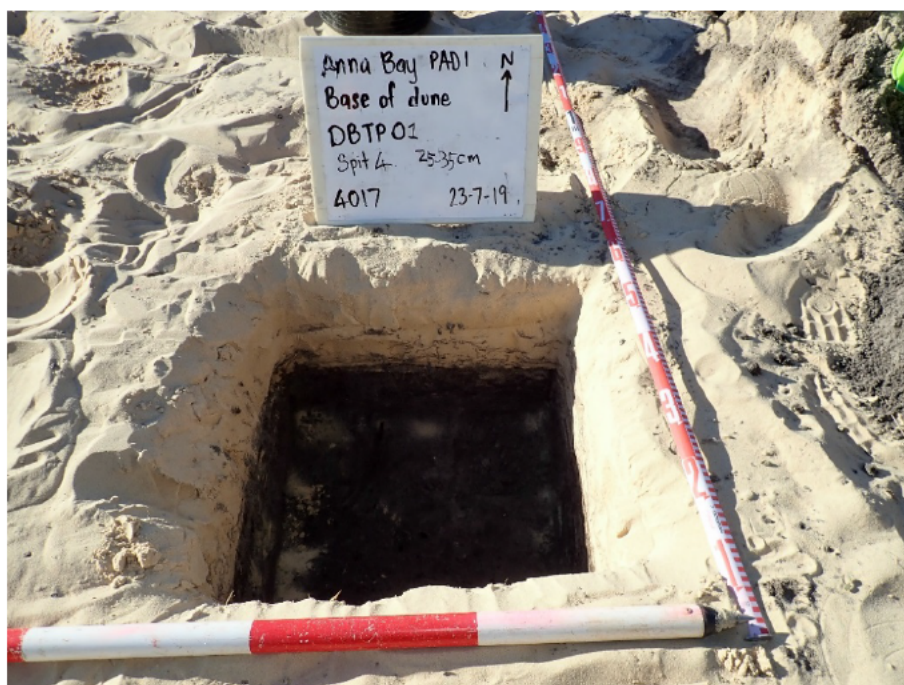


Plate 22: DB-TP-01



Plate 23: Section View of DB-TP-01

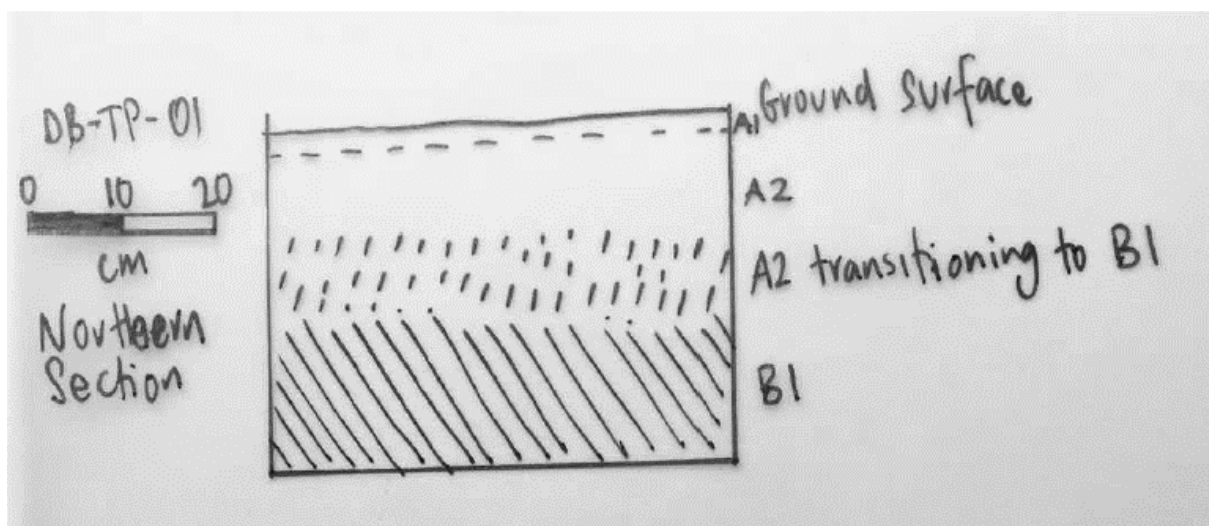


Plate 24: Section drawing DB-TP-01

Bottom of Dune Test Pit DT-TP-02

Table 28: Spit and soil descriptions for DB-TP-02

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Loose, clean and dry sand (loose consistency).	None	10YR/8/6	7	Yellow
2	5-15 cm	Soft damp sand (friable consistency). Disturbed by roots in northern wall.	None	N/A	N/A	N/A
3	15-25 cm	Clean sand mixed with some humic material (firm consistency).	None	10YR/5/2	7.5	Greyish brown
4	25-35 cm	Dark brown humic deposit (firm consistency).	None	N/A	N/A	N/A



Plate 25: DB-TP-02



Plate 26: Section View of DB-TP-02

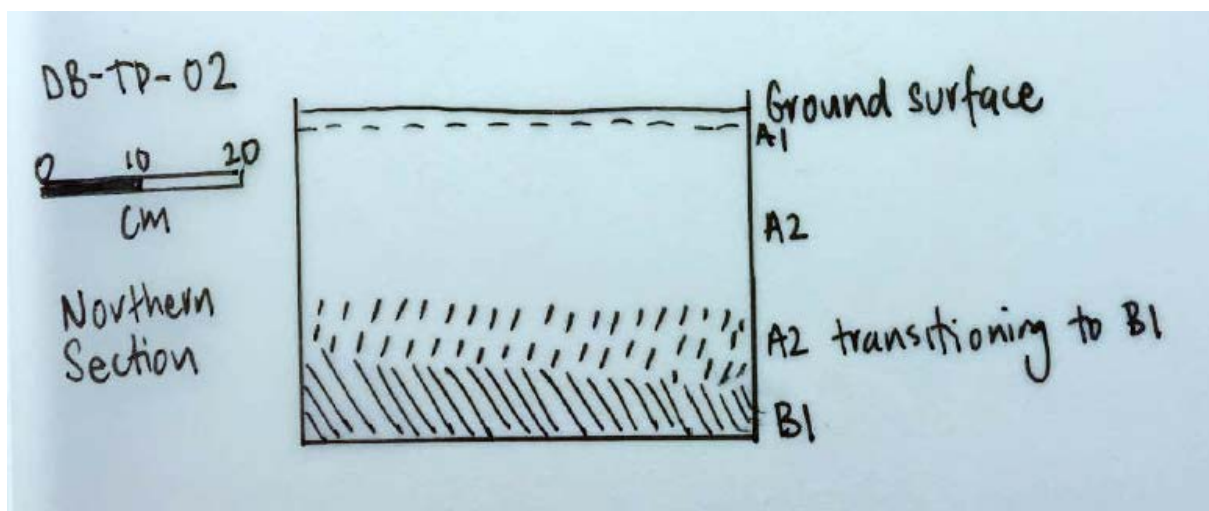


Plate 27: Section drawing DB-TP-02

Bottom of Dune Test Pit DT-TP-03

Table 29: Spit and soil descriptions for DB-TP-03

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Loose, finely grained, dry sand (loose consistency).	None	10YR/8/6	7	Yellow
2	5-15 cm	Sand that is clean, damp with small amounts of introduced fill of gravel material (loose consistency). Disturbed by introduced fill (gravel material).	None	N/A	N/A	N/A
3	15-25 cm	Sand that is clean, damp with small amounts of humic material (friable consistency).	None	N/A	N/A	N/A
4	25-35 cm	Dark brown and damp humic deposit about 32 cm deep (friable to firm consistency).	None	10YR/5/2 10YR/5/1	7.5 7	Greyish brown Grey
5	35-45 cm	Sand mixed with humic material (friable to firm consistency).	None	N/A	N/A	N/A
6	45-55 cm	Dark brown/blackish sand which is finely grained (friable to firm consistency).	None	10YR/3/1	7	Grey
7	55-65 cm	Dark brown/blackish sand which is finely grained (firm consistency).	None	N/A	N/A	N/A
8	65-75 cm	Dark brown/blackish sand (friable to firm consistency). Giving way to grey sand which is softer and not as compacted (coarser grained).	None	10YR/4/1	6.5	Dark grey
9	75-85 cm	Soft, grey sand (friable consistency).	None	N/A	N/A	N/A
10	85-95 cm	Soft grey sand which is slightly lighter in colour and increasingly lighter with depth (loose to friable consistency).	None	10YR/5/1	6	Grey
11	95-105 cm	Soft grey sand which is clean and leaching of tannins by humic deposit above (loose consistency).	None	N/A	N/A	N/A
12	105-115 cm	Soft grey sand which is clean and sterile (loose consistency).	None	N/A	N/A	N/A



Plate 28: DB-TP-03



Plate 29: Section View of DB-TP-03

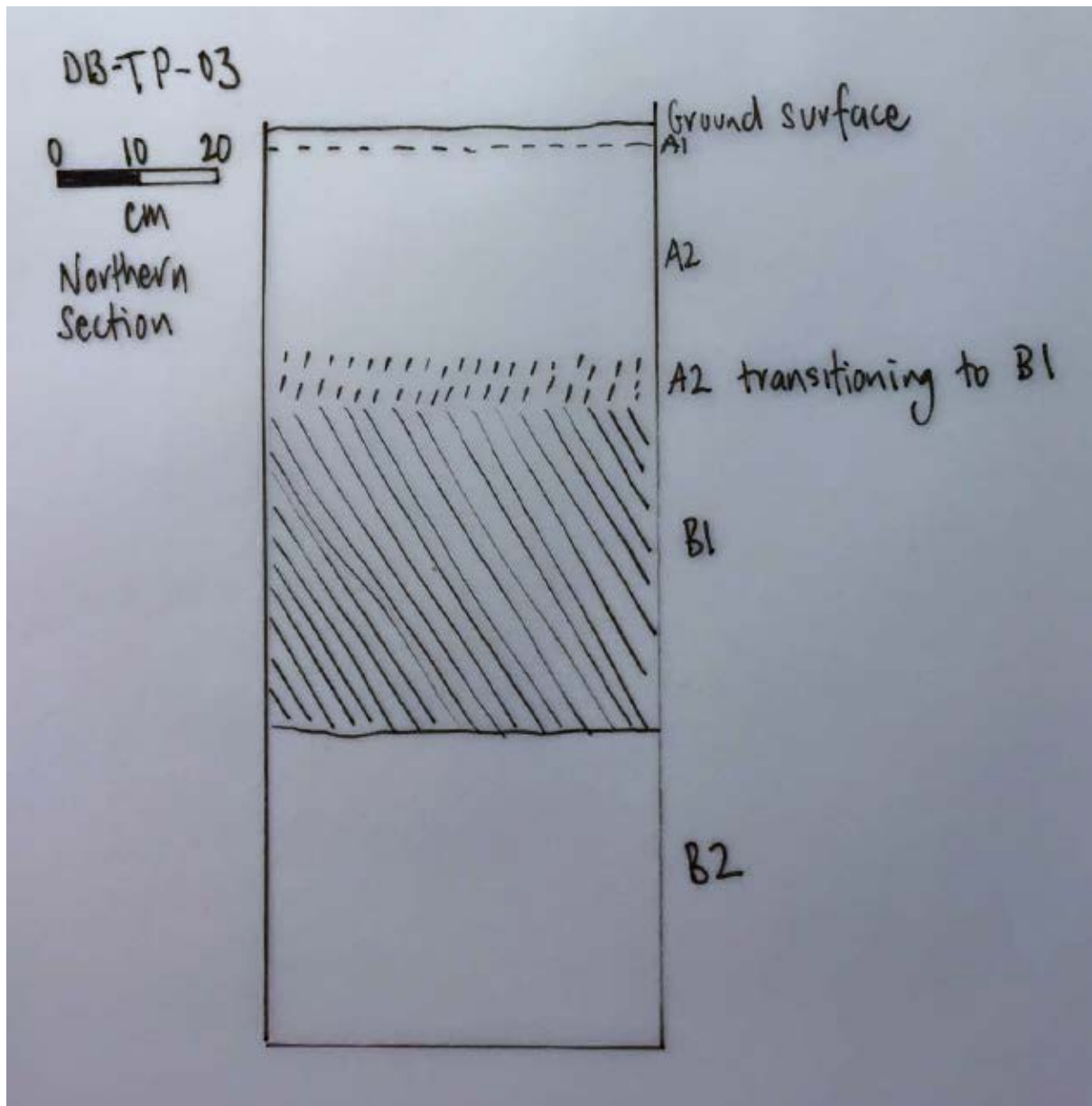


Plate 30: Section drawing DB-TP-03

Bottom of Dune Test Pit DT-TP-04

Table 30: Spit and soil descriptions for DB-TP-04

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Loose, finely grained, dry sand (loose consistency). Disturbed by introduced fill (gravel material).	None	N/A	N/A	N/A
2	5-15 cm	Soft, damp and clean sand (friable consistency).	None	10YR/8/6	7	Yellow
3	15-25 cm	Humic material coming through at 10-25 cm (friable consistency). Disturbed by decomposing humic material, possibly mulch.	None	10YR/5/2	7.5	Greyish brown
4	25-45 cm	Dark brown humic deposit (friable to firm to compact consistency).	None	10YR/5/1	7	Grey
5	45-55 cm	Grey sterile sand at approximately 53 cm depth (friable to firm consistency).	None	N/A	N/A	N/A



Plate 31: DB-TP-04



Plate 32: Section View of DB-TP-04

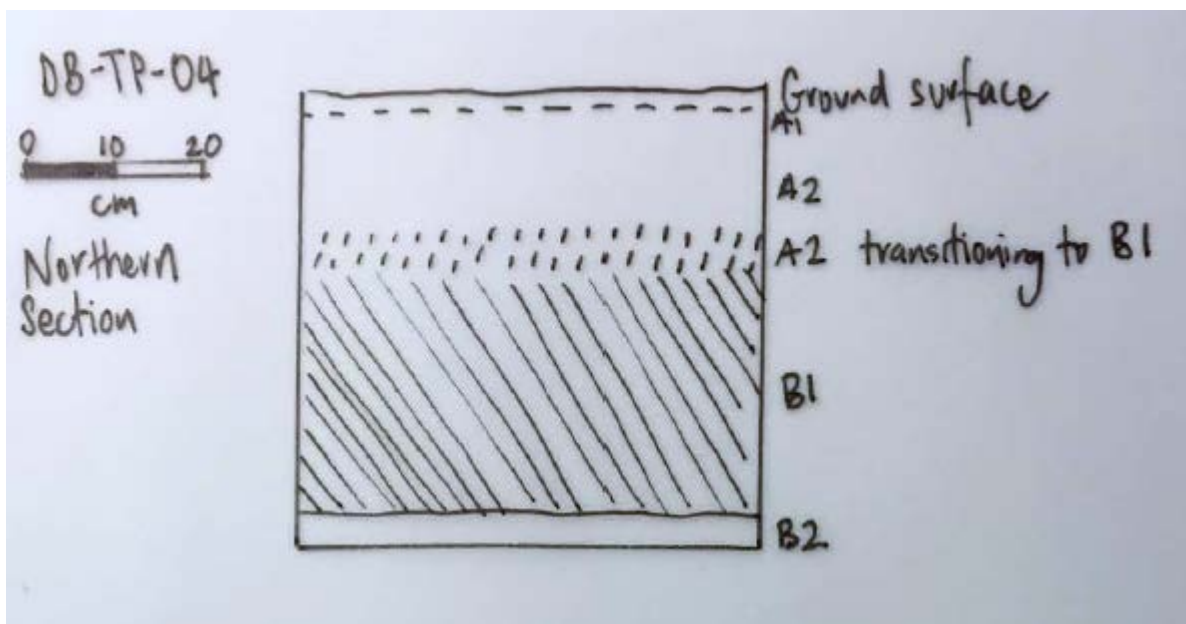


Plate 33: : Section drawing DB-TP-04

Bottom of Dune Test Pit DT-TP-05

Table 31: Spit and soil descriptions for Test Pit 5

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Loose, finely grained, dry sand (loose consistency). Disturbed by introduced material, broken glass, gravel and ceramic fill.	None	10YR/8/6	7	Yellow
2	5-15 cm	Clean soft sand with small amounts of humic material (loose to friable consistency).	None	N/A	N/A	N/A
3	15-25 cm	Clean soft sand with small amounts of humic material increasing with depth (loose to friable consistency).	None	N/A	N/A	N/A
4	25-35 cm	Dark brown/blackish humic deposit (loose consistency).	None	10YR/5/2	7.5	Greyish brown
5	35-45 cm	Hard dark grey/brown humic deposit (firm to compact consistency).	None	10YR/4/1	6.5	Dark Grey
6	45-55 cm	Soft grey sand (loose to friable consistency). Disturbed by roots.	None	10YR/4/1	6.5	Dark Grey



Plate 34: DB-TP-05



Plate 35: Section View of DB-TP-05

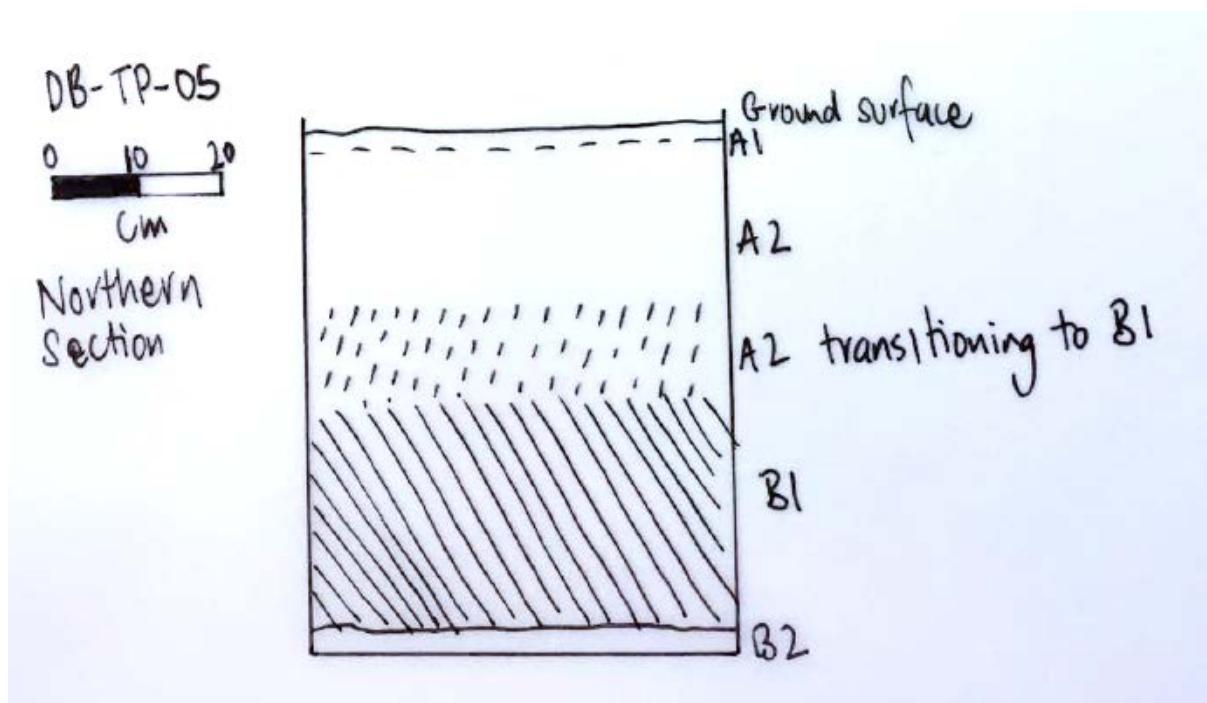


Plate 36: Section drawing DB-TP-05

Bottom of Dune Test Pit DT-TP-06

Table 32: Spit and soil descriptions for Test Pit 6

Spit	Depth	Description	Finds	Munsell Colour	pH	Soil Colour
1	0-5 cm	Soft clean sand (loose consistency). Disturbed by gravel fill.	None	10YR/8/6	7	Yellow
2	5-15 cm	Clean soft sand with small amounts of humic material (loose to friable consistency).	None	N/A	N/A	N/A
3	15-25 cm	Clean soft sand with small amounts of humic material increasing with depth (loose to friable consistency).	None	N/A	N/A	N/A
4	25-65 cm	Clean damp sand mixed with small amounts of humic material (loose to friable consistency). Disturbed by humic layer (mulch) at 650mm.	None	10YR/5/2	7.5	Greyish brown
5	65-75 cm	Dard brown humic deposit (firm to compact consistency).	None	10YR/4/1	6.5	Dark Grey



Plate 37: DB-TP-06



Plate 38: Section View of DB-TP-06

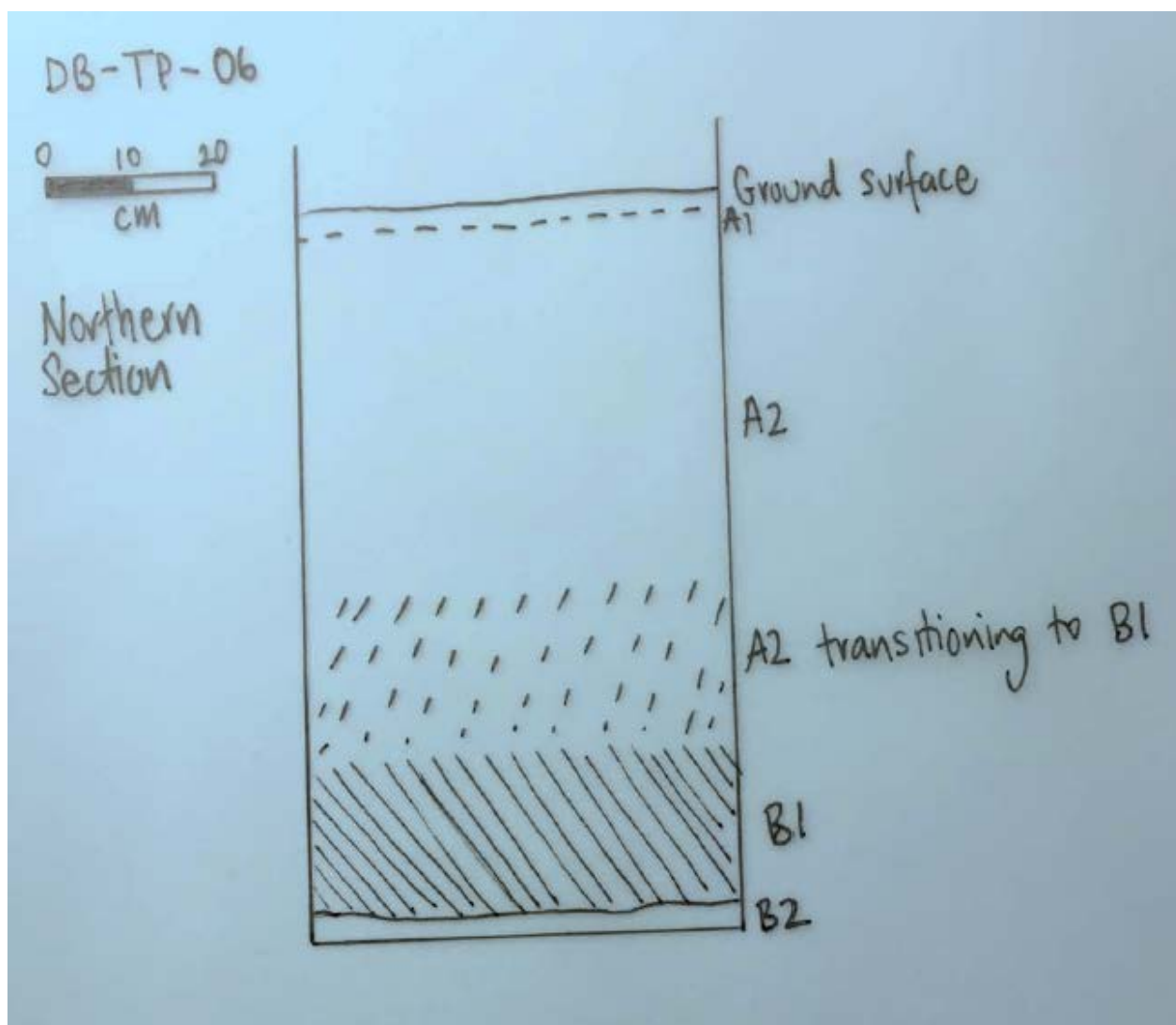


Plate 39: Section drawing DB-TP-06

Annex C: Due Diligence Assessment

12 March 2018

Ms Julie Wells
Tattersalls Lander Pty Ltd
Via email: julie@tatland.com.au

Dear Ms Wells,

Re: Aboriginal Heritage Assessment 4226 Nelson Bay Road, Anna Bay NSW

Thank you for inviting Niche Environment and Heritage (Niche) to complete a preliminary Aboriginal archaeological assessment for the proposed Anna Bay Sand Quarry. This short, letter-format report includes the results of the search of the Aboriginal Heritage Information Management System (AHIMS) administered by Office of Environment and Heritage (OEH), and the results of a field inspection.

The search of the AHIMS register was conducted on 18 January 2018 (AHIMS Client Service ID: 322781). The AHIMS search identified on Aboriginal site within the Subject Area, known as NBRd 4 (AHIMS ID#38-5-0320) comprising shell fragments on the surface, with the high possibility of the presence of more shell in the area as part of an extensive shell-midden. The AHIMS search identified another thirteen (13) Aboriginal sites within 1 kilometres of the Subject Area, including surface stone artefact scatters, shell middens including stone artefacts and potential archaeological deposits (PADs). The results of the AHIMS search are attached at the end of this document. Results of the search of the State Heritage Register (SHR), Australian Heritage Database and the Port Stevens Local Environmental Plan 2013 are provided in the Heritage Impact Assessment (Niche 2108).

The preliminary landscape assessment of the Subject Area identified a landscape feature which is identified as likely to indicate the presence of Aboriginal objects in accordance with Step 2c of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010)*.

Traditionally, the Worimi people used the beaches to travel between Nelson Bay to the north and Stockton to the south, with Tilligerry Creek used as a route to the surrounding swamplands, creek lines and western areas. The area known as Stockton Bight has a special cultural significance to the Worimi people as it retains a large amount of cultural history. The land and waters have been used for thousands of years for the hunting and gathering of foods, fishing and the continuation of cultural, spiritual and sacred activities. Aboriginal cultural connections have always been strong in this area and continue today, as it is still a well-utilised fishing and recreational area used by today's Worimi people (MCH 2015).

A field assessment was completed by Viki Gordon (Senior Heritage Consultant), Jamie Merrick (Sites Officer Worimi Local Aboriginal Land Council), Lennie Anderson (Nu-Run-Gee Pty. Ltd.) and Rebecca Young (Mur-Roo-Ma Incorporated) on 23rd January 2018. The field assessment was undertaken to determine whether the project design would impact any Aboriginal objects.

Though the field assessment did not locate any surface Aboriginal objects it is the conclusion of the assessment that subsurface Aboriginal objects may be present and that further background research and inspection will need to be carried out. This conclusion is drawn due to:

- the close proximity to the proposed works to a number of Aboriginal sites (Figure 1) registered on the Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS),
- the presence of a sand dune system which has the potential to comprise Aboriginal objects,
- cultural information for Aboriginal representatives in relation to large shell middens in the general vicinity of the Subject Area,
- the relatively undisturbed nature of the vegetation,
- the close proximity of fresh water sources, and
- the undisturbed nature of the sand dune.

The above features, where relatively undisturbed, are identified in the Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW as requiring further investigation and impact assessment if they cannot be avoided. Consequently, the recommendation is made that Tattersalls Lander Pty Ltd complete an Aboriginal Cultural Heritage Assessment with the possibility to apply for an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974* as outlined in the Secretary's Environmental Assessment Requirements (SEARs) using the:

- DECCW (2010) *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*
- DECCW (2010) *Aboriginal Cultural Heritage Consultation Requirements for Proponents*
- DECCW (2010) *Guide to investigation, assessing and reporting on Aboriginal cultural heritage in NSW*.

Please feel free to call or email should you wish to discuss anything further.

Yours sincerely

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

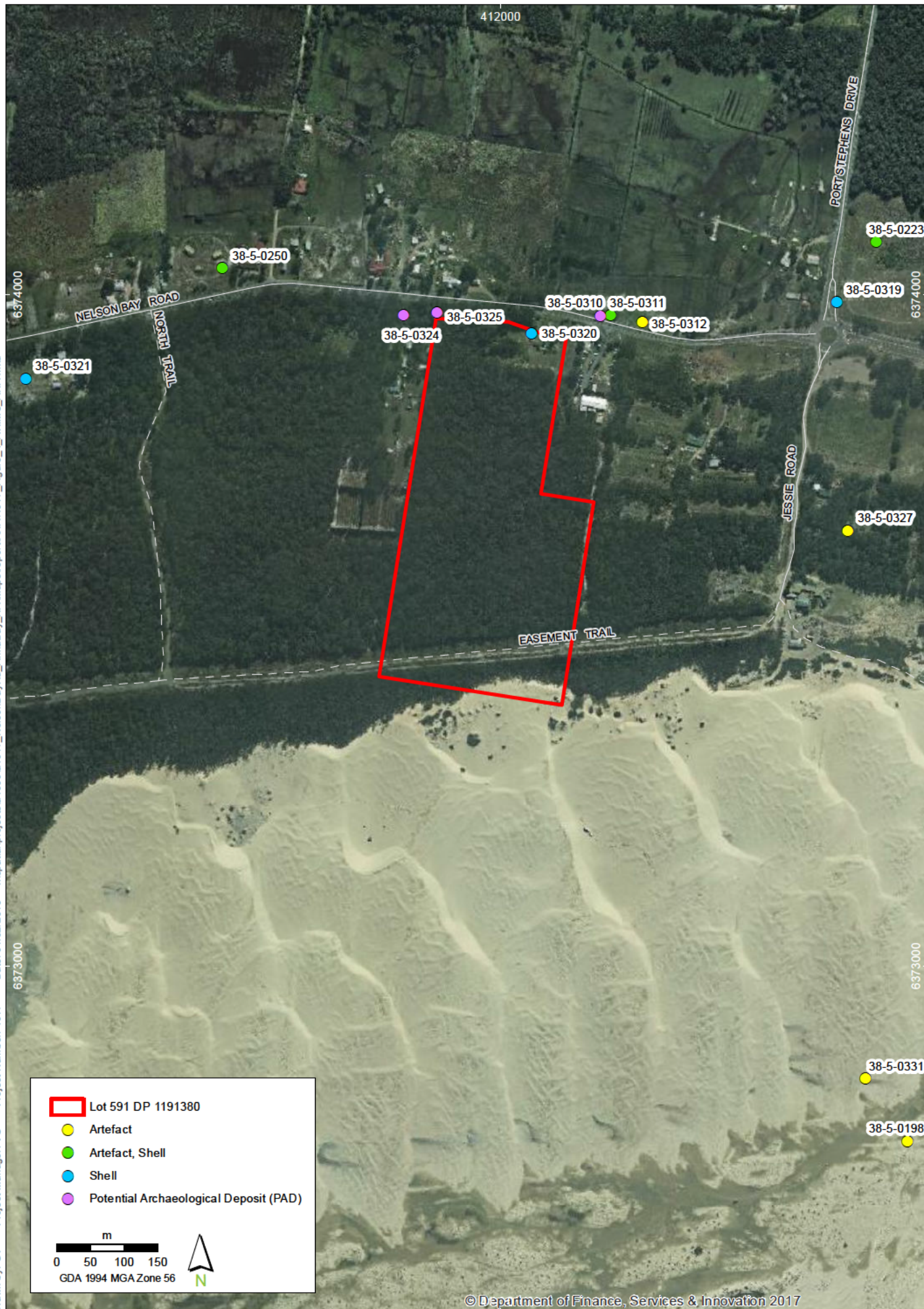
Renée Regal
Team Leader- Heritage
Niche Environment and Heritage

Bibliography:

McCardle Cultural Heritage Pty Limited 2015. MR 108 Nelson Bay Rd. Bobs Farm to Anna Bay Stage 3 – Cromarty Lane to Port Stephens Drive. Archaeological Salvage AHIP 1132063. Volume 1. A report to Roads and Maritime Services

Niche Environment and Heritage 2018. Anna Bay Sand Quarry 4226 Nelson Bay Rd, Anna Bay – Historical Heritage Impact statement. A report for Hay Enterprises (NSW) Pty Ltd.

Figure 1: Location of Aboriginal sites recorded on the AHIMS (Niche, AHIMS)



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

ATTACHMENT: RESULTS OF THE AHIMS SEARCH

Niche Environment and Heritage

Date: 18 January 2018

PO Box 3104

Umina Beach New South Wales 2257

Attention: Viki Gordon

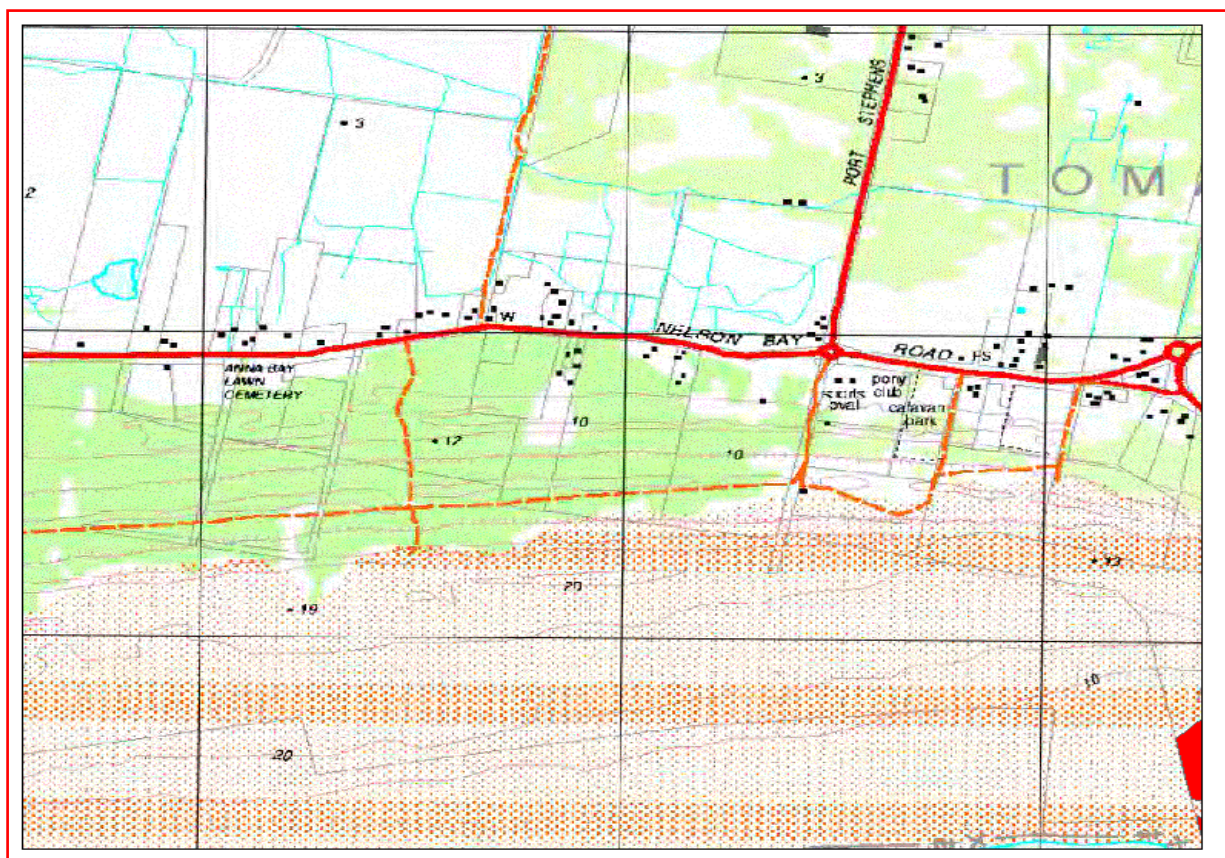
Email: vgordon@niche-eh.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 591, DP:DP1191380 with a Buffer of 1000 meters.

Additional Info : ACHA, conducted by Viki Gordon on 18 January 2018.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

14	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Annex D: Aboriginal Heritage Impact Permit

Issue of Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974



Planning,
Industry &
Environment

Your reference: AHIP Application for archaeological testing, 4226 Nelson Bay Road, ANNA BAY NSW 2316.
Our reference: AHIMS No. 4466 / EF19/16941
Notice number: C0004973
Contact: rog.hcc@environment.nsw.gov.au

Dr. Morgan Disspain – Project Manager
Senior Heritage Consultant
Niche Environmental and Heritage
HAY ENTERPRISES (NSW) PTY LTD
774 MARSH ROAD
BOBS FARM, NSW 2316

Attention

Dr. Morgan Disspain, mdisspain@niche-eh.com

Ms. Julie Wells, julie@tatland.com.au

Mr. Bob Lander, bob@tatland.com.au

NOTICE OF THE ISSUE OF

ABORIGINAL HERITAGE IMPACT PERMIT C0004974

Issued pursuant to section 90C (4) of the *National Parks and Wildlife Act 1974*

BACKGROUND

- A. Hay Enterprises NSW Pty Ltd (the applicant) applied to the Biodiversity and Conservation Division (BCD), of the Department of Planning, Industry and Environment (DPIE) (at the time of the application known as the Office of Environment and Heritage (OEH)), under section 90A of the *National Parks and Wildlife Act 1974* (NPW Act) for an Aboriginal Heritage Impact Permit (AHIP). The AHIP application was in relation to proposed Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP1191380, Anna Bay NSW 2316, in the Port Stephens Council Local Government Area.
- B. The project area contains an area of archaeological sensitivity, AHIMS site # 38-5-0347 (Anna Bay PAD-1) which would be impacted by the proposed activity.
- C. The applicant is seeking to determine the status of AHIMS Site # 38-5-0347 (Anna Bay PAD-1), and the nature and extent of the site prior to any development proposal being submitted to Port Stephens Council, as the determining authority.
- D. The received the application on 1 May 2019 and further information was received on 3 July 2017.

Issue of Aboriginal Heritage Impact Permit

National Parks and Wildlife Act 1974



Planning,
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Environment

ISSUE OF ABORIGINAL HERITAGE IMPACT PERMIT

1. BCD has considered the application and supporting information provided and matters under section 90K of the NPW Act and has decided to issue an AHIP **C0004974** subject to conditions.
2. The AHIP is attached.
3. You should read the AHIP carefully and ensure you comply with its conditions.

It is an offence under section 90J of the NPW Act to fail to comply with the conditions of the AHIP. The maximum penalty that a court may impose on a corporation for failing to comply with this AHIP is \$1,100,000.00. BCD can also issue penalty notices for this offence.

A handwritten signature in blue ink, appearing to read 'SCox'.

STEVEN COX

Senior Team Leader Planning

Hunter Central Coast Branch

Biodiversity and Conservation Division

Department of Planning, Industry and Environment

8 July 2019

INFORMATION ABOUT THIS NOTICE

- Details provided in this notice will be available on DPIE's Public Register in accordance with section 188F of the NPW Act.

Variation of this AHIP

- This AHIP may only be varied on application by the AHIP holder or by DPIE's to correct typographical errors or resolve inconsistencies between conditions of the AHIP. A permit can only be varied by subsequent variation notices.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



Planning,
Industry &
Environment

AHIP number: C0004974

(AHIMS Permit ID: 4466)

AHIP Issued To:

HAY ENTERPRISES (NSW) PTY LTD
74 MARSH ROAD
BOBS FARM NSW 2316

Attention

Dr. Morgan Disspain, mdisspain@niche-eh.com

Ms Julie Wells, julie@tatland.com.au

Mr. Bob Lander, bob@tatland.com.au

BCD Office issuing this AHIP

Biodiversity and Conservations Division

Department of Planning, Industry and Environment

Hunter Central Coast Branch

Locked Bag 1002

Dangar NSW 2309

Email: rog.hcc@environment.nsw.gov.au

Additional details for public register

a) Name of development or project	Anna Bay Sand Quarry 4226 Nelson Bay Road Lot 591 DP 1191380 ANNA BAY NSW 2316
b) Location	4226 Nelson Bay Road Lot 591 DP 1191380 ANNA BAY NSW 2316
c) Local Government Area(s)	Port Stephens
d) Description of harm authorised	Archaeological Test Excavations AHIMS Site # 38-5-0347 (Anna Bay PAD 1)
e) AHIP commencement date and duration	Commencement: 8 July 2019 Duration: 2 years

AHIP number: C0004974

Application Ref No. A06481-2019

Printed: 10:48:31 AM 8/07/2019

Page 1 of 17

AHIP TO HARM ABORIGINAL OBJECTS

A. Background

- (i) On 1 May 2019, an application was made to the Biodiversity and Conservation Division (BCD), of the Department of Planning, Industry and Environment (DPIE) (at the time of the application known as the Office of Environment and Heritage (OEH)) for an Aboriginal Heritage Impact Permit (AHIP) pursuant to s.90 of the *National Parks and Wildlife Act 1974* (the Act).
- (ii) Hay Enterprises NSW Pty Ltd (the applicant) applied for an AHIP in relation to proposed Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP1191380, Anna Bay NSW 2316, in the Port Stephens Council Local Government Area.
- (iii) The project area contains an area of archaeological sensitivity, AHIMS site # 38-5-0347 (Anna Bay PAD-1) which would be impacted by the proposed activity.
- (iv) The applicant is seeking to determine the status of AHIMS Site # 38-5-0347 (Anna Bay PAD-1), and the nature and extent of the site prior to any development proposal being submitted to Port Stephens Council, as the determining authority.
- (v) OEH considered the application and supporting information provided and matters under section 90K of the Act and decided to issue an AHIP subject to conditions.

B. AHIP issued subject to conditions

An AHIP is issued to harm Aboriginal objects identified in Schedules B and C, in accordance with the conditions of this AHIP.

This AHIP is issued pursuant to section 90 of the Act.

C. Commencement and duration of AHIP

This AHIP commences on the date it is signed unless otherwise provided by this AHIP.

Unless otherwise revoked in writing, this AHIP remains in force for:

- (i) 2 years from the date of commencement, that is, until **8 July 2021**.

D. Proposed Works

The main components of the development proposal include:

- The extraction of sand to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.

The works will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the AHIP area.

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



**Planning,
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Environment**

Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.

STEVEN COX

Senior Team Leader Planning

Hunter Central Coast Branch

Biodiversity and Conservation Division

Department of Planning, Industry and Environment

5 July 2019

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



**Planning,
Industry &
Environment**

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LAND TO WHICH THIS AHIP APPLIES

Figure (1)

The lands to which this AHIP applies - AHIP extent for Archaeological Test Excavations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316 (Page 12 of this AHIP).

Figure (2)

The lands to which this AHIP applies - Archaeological Test Excavation Locations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316 (Page 13 of this AHIP).

CONDITIONS

The conditions of this AHIP specify the actions that are permitted and/or required in relation to areas and Aboriginal objects, which are detailed in the Schedules that follow.

Administrative Conditions

Responsibility for compliance with conditions of AHIP

1. The AHIP holder must ensure that all persons involved in actions or works covered by this AHIP (whether employees, contractors, sub-contractors, agents or invitees) are made aware of and comply with the conditions of this AHIP.

Project manager to oversee the actions relating to this AHIP

2. A suitably qualified and experienced individual must be appointed as a project manager who is responsible for overseeing, for and on behalf of the AHIP holder, all the actions relating to this AHIP.
3. The individual appointed as project manager must be the project manager nominated in the application form.
4. If an alternative to the nominated project manager is appointed, BCD must be notified of their contact details within 14 days of this appointment.

Actions must be in accordance with AHIP application

5. All actions on the land must be carried out in accordance with the application except as otherwise expressly provided by a condition of this AHIP.

Operational Conditions

Certain Aboriginal objects must not be harmed

6. All human remains in, on or under the land must not be harmed.

Test excavations

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



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Environment

7. Test excavations may be carried out across the test excavation areas, as shown on Figure 2 The lands to which this AHIP applies - Archaeological Test Excavation Locations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316 (Page 13 of this AHIP)
8. Aboriginal objects that are recovered during the excavations may be analysed on-site and/or may be taken off-site for further analysis.
9. The excavations and analysis of Aboriginal objects must be carried out in accordance with the 'Anna Bay Sand Quarry, 4226 Nelson Bay Road, Anna Bay NSW, Aboriginal Cultural Heritage Assessment Report, Prepared for Tattersall Lander Pty Ltd, on Behalf of Hay Enterprises NSW Pty Ltd, Port Stephens Local Government Area, Consultancy: Niche Environment and Heritage, 15 March 2019' (OEH CM9 DOC19/369954-2), that was provided with the application.
10. The excavations must be completed in an area before any harm of Aboriginal objects described in Schedule C can commence in that same area.

Harm of certain Aboriginal objects through the proposed works

11. The Aboriginal objects described in Schedule C may be harmed. Nothing in this condition authorised harm to Aboriginal objects described in Schedule A (whether human remains, Aboriginal objects or 'no-harm areas').
12. Aboriginal objects described in Schedule C must not be harmed unless:
 - (a) all excavations described in Schedule B2 have been completed in the area.

Temporary storage of certain Aboriginal objects

13. Any Aboriginal objects that are removed from the land by actions authorised by this AHIP, must be moved as soon as practicable to the temporary storage location in the table below, pending any agreement reached about the long-term management of the Aboriginal objects.
14. The temporary storage location is as follows:

Location name:	Niche Environment and Heritage Offices
Address:	Niche Environment and Heritage Offices Level 4 460 Church Street PARRAMATTA NSW 1750
Storage particulars:	In a secure locked cabinet.

15. Any Aboriginal objects stored at the temporary storage location must not be further harmed, except in accordance with the conditions of this AHIP.

Long term management of certain Aboriginal objects

16. Requirement 26 “Stone artefact deposition and storage” in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (24 September 2010, available online at: <http://www.environment.nsw.gov.au/licences/archinvestigations.htm>) must be complied with.

Notification and Reporting Conditions

Notification of commencement and completion of actions

17. Written notice must be provided to the BCD office prior to the commencement of actions authorised by this AHIP. Written notice of commencement may be emailed to rog.hcc@environment.nsw.gov.au
18. Written notice must be provided to the BCD office within 7 days of the completion of actions authorised by this AHIP. Written notice of completion may be emailed to rog.hcc@environment.nsw.gov.au

Copy of this AHIP and notices to be provided to Registered Aboriginal Parties

19. A copy of this AHIP must be provided to each Registered Aboriginal Party, within 14 days of receipt of the AHIP from BCD.
20. Where this AHIP is varied or transferred, a copy of the AHIP variation or transfer notice must be provided to each Registered Aboriginal Party, within 14 days of receipt of the notice.

Human remains

21. If any human remains are discovered and/or harmed in, on or under the land, the AHIP holder must:
- (a) not further harm these remains
 - (b) immediately cease all work at the particular location
 - (c) secure the area so as to avoid further harm to the remains
 - (d) notify the local police and BCD’s Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location, and
 - (e) not recommence any work at the particular location unless authorised in writing by BCD.

Incidents which may breach the Act or AHIP

22. The AHIP holder must notify the BCD office in writing as soon as practicable after becoming aware of:
- (a) any contravention of s.86 of the Act not authorised by an AHIP, and/or
 - (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

23. Where BCD suspects that an incident has occurred which may have breached the Act or AHIP, BCD may request a written incident report, which includes the following:
- (a) the nature of the incident
 - (b) the actual or likely impact of the incident on Aboriginal objects and/or Aboriginal places

- (c) the nature and location of these Aboriginal objects and/or Aboriginal places, referring to and providing maps and photos where appropriate
- (d) any conditions of an AHIP which may have been breached, and
- (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.

24. The incident report must be provided to the BCD office within the timeframe specified in the request.

Provision of Aboriginal Site Impact Recording Form

25. An Aboriginal Site Impact Recording Form must be completed and submitted to the AHIMS Registrar, for each AHIMS site identified in Schedules B and C, within 6 months of the completion of the actions authorised by this AHIP.

Note:

- (i) The Aboriginal Site Impact Recording Form can be found on the OEH website:

<http://www.environment.nsw.gov.au/licences/DECCAHISSiteRecordingForm.htm>

- (ii) Contact details for the AHIMS Registrar can be found on the DPIE website:

<http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm>

Report about harm to Aboriginal objects (Test Excavation Report)

26. A Test Excavation Report must be prepared in accordance with Requirement 11 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (24 September 2010, available online at: <http://www.environment.nsw.gov.au/licences/archinvestigations.htm>)

27. The Test Excavation Report must be submitted to the BCD office within 12 months of the completion of the test excavations.

28. A copy of the Test Excavation Report, including a summary of the report in plain English, must be sent by registered post to each Registered Aboriginal Party within 14 days of the report being submitted to DPIE.

General Conditions

Indemnity

29. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Secretary of DPIE, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from:

- (a) any damage or destruction to any real or personal property; and
- (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any actions undertaken pursuant to this AHIP.

Release

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



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30. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Secretary of DPIE, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from:
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising from or in connection with any actions undertaken pursuant to this AHIP.

Written notice

- (c) Any requirement to provide written notice to the BCD office in this AHIP may be complied with by emailing notice to the BCD office's email address. The BCD office's contact details are specified at the front of this AHIP.

SCHEDULES

The following schedules identify the areas and Aboriginal objects that are subject to the conditions of this AHIP.

Schedule A: Aboriginal objects which must not be harmed

A1 Human remains

All human remains in, on or under the land must not be harmed, as specified by the conditions of this AHIP.

A2 Aboriginal objects that are identified on AHIMS

Not applicable

A3 No-harm areas

Not applicable

Schedule B: Aboriginal objects that may be harmed through the certain actions

B1 Movement only

Not applicable

B2 Test excavations

Test excavations may be carried out across the test excavation areas, as shown on Figure 2 The lands to which this AHIP applies - Archaeological Test Excavation Locations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316 (Page 13 of this AHIP) but only in accordance with the conditions of this AHIP.

Test excavation area comprises the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Part	38-5-0347	PAD	Anna Bay PAD 1	No	412042	6373398	GDA

B3 Community collection

Not applicable

Schedule C: Aboriginal objects which may be harmed through the proposed works

The Aboriginal objects described in this schedule may be harmed, but only in accordance with the conditions of this AHIP (excluding any Aboriginal objects described in Schedule A).

C1 Harm of Aboriginal objects identified on AHIMS

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Part	38-5-0347	PAD	Anna Bay PAD 1	No	412042	6373398	GDA

C2 Areas where harm of Aboriginal objects is authorised

Not applicable

Aboriginal Heritage Impact Permit

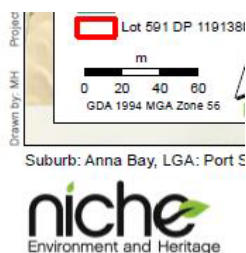
Section 90 of the *National Parks and Wildlife Act 1974*



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Figure (1)

The lands to which this AHIP applies - AHIP extent for Archaeological Test Excavations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316.



Aboriginal Heritage Impact Permit

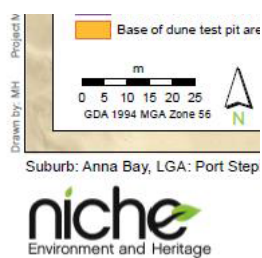
Section 90 of the *National Parks and Wildlife Act 1974*



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Figure (2)

The lands to which this AHIP applies - Archaeological Test Excavation Locations, Anna Bay Sand Quarry, 4226 Nelson Bay Road, Lot 591 DP 1191380, Anna Bay NSW 2316.



DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object	has the same meaning as in the Act.
Act	means the <i>National Parks and Wildlife Act 1974</i> .
AHIMS	means the Aboriginal Heritage Information Management System maintained by DPC, as defined in s.90Q of the Act.
AHIP	means Aboriginal Heritage Impact Permit
AHIP holder	means the entity or person listed on the cover page under the heading "AHIP issued to".
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Community collection	means the collection of Aboriginal objects by one or all Registered Aboriginal Parties or their representatives.
Community collection area	means an area described as a community collection area in Schedule B3
Harm	has the same meaning as in the Act. In relation to Aboriginal objects, harm means the movement, damage, defacement and/or destruction of Aboriginal objects. In relation to an Aboriginal place, harm means the damage, defacement and/or destruction of the Aboriginal place.
Land	means the land described under the heading "Land to which this AHIP applies".
No-harm areas	means those areas described in Schedule A3.
OEH	Office of Environment and Heritage (NSW).
DPIE office	means the office listed on the cover page of this AHIP.
Proposed works	means the works described under the heading "D. Proposed Works" at the front of this AHIP.
Public register	means the public register established under s.188F of the Act, that contains details of AHIPs issued by the Secretary of DPIE, as described under the heading "Information about this AHIP".
Registered Aboriginal Parties	means the Registered Aboriginal Parties listed in the application.
Salvage excavation	means an archaeological excavation carried out in accordance with the methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of salvage excavation is to recover a sample of Aboriginal objects as an archival record of Aboriginal life from a site that will be destroyed.
Salvage excavation area	means any area described as a salvage excavation area in Schedule B2.
Test excavation	means an archaeological excavation carried out in accordance with methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of test excavation is to collect a

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



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sample of Aboriginal objects, in order to establish the nature and extent of sub-surface Aboriginal objects and to assist in the assessment of management options for the site.

Test excavation area means any area described as a test excavation area in Schedule B2

INFORMATION ABOUT THIS AHIP

Public Register

Under section 188F of the Act, the Secretary of DPIE is required to keep a public register containing the details of each AHIP issued. The details of this AHIP that will be published on the public register are outlined on the front page of this AHIP.

The public register is available online at www.environment.nsw.gov.au

Appeals

Under section 90L of the Act, the AHIP holder may appeal to the Land and Environment Court if they are dissatisfied with any condition of this AHIP. The appeal must be lodged within 21 days of the date this AHIP was issued.

Penalties for breach of the Act or AHIP condition

Significant penalties can be imposed by the Land and Environment Court for harm to an Aboriginal object or Aboriginal Place other than as authorised by a condition of an AHIP, or for a breach of an AHIP condition. DPIE can also issue penalty notices for a breach of the Act or AHIP condition.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the *National Parks and Wildlife Act*

Newly identified Aboriginal objects must be notified to the Secretary of DPC under s.89A of the Act using the form available online at www.environment.nsw.gov.au

Stop work orders, interim protection orders and remediation directions may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the BCD office for a variation of any conditions of an AHIP, using the AHIP variation application form available online at www.environment.nsw.gov.au. Requests for significant variations must be accompanied by evidence of further consultation with Registered Aboriginal Parties and may include payment of fees.

The conditions of an AHIP may be varied at any time by the Secretary of DPIE in order to correct a typographical error or to resolve an inconsistency between conditions. The AHIP holder may appeal a decision of the Secretary of DPIE to vary the conditions of the AHIP.

Aboriginal Heritage Impact Permit

Section 90 of the *National Parks and Wildlife Act 1974*



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Transfer of AHIP

The AHIP holder may apply to transfer this AHIP to another person by using the AHIP transfer application form available online at www.environment.nsw.gov.au.

Surrender of AHIP

The AHIP holder may apply to surrender this AHIP by using the AHIP surrender application form available online at www.environment.nsw.gov.au. The surrender must be approved by the Secretary of DPIE and may be subject to conditions.

Suspension and revocation of AHIP

An AHIP may be suspended or revoked at any time at the discretion of the Secretary of DPIE. Prior to suspending or revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Disclosure of information pursuant to lawful requirement

This AHIP does not prevent the disclosure of any information or document in DPIE's possession in accordance with any lawful requirement.

Making copies of reports

By providing a report, the AHIP holder acknowledges that DPIE can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

DPIE is able to make copies of any reports provided to DPIE under this AHIP.

Annex E: Aboriginal Site Impact Recording Form (Anna Bay PAD 1)

- 1 This form must be completed following impacts to AHIMS sites that are:
 - a) a result of test excavation carried out in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*
 - b) authorised by an Aboriginal Heritage Impact Permit (AHIP) issued by the Office of Environment and Heritage (OEH)
 - c) undertaken for the purpose of complying with Director General's Requirements issued by the Department of Planning and Infrastructure (DP&I) for:
 - State Significant Development (SSD - Part 4),
 - State Significant Infrastructure (SSI - Part 5.1), or
 - A Major Project (Part 3A - now repealed) under the *Environmental Planning and Assessment Act 1979* (EP&A Act), or
 - d) authorised by a SSD/SSI/Part 3A consent/approval under the EP&A Act.
- 2 Completed forms must be submitted to the AHIMS Registrar (www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm).
- 3 This form is intended to complement (not replace) the AHIMS Site Recording Form. Where there is a need to provide detailed information about the nature of a site, use the AHIMS Site Recording Form.
- 4 This form does not replace the need to submit reports to OEH (as a condition of an AHIP or SSD/SSI/Part 3A consent/approval). This form must be submitted in addition to any reports.

AHIMS site ID:

Date recorded:

Site impact authorisation (select one)	Reference numbers, dates
<input type="checkbox"/> Archaeological Code (The impacts to this site were the result of test excavation carried out in accordance with the <i>Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW</i> .)	Date OEH was notified (under requirement 15c of the Code): <input type="text"/> OEH Regional office notified: <input type="text"/>
<input checked="" type="checkbox"/> AHIP (The impacts to this site were authorised by an AHIP.)	AHIP number: <input type="text" value="C0004974"/> Date issued/signed: <input type="text" value="2019-07-08"/> AHIMS permit ID/number: <input type="text" value="4466"/>
<input type="checkbox"/> SSD/SSI/Part 3A application (The impacts to this site were undertaken for the purposes of complying with Director General's Requirements issued by the DP&I)	Project number: <input type="text"/> Date Director General's Requirements issued: <input type="text"/>
<input type="checkbox"/> SSD/SSI/Part 3A approved project (The impacts to this site were authorised by a consent/approval under Parts 4/5.1/3A of the EP&A Act.)	or Date of project approval: <input type="text"/>

Site status following impacts:

- ☒ **Not a site** (The investigations concluded that this is not a site.)
- ☐ **Valid site** (The investigations confirmed that this is an Aboriginal site.)
- ☐ **Partially destroyed** (The site was partially destroyed following authorised impacts; a portion of the site remains in situ.)
- ☐ **Destroyed** (The site was completely destroyed following authorised impacts.)

Site Location Information:

Site name: Anna Bay PAD 1

Easting: 412042

Northing: 6373398

Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 25

Zone: 56

Location method: Non-Differential GPS

Recorder Information:

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Disspain

Morgan

Organisation: Niche Environment and Heritage

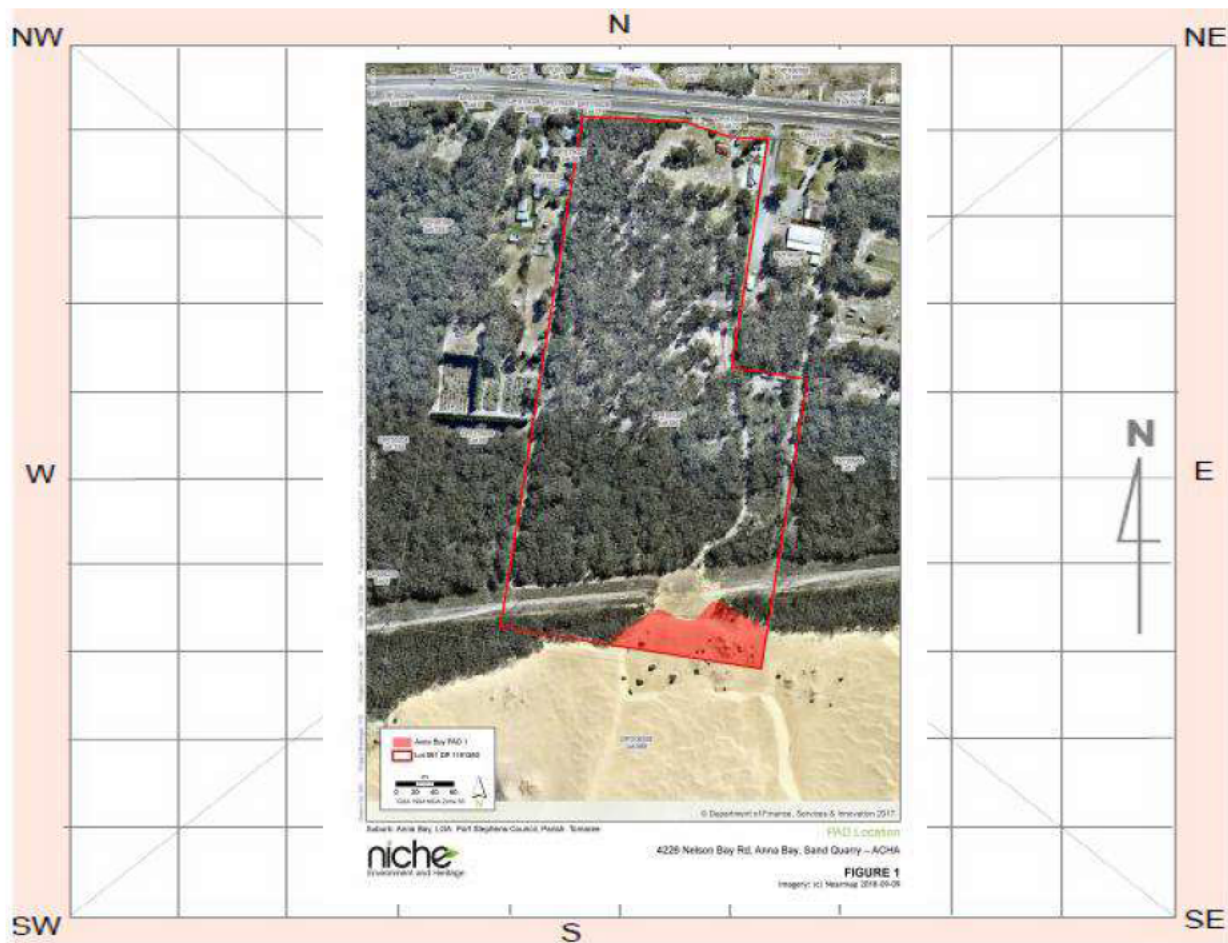
Address:

Phone: 0488774566

E-mail: mdisspain@niche-eh.com

Location map

Clearly demarcate the original AHIMS site boundary, show the boundaries of impacted areas and the areas where the site remains in situ. Display map coordinates.



Site contents information

open/closed site:

Open

Site condition:

Erosion

Features:

1.

Potential Archaeological Deposit

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

180

60

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar Length
(cm)

Scar Width
(cm)

Scar
shape

Tree
Species

Description:

PAD within a dynamic sand dune. Boundaries determined by subject area under assessment.

Features:

2.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar Length
(cm)

Scar Width
(cm)

Scar
shape

Tree
Species

Description:

Features:

3.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar Length
(cm)

Scar Width
(cm)

Scar
shape

Tree
Species

Description:

Features:

4.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar Length
(cm)

Scar Width
(cm)

Scar
shape

Tree
Species

Description:

Features:

5.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar Length
(cm)

Scar Width
(cm)

Scar
shape

Tree
Species

Description:

Other Site
Info:

Methodology and results

Summary of the methodology and results of the activity or works undertaken through the authorised impacts, as relevant to the AHIMS site

16 test pits measuring 50 x 50 cm were excavated across the PAD, both at the base of the dune, and along the crest. material was sieved through 3mm mesh. No Aboriginal Objects were identified.

Management recommendations

Summary of any management recommendations for the AHIMS site

Not a site

Post-investigation significance

Discuss if the scientific/archaeological or cultural significance of the site has changed in light of the results of the investigations or works conducted at the site.

Please refer to report (Niche Environment and Heritage 2019)

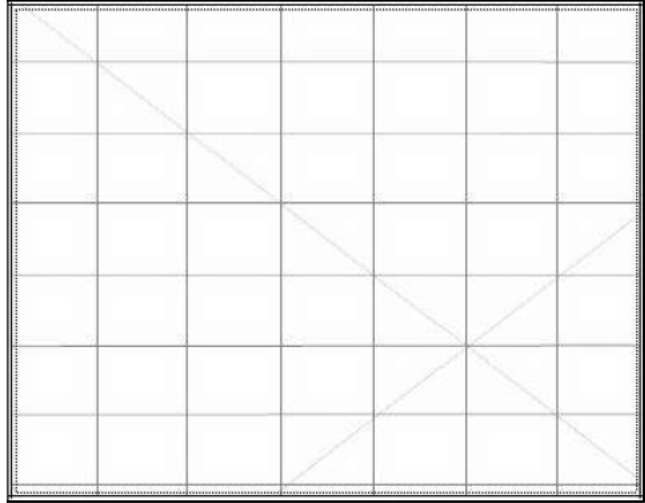
Additional comments

Site photographs

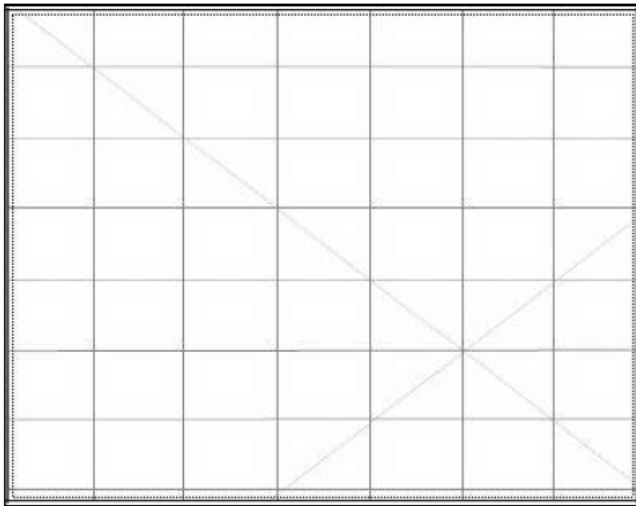
Include photographs of the authorised impacts activity, as relevant to the AHIMS site. Please keep photo size to a maximum of 200 kb.



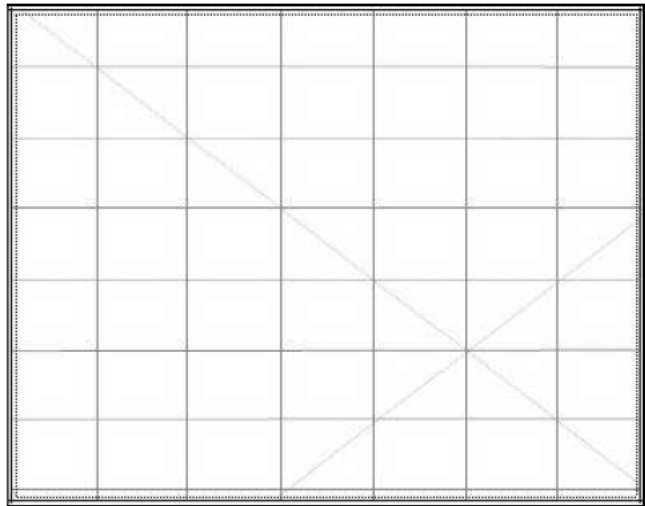
Description: Anna Bay PAD 1 facing west across dune face



Description:



Description:



Description:

Niche Environment and Heritage

A specialist environmental and heritage consultancy.

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All mail correspondence should be through our Head Office

Appendix B: Test Excavation Research Methodology



Anna Bay Sand Quarry

4226 Nelson Bay Road, Anna Bay NSW

**Aboriginal Heritage Impact Permit
Archaeological Testing Methodology**

Prepared for Tattersall Lander Pty Ltd on behalf of Hay Enterprises NSW Pty Ltd

Port Stephens Council Local Government Area

Author: Dr Morgan Disspain

25 February 2019

Document control

Project no.:	4017
Project client:	Tattersall Lander Pty Ltd
Project office:	NSW
Document description:	Aboriginal Heritage Impact Permit Archaeological Testing Methodology
Project Director:	Renée Regal
Project Manager:	Dr Morgan Disspain
Authors:	Dr Morgan Disspain
Internal review:	Clare Anderson
Document status:	Final
Local Government Area:	Port Stephens

Document revision status

Author	Revision number	Internal review	Date issued
Dr Morgan Disspain	Final	Clare Anderson	25 February 2019

Niche Environment and Heritage

Excellence in your environment.
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Locations

Sydney
Central Coast
Illawarra
Armidale
Newcastle
Mudgee
Port Macquarie
Brisbane
Cairns

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Cover photograph: Looking east at proposed sand quarry area (Niche 2018)

Glossary and Abbreviations

Term	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present day Aboriginal communities.
Aboriginal object(s)	The legal definition for material Aboriginal cultural heritage under the NSW <i>National Parks and Wildlife Act 1974</i> .
Aboriginal stakeholders	Members of a local Aboriginal land council, registered holders of Native Title, Aboriginal groups or other Aboriginal people who may have an interest in the Project.
Archaeology	The scientific study of human history, particularly the relics and cultural remains of the distant past.
Archaeological deposit	A layer of soil material containing archaeological remains.
Archaeological investigation	The process of assessing significance and potential of archaeological resources of a given impact area by a qualified archaeologist.
Archaeological site	A site with material evidence of past Aboriginal or non-Aboriginal activity in which material evidence (artefacts) of past activity is preserved.
AHIP	Aboriginal Heritage Impact Permit
Artefact	An object made by human agency (e.g. stone artefacts).
Assemblage	A group of stone artefacts found in close association with one another. Any group of items designated for analysis - without any assumptions of chronological or spatial relatedness.
Avoidance	A management strategy which protects Aboriginal sites within an impact area by avoiding them totally in development.
Catchment	The area from which a surface watercourse or a groundwater system derives its water.
Cumulative impacts	Combination of individual effects of the same kind due to multiple actions from various sources over time.
Development	The operations involved in preparing a mine for extraction, including cutting roadways and headings. Also includes tunnelling, sinking, crosscutting, drifting, and raising.
Drainage	Natural or artificial means for the interception and removal of surface or subsurface water.
Drape	A thin mobile layer of sediment that sits on the ground surface
Exposure	Exposure is different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals'.
Flake	A piece of stone detached from a core, displaying a bulb of percussion and striking platform.
Harm	With regard to Aboriginal objects this has the same meaning as the NSW <i>National Parks and Wildlife Act 1974</i> .
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment.
Impact area	An area that requires archaeological investigation and management assessment.
In situ	Latin words meaning 'on the spot, undisturbed'.

Term	Definition
Isolated find	A single artefact found in an isolated context.
Landscape character	The aggregate of built, natural and cultural aspects that make up an area and provide a sense of place. Includes all aspects of a tract of land – built, planted and natural topographical and ecological features.
Land unit	An area of common landform, and frequently with common geology, soils and vegetation types, occurring repeatedly at similar points in the landscape over a defined region. It is a constituent part of a land system.
Landform	Any one of the various features that make up the surface of the earth.
Management plans	Conservation plans which identify short and long term management strategies for all known sites recorded within a (usually approved) Project Area.
Methodology	The procedures used to undertake an archaeological investigation.
Mitigation	To address the problem of conflict between land use and site conservation.
OEH	Office of Environment and Heritage
Open camp site	An archaeological site situated within an open space (e.g. archaeological material located on a creek bank, in a forest, on a hill, etc.).
PAD	Potential archaeological deposit. A location considered to have a potential for subsurface archaeological material.
Site recording	The systematic process of collecting archaeological data for an archaeological investigation.
Site	In archaeological terminology a place where material evidence of past human activity is identifiable.
Survey coverage	A graphic and statistical representation of how much of an impact area was actually surveyed and therefore assessed.
Visibility	Visibility is the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stony ground or introduced materials will affect the visibility. Put another way, visibility refers to ‘what conceals’.

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1. Introduction

1.1 Background

Niche Environment and Heritage (Niche) was commissioned by Tattersall Lander Pty Ltd, on behalf of Hay Enterprises NSW Pty Ltd, to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to facilitate the development of the Anna Bay Sand Quarry at 4226 Nelson Bay Road, Anna Bay (the Project), a designated development, under Part 4 of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act). As a designated development, the Secretary's Environmental Assessment Requirements (SEAR 1172) require that an assessment of the potential impacts on Aboriginal heritage (cultural and archaeological) be undertaken. The assessment should include evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage.

The assessment to date has included background archaeological and historical investigation, ongoing consultation with the Registered Aboriginal Parties and an archaeological survey that included representatives from Mur-roo-ma Incorporated, Worimi Traditional Owners Indigenous Corporation, Karuah Indigenous Corporation, Worimi Local Aboriginal Land Council, and Nur-Run-Gee Pty Ltd.

The southern section of the Subject Area contains an area of high sensitivity within a sand dune system, which may be a continuation of a previously recorded site within the Subject Area, AHIMS ID#38-5-032. The area of sensitivity has been named Anna Bay PAD-1 (AHIMS ID#38-5-0347), which would be impacted by the proposed activity. The environmental context of the PAD, being an unconsolidated sand dune means that test excavation methodology under the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* [hereafter referred to as the 'Code of Practice'] is not suitable. As such, it is proposed to implement alternate excavation methods, as outlined in Section. 4.3. Owing to these factors, an AHIP is being sought from the Office of Environment and Heritage (OEH) to complete an archaeological testing program to test the area identified as Anna Bay PAD-1 (AHIMS ID#38-5-0347).

This methodology for the test excavation has been designed to conform to the relevant requirements of various advisory documents and guidelines. These guidelines and documents include:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH, 2011a).
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974)* (DECCW, 2010a).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) [hereafter referred to as the 'Code of Practice'].
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [ICOMOS], 1999).
- *Aboriginal Cultural Heritage Standards and Guidelines Kit* (NSW National Parks and Wildlife Service, 1997).

1.2 Objective of community consultation

The objective of community consultation is for Aboriginal people to have the opportunity to improve assessment outcomes by:

- providing relevant information about the cultural significance and values of the Aboriginal object(s) and/or place(s);

- influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s);
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the Subject Area; and
- commenting on the draft assessment report before it is submitted to government.

The following report is designed to inform the Registered Aboriginal Parties (RAPs) for the Project on the proposed subsurface archaeological investigation and provide them with the opportunity to comment on the methodology.

2. Project Information

2.1 The Project

The Proponent intends to establish the Anna Bay Sand Quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380).

This work will involve the excavation and relocation of sand, which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Tattersall Lander Pty Ltd, on behalf of Hay Enterprises NSW Pty Ltd, to consult with the Aboriginal community and to prepare:

- an Aboriginal Cultural Heritage Assessment (ACHA) Report and Archaeological Report (AR);
- management recommendations for any Aboriginal objects that might be identified during the process;
- an AHIP application to undertake archaeological test excavations; and
- a subsequent AHIP, should it be required, to manage any Aboriginal objects identified during the ACHA.

2.2 Where is the proposed project

The proposed Anna Bay Sand Quarry is situated at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380), within the coastal, semi-rural locality of Anna Bay, 12 km south west of Nelson Bay and 25 km north east of Newcastle Airport. It is situated within the Port Stephens region of NSW, in the Parish of Tomaree, in the County of Gloucester, and in the Port Stephens Council Local Government Area (Figure 1).

2.3 What is being proposed?

The main impacts of the development proposal (Figure 2) will be:

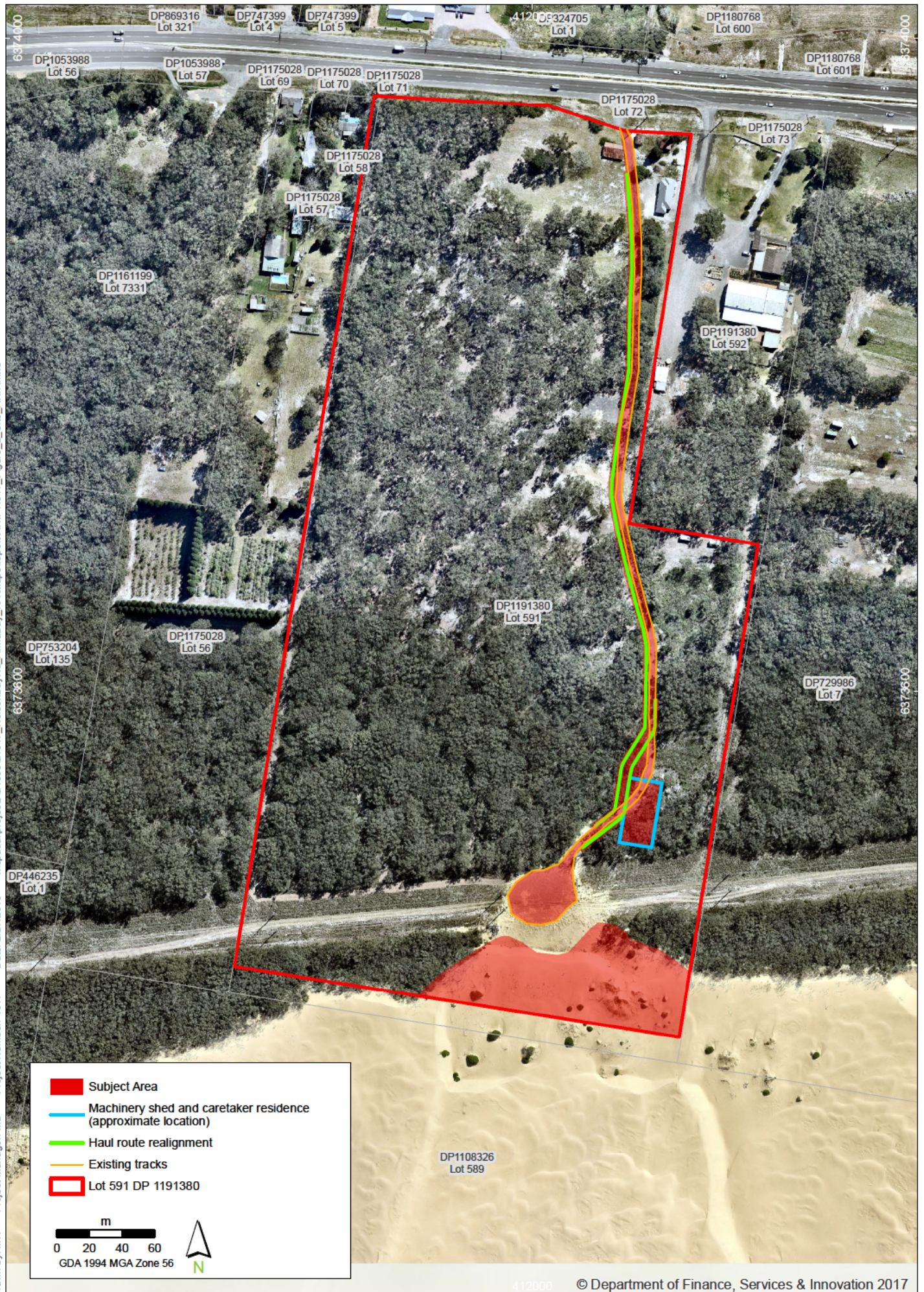
- The extraction of sand to ground level.
- Construction of a manager's residence/site office.
- Removal of vegetation for the purposes of the manager's residence/site office and associated bushfire asset protection zone (APZ)
- Site access upgrade at the intersection with Nelson Bay Road and minor site access improvements (haul road).
- Ancillary infrastructure.
-

This work will involve the excavation and relocation of sand which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

Drawn by: MH Project Manager: MD Project Number: 4017 Date: 2/25/2019 T:\spatial\projects\4000\4017_NelsonBayRd_AnnaBay_HA\Map\report\AHIP\4017_Figure_1_Location_AH.P mxd



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Location of the Subject Area

4017 Anna Bay Sand Quarry

FIGURE 2

Imagery: (c) Nearmap 2018-09-09

3. Assessment to Date

The assessment to date has included background desktop research about the Subject Area and immediate surrounds, database searches for listed heritage places and previously recorded sites, and a site inspection, which was conducted on 11 October 2019. Detailed information about these assessments can be found in the Aboriginal Cultural Heritage Assessment Report (ACHAR) for this project (Niche 2019). The below information provides a brief summary of previously recorded sites within, and within proximity to the Subject Area.

3.4 Previously recorded sites

An extensive Aboriginal Heritage Information Management System (AHIMS) search was conducted on 18 January 2018 (AHIMS Client ID: 322781), centred on the Subject Area (Figure 3).

The AHIMS search identified one Aboriginal site within the Subject Area, known as NBRd 4 (AHIMS ID# 385-0320). The site comprises shell fragments on the ground surface, with the high possibility of the presence of more shell in the area as part of an extensive shell-midden. Thirteen (13) additional Aboriginal sites were located outside the Subject Area within a 1 km distance, including surface stone artefact scatters, shell middens with stone artefacts, and potential archaeological deposits (PADs). The AHIMS sites are summarised in Table 1.

Table 1: Previously recorded AHIMS sites within 1 km of the Subject Area

AHIMS No.	Site Features
38-5-0121	Artefacts and shell
38-5-0198	Artefact
38-5-0223	Artefact and shell
38-5-0250	Artefacts and shell
38-5-0320	Shell
38-5-0321	Shell
38-5-0319	Shell
38-5-0312	Artefact
38-5-0310	Artefact and shell
38-5-0311	Potential Archaeological Deposit (PAD)
38-5-0327	Artefact
38-5-0324	Potential Archaeological Deposit (PAD)
38-5-0325	Potential Archaeological Deposit (PAD)
38-5-0331	Artefact

3.4.1 Sites within the Subject Area

The previously recorded Aboriginal site (NBRd 4 AHIMS ID#38-5-0320) was relocated in the northern part of the property during the site inspection. The site will not be impacted by the proposed haul road, as the section in close vicinity to the site has been already built and there are no significant modifications proposed for this road.

During the site survey, one area of archaeological potential was identified within the Subject Area — Anna Bay PAD 1 (AHIMS ID 38-5-0347) (Table 2). This was defined as the immediate vicinity and foreground of the sand dunes in the southern section of the property (Figure 4).

Table 2: Details of the previously and newly recorded Aboriginal sites within the Subject Area

Site name and number	Site Features	Easting	Northing
NBRd 4 (AHIMS ID #3850320)	Shell, Potential Archaeological Deposit	412046	6373942
Anna Bay PAD 1 (AHIMS ID 38-5-0347)	Potential Archaeological Deposit	412042	6373398

3.4.2 Other heritage registers

Searches of numerous heritage databases, as well as the Port Stephens Local Environmental Plan (LEP) and Port Stephens Development Control Plan (DCP), were undertaken by Niche on 31 January, 2018.

No listed heritage items are located within the Subject Area (Table 3); however, a number of heritage items are located nearby. Further consideration of historic heritage items is provided in a separate Heritage Impact Assessment (Niche Environment and Heritage, 2018a).

Table 3: Heritage registers search results

Heritage Registers	Heritage Items in the Subject Area	Nearby Heritage Items
World Heritage List	None	None
National Heritage List	None	None
Commonwealth Heritage List	None	None
State Heritage Register	None	Birubi Point Aboriginal Place
State Heritage Inventory	None	Birubi Point Cemetery (Item ID: I2)
Local Environmental Plans	None	Stockton Beach Dune System (Item ID: I34)
Development Control Plans	None	DCP Controls apply to the above heritage items.

3.4.2.1 Birubi Aboriginal Place

Birubi Point, which is located 1.4 km the east of the Subject Area, is a registered Aboriginal Place due to its continued association with the Worimi people. It was registered as an Aboriginal Place 5062849 (file number 07/18962 & DOC 07/50249 & DOC1) under the NPW Act in 2007. It is a traditional Aboriginal ceremonial and burial site, which contains extensive archaeological material considered important to the teaching of the current and future generations about the local Aboriginal culture. This site is connected with the Worimi Conservation Lands, which are a joint management of a number of National parks and conservation areas. This place provides valuable information regarding the archaeological potential of the Subject Area due to its proximity and context.

3.4.2.2 Birubi Point Cemetery

Birubi Point Cemetery is located approximately 2.3 km from the Subject Area. Birubi Point Cemetery was in use between 1876 and 1996 and contains the graves of early settlers to the area, as well as shipwrecked persons, some of who were unidentified. The cemetery is located adjacent to the original lot of land settled by the Blanch family in the 1950s. The point on which the cemetery is located was known as Cemetery

Point, until the name was officially changed in 1976; it is now located within the lands of the Birubi Point Aboriginal Place. The first internment in 1876 was that of Lucy Blanch who was an Anna Bay pioneer. The cemetery contains a layout plan on a plaque and includes a list of all the known burials within the cemetery, numbering 88 internments.

3.4.2.3 Stockton Beach Dune System

Stockton Beach dune system is the largest moving coastal land mass in the southern hemisphere, and stretches from Stockton to Anna Bay covering a distance of approximately 25 kilometres in length. According to the Register of the National Estate, the entire bight (stretching from the Hunter River Estuary to Birubi Point in the north) is of significance for its unique natural ecosystem (RNE Place ID: 19510).

As a result of the shifting sand sheet, Aboriginal midden sites, burials and education sites important to the Worimi peoples, as well as World War II fortifications, are periodically covered and revealed by the moving sands. These sand dunes are directly adjacent to the Subject Area, and are encroaching northwards from the southern boundary of the Subject Area. Their dynamic nature means that archaeological material may exist within the Subject Area subsurface.

3.1 Archaeological survey

The archaeological survey of the Subject Area was carried out on the 11 October, 2018. Details of the participants are provided in **Error! Reference source not found.** below.

Table 4: Details of field survey participants in alphabetical order

Name	Organisation
Lennie Anderson	Nur-Run-Gee Pty Ltd
Dave Feeney	Karuah Indigenous Corporation
Balazs Hansel	Niche
Jamie Merrick	Worimi Local Aboriginal Land Council
Candy Towers	Worimi Traditional Owners Indigenous Corporation
Tom Towers	Worimi Traditional Owners Indigenous Corporation
Bec Young	Mur-roo-ma Incorporated

The field survey covered the entire Subject Area with an additional buffer around the entire extent of the proposed impact footprint including the manager's residence/site office as well as the sand quarry.

The previously recorded Aboriginal site NBRd 4 (AHIMS ID#38-5-0320) was relocated in the northern part of the property. The site will not be impacted by the proposed haul road, as the section in close vicinity to the site has been already built and there are no significant modifications proposed for this road.

No additional Aboriginal sites were identified; however, the survey identified an area of archaeological potential within the immediate vicinity and foreground of the sand dunes in the southern section of the property.

This PAD was subsequently registered (Anna Bay PAD 1 (AHIMS ID 38-5-0347)), and the survey results recommended further investigation in the form of test excavation to increase archaeological exposure and visibility and to test the potential of the landform for archaeological resources.

3.2 Predictive Model

Predictive modelling has been developed for the area utilising data from the archaeological, geological and geomorphic research presented in the ACHAR. Previous archaeological studies undertaken throughout the area provide a good indication of site types and site patterning in the area. These studies have shown that shell middens associated with stone artefacts and middens with only shell fragments are the most predominate site types within the area. The most common site location is the seaward area of active transgressive dunes/ active blowout. This is then followed by the beach fore dune and outer basin (Eric Martin and Associates, 2002:34). The Subject Area lies in the Outer Holocene barrier and sand dunes.

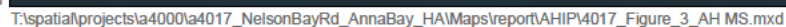
The general predictions and key trends are listed below:

- The most common site types are open sites containing shell with artefacts, followed by isolated finds.
- Sites are usually located within 50 metres of reliable water source.
- Sites are located both on the Holocene and Pleistocene dunes overlooking the interbarrier depression.
- Sites are not usually found in the interbarrier depression.
- Site types are predominately shell middens, stone tools and may also contain charcoal.
- Artefact scatters, isolated finds, scarred trees, burials and ceremonial sites may also be found along the dunes.
- Larger sites with higher densities of artefacts are more likely to be found close to stream confluences and permanent water sources, such as Tillegerry Creek (approximately two kilometres from the Subject Area).
- Artefacts typically date to the Holocene.
- Both middens (including estuarine shell species, rock oysters and mud whelk) and open camp sites are located on the inner landward margin of the Holocene dunes.
- Stone artefact types include flakes, flaked pieces, broken flakes, cores and tools.
- Artefact scatters are most commonly linked in close proximity to permanent water sources including creeks, swamps, the inter barrier depression and the coast.
- Frequency and density of artefacts are directly related to location within the landscape.
- Large sites increase markedly with proximity to permanent water sources.
- The majority of sites will be subject to disturbances including human and natural.
- High concentrations of artefacts are more likely to be located within resource rich areas.

A site specific predictive model was developed and is described below. This predictive model has been developed based on a review of landscape context and individual landforms, ethno historical evidence of traditional land use, distribution of natural resources, the results of previous archaeological work in the vicinity of the study area and the predictive modelling proposed in previous investigations.

- Shell artefacts and stone artefacts will be the most common site type across the landscape and are the most likely site type to occur within Anna Bay PAD 1.
- The unconsolidated sand at the top of the dune is predicted to have lower archaeological integrity owing to the mobility of the dunes, than the stable sediment at the base of the dune, which has a higher likelihood of containing in situ archaeological deposits.
- Sites will most commonly be low density artefact scatters or isolated finds, although high density scatters may also be present.
- Relatively undisturbed soils have potential to contain subsurface archaeological deposits.

- Excavations within the region suggest that high densities of artefacts are present around 50 m from water sources, and that subsurface material may be much greater than indicated by surface numbers of artefacts. Densities of artefacts are likely to be lower within Anna Bay PAD 1 due to its distance from water sources.
- Given the environmental context of the sand dunes, and the proximity to Birubi Aboriginal Burial Ground, it is possible that burials may occur in the sand dunes though such an occurrence would be rare. Burial sites can occur anywhere but generally in significant landform locations and generally in soft soils.
- The following site types are **unlikely** to occur in Anna Bay PAD 1:
 - Stone quarry sites, axe grinding grooves, stone engravings/art and shelter sites due to the lack of suitable geology.
 - Scarred or carved trees due to the extent of vegetation clearing in the region.



4. Proposed Methodology for Cultural Heritage Assessment

4.1 Aboriginal Cultural Heritage Assessment (ACHA) and AHIP Test excavation

The ACHA will follow and draw on where relevant the guidelines set out in the:

- *Aboriginal cultural heritage consultation requirements for proponents 2010*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales.*

The ACHA will aim to:

- Synthesise the results of technical investigations, the significance of the finds made, make management recommendations on requirements for additional approvals including the testing AHIP and possible development AHIP, should it be required.
- Incorporate the process and results of consultation, undertaken in compliance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* guidelines.

The ACHA will follow the broad program outlined below:

- **Desktop assessment** - Much of this work has already been completed by Niche. This work will continue up until the finalisation of the draft ACHA for submission to the RAPs for comment.
- **Survey** - A survey was undertaken in October 2018 in consultation with RAPs. During this survey, the Anna Bay PAD 1 (AHIMS ID 38-5-0347) was identified and recorded.
- **Reporting** - A draft report that satisfies the requirements of the *Office of Environment and Heritage Archaeological Code of Practice, the Consultation Requirements for Proponents* and the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW 2011* will be prepared to support an AHIP application to allow investigative works in the subject area in mid- 2019.
- **AHIP Application** – An AHIP application to conduct archaeological test excavations will be submitted to OEH.
- **Archaeological test excavation program** - Following the approval of an AHIP for testing, an archaeological testing program would be undertaken. The archaeological testing program is outlined in Section 4.3. Once testing has been completed, any artefacts recovered from the testing program would be analysed and the draft ACHA/AR would be prepared.
- **Reporting** – The ACHA and AR would be updated to include details of the archaeological testing program and further mitigation and management recommendations as required. There may be a requirement at this stage for a further AHIP application for quarrying of sand material.

4.2 Aboriginal community input points for the assessment

The guidelines suggest several points of input for RAPs, including:

- (1) during project information presentation
- (2) during development of the methodology
- (3) during meetings / site inspections / fieldwork (i.e. at any time during the process)
- (4) during review of the draft cultural heritage report

Points one, two, and three have been undertaken for the present report.

4.3 Archaeological and Cultural Heritage AHIP Test Excavation

The purpose of this section is to describe the method that will be used to conduct archaeological test excavation of the area identified as having potential for archaeological deposits (PAD). The area of sensitivity has been named Anna Bay PAD-1 (AHIMS ID#38-5-0347) (Figure 4) and would be impacted by the proposed sand extraction. The aim of the test excavation will be to provide further information on the presence, nature, significance and extent of sub-surface archaeological deposit within the Subject Area, and the Aboriginal archaeological values of the Subject Area.

The environmental context of the PAD, being an unconsolidated sand dune, means that test excavation methodology suitable for the unstable landform does not follow the conditions and methodology set out in the Code of Practice. As such, it is proposed to implement alternate excavation methods, as outlined in Section. 4.3. Owing to these factors, an AHIP is being sought from the OEI to complete an archaeological testing program to test the area identified as Anna Bay PAD-1 (AHIMS ID#38-5-0347).

4.3.1 Research questions

The primary purpose of conducting archaeological test excavations at Anna Bay PAD 1 is to add to our knowledge of the distribution of cultural material within the Subject Area, and to develop appropriate management strategies for implementation during future works. In doing so, we hope to add important information to the 'story' of Aboriginal occupation of these lands. The intention of the proposed archaeological investigation is not just to collect as many artefacts as possible, but rather to obtain a better understanding of the distribution of archaeological and cultural heritage materials across the Subject Area.

Because of this unknown archaeological potential within the PAD, the following high level research questions will be used to structure and guide the ACHA, particularly the investigation AHIP:

- What is the presence, absence or likelihood of occurrence of Aboriginal objects?
- If present or likely, what is the scope and integrity of an identified archaeological profile?
- If present, what is the age of deposition and significance of the Aboriginal objects?

Should Aboriginal objects be found to be present, the research questions will be revisited and reconsidered and new research questions that interact with and derive from what has been found in the investigation AHIP will be formulated and used to guide any future archaeological works that may be required.

4.3.2 Consultation on the methodology

The methodology for the test excavation was sent to the RAPs during the consultation process, and a copy of feedback is included in Appendix B of the ACHAR – Community Consultation.

4.4 Sampling Strategy

The test excavations would target Anna Bay PAD 1, as it would be directly impacted by the proposed development, and has been assessed as having the potential to contain Aboriginal artefacts. The proposed quarry would remove all of the sand within the PAD to ground level, destroying any in situ Aboriginal sites. The remainder of the Subject Area will either not be impacted during the proposed project, or has been disturbed to an extent where the likelihood of Aboriginal artefacts existing is significantly lower than the Anna Bay PAD 1.

10–20 non-stratigraphic shovel test pits would be excavated along the top of the sand dune, within the impact footprint and AHIP area. The purpose of these trenches would be to:

- identify the presence or absence of Aboriginal objects within the highly dynamic area of the sand dune; and
- collect soil samples for pH test, and munsell colour determination.

Additionally, 10–20 stratigraphic trenches measuring 50 cm x 50 cm would be excavated by hand at the base of the dune, within the AHIP area. The purpose of the test pits will be to:

- Establish the stratigraphy of potential subsurface deposits.
- Identify the presence or absence of Aboriginal objects.
- Collect radiocarbon dating samples, if present.
- Collect soil samples.
- Assist in the identification of archaeologically sterile unit should that occur within the impact footprint.

It is anticipated that a maximum of 20 m² would be excavated during the test excavations. This is less than 0.3% of the total area of Anna Bay PAD 1, being 6793 m². Expansion test pits, triggered by the criteria in Section 4.4.3 would be limited to an additional 40 m².

4.4.3 Method

It would be very difficult to test the sand body within Anna Bay PAD 1 using traditional methods without a significant safety risk due to the very loose nature of the sand. Owing to this, it is proposed to use two different methods of excavation within the PAD.

On top of the sand dune, where the sand is extremely loose and soft, test excavations would:

- Be carried out using a shovel to dig test pits measuring approximately 50 cm x 50 cm over a 5 m x 5 m grid. Figure 5 depicts an estimated positioning of the grid system; however, the field team reserves the right to alter this placement based on on-the-ground observations of best placement at the time of the test excavation program. The exact locations will be determined by the Excavation Director, based on advice of the Heritage Consultant and Registered Aboriginal Parties.
- Test Pits will be hand excavated
- Excavation would cease:
 - Where it would be considered that digging any deeper would be unsafe without the aid of benching or shoring;
 - at the base of artefact bearing layers;
 - at a viable B horizon indicating a base of artefact layer;
 - at rock, should this occur in the absence of B horizon or base of artefact layer;
 - at groundwater, where present; or
 - where sufficient information has been recovered to understand the extent, nature and significance of the archaeological deposit, if any.
- All excavated material will be dry sieved through 3 mm mesh screens. It is anticipated that these test pits will not be dug in controlled spits, owing to the unconsolidated nature of the sediment profile.
- Photographic recording of each hole will be taken, as well as GPS locations.

The proposed test excavation methodology for the stable ground surface at the base of the sand dune is outlined below:

- Test excavation pits would measure 50 cm x 50 cm and would be laid out over a 10 m x 10 m grid. Figure 5 depicts an estimated positioning of the grid system; however, the field team reserves the right to alter this placement within the AHIP area based on on-the-ground observations of best placement at

the time of the test excavation program. The exact locations will be determined by the Excavation Director, based on advice of the Heritage Consultant and Registered Aboriginal Parties. These locations may be subject to change as further information becomes available.

- The excavation pits will be hand excavated.
- Excavation would be carried out using 5 cm spits for the first test pit within each transect, and 10 cm spits for each test pit thereafter to:
 - the base of artefact bearing layers;
 - a viable B horizon indicating a base of artefact layer;
 - rock, should this occur in the absence of B horizon or base of artefact layer;
 - groundwater, where present;
 - where it would be considered that digging any deeper would be unsafe; or
 - where sufficient information has been recovered to understand the extent, nature and significance of the archaeological deposits
- Where necessary, test excavation pits would be expanded using 50 cm x 50 cm pits to document archaeological features or areas of relatively high artefact density. These areas will not exceed 3 m² in surface area.
- All excavated material will be weighed prior to sieving to allow for the provision of proportional weights for analysis of shell or faunal bone if it is identified within the PAD.
- All excavated material will be dry sieved through 3 mm mesh.
- Soil will be retained for backfilling of test pits.
- All excavation units (spits, contexts, stratigraphic units etc.) will be assigned a unique identifier.
- If specific archaeological features such as hearths are identified the feature will be excavated stratigraphically and be photographed and drawn.
- Photographic recording of each pit and spit as well as large scale photos of transects will be taken.
- Scaled drawings of one section of each test pit will be completed.
- Non-differential GPS readings will be taken at each test pit location.

Expansion of test pits is not anticipated to be required; however, the following guide will be used to assist decision making if finds of particular interest are encountered, and if test pit expansion is warranted:

- In no case will test pits expand beyond the impact footprint.
- Discovery of relative density of artefact frequencies that in the opinion of the archaeologist, are unusually high.
- Discovery of unusual or rare raw materials, artefact types or classes that, in the opinion of the archaeologist, are likely to be especially informative for the assessment of value and significance.
- Discovery of flaking floors/artefact manufacture areas.
- Recovery of dating samples.
- Encountering of site or stratigraphic features that in the opinion of the archaeologist are likely to be especially informative for the assessment of value and significance.
- Expansion would be limited to a maximum of an additional 40 m² over the AHIP area, and/or would cease once enough information has been recovered to adequately characterise the objects present with regard to their nature and significance, whichever occurs first.

4.4.4 Rehabilitation of Excavation Locations

Test Pits will be back-filled as soon as practicable after excavation. Backfilling will utilise original soil where possible. Where imported fill is required to be backfill, clean fill (crushed rock, sand) or other fill, it will be sourced from a location which has been identified as not having the potential for Aboriginal objects to be present.

4.4.5 Sample Collection

All material recovered from the test pits will be dry sieved using, at a minimum, a 3mm mesh size.

It may be necessary to step out or shore test pits when excavating at depth in sandy profiles. Where this occurs, the sieving of soil excavated for safe work methods rather than as part of the sample being investigated will be at the discretion of the Excavation Director.

All cultural material or environmental samples recovered will be carefully bagged and labelled with a unique identifier.

Charcoal or shell dating samples will be collected and a representative sample will be processed where appropriate samples are identified. OSL dating samples will also be collected if required. This analysis will only be undertaken when it will add significantly to an understanding of the site's stratigraphy.

4.5 Artefact cataloguing

A full record and catalogue of the artefacts will be prepared in accordance with Requirement 19 and 20 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW 2010*.

Artefact analysis and the preparation of a catalogue will be conducted by Niche.

4.6 Short and long term storage of artefacts

The long term disposition of artefacts will require placing artefacts back on site at completion of works, unless the RAPs agree to a Care and Control Agreement. Any artefacts recovered during excavation will be temporarily held by Niche in a locked cupboard at the Niche Environment and Heritage Office located at Level 1, Suite 1.01B, 460 Church Street, Parramatta 1750.

4.7 Stone artefact attribute recording and analysis

A comparison of any artefact assemblages will be carried out. Variables noted would include provenance information, raw material type, presence of cortex, artefact type, maximum size, oriented size measures for complete and modified artefacts, weight, flake shape, flake platform, core type and core flaking pattern.

An archaeologist with skills in stone artefact identification will analyse, record and catalogue the artefacts in a laboratory post-excavation.

4.8 Shell attribute recording and analysis

All shell material recovered during the archaeological test excavation would be assessed to determine whether it was deposited naturally (through environmental processes), or as the result of Aboriginal (shell midden) use, and subsequently recorded. If Aboriginal shell midden is recovered during the excavation, further analysis of these materials would be undertaken. The shell analysis would aim to provide information on the following:

- What shellfish were consumed and in what quantities?
- What do variations in pH levels and shell concentrations indicate about site disturbance?
- When was the shell discarded?

In terms of analysis, all shell fragments recovered during sieving would be sorted by species for each excavated unit and subjected to the quantitative measurements described below, including total weight, total weight of fragments, minimum number of individuals (MNI), presence/absence of burnt shell, and presence/absence of modified shell. For the purpose of this study, MNI values would be obtained by counting the number of bivalve hinges, and the overall value halved.

All midden material recovered from the excavation will be analysed to provide information about the use, size and components of the midden. A sample of shell will be dated, where possible.

4.9 Faunal remains attribute recording and analysis

If faunal material is encountered, we would undertake analysis to determine:

- What animals/fish were consumed and in what quantities?

All animal/fish fragments recovered during sieving would be sorted by species for each excavated unit and subjected to the quantitative measurements described below, including: total weight, total weight of fragments, minimum number of individuals (MNI), presence/absence of burnt bone, presence/absence of modified bone.

4.10 Skeletal remains

The research AHIP will not apply to human remains. If any human remains are discovered and/or harmed in, on or under the land, personnel must:

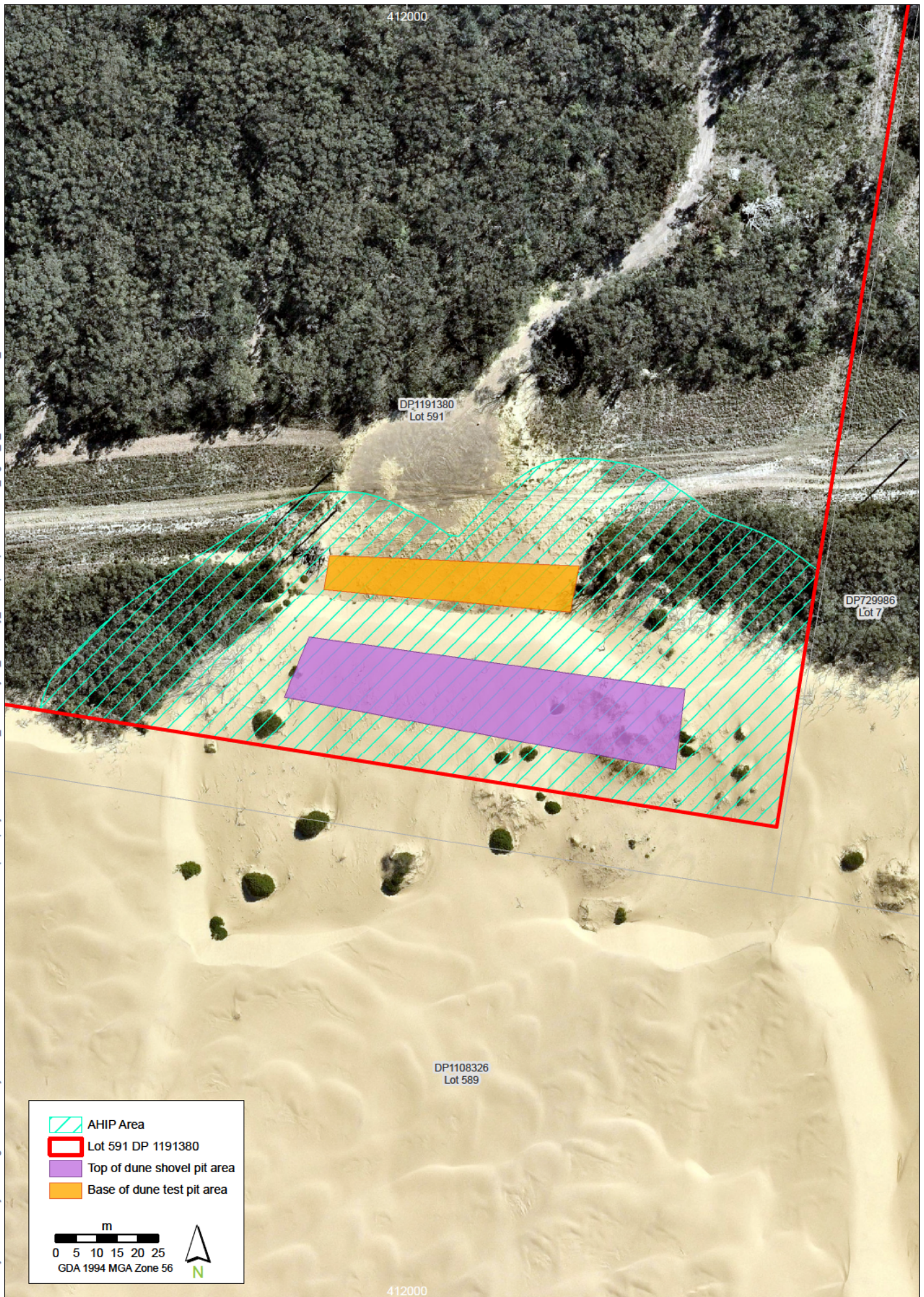
- Not further harm these remains.
- Immediately cease all work within this location.
- Secure the area so as to avoid further harm to the remains.
- Notify the local police and OEH's Enviroline on 131 555 as soon as practicable and provide any available details of the remains and their location.
- Not recommence any work at the particular location unless authorised in writing by OEH.

4.11 Personnel

One excavation team is proposed, consisting of two suitably qualified archaeologists and four to six site officers from the RAPs. Roles within the teams would be flexible, and it is expected that members would rotate through roles including excavation, recording and sieving. Generally, two team members would excavate, two team members would sieve, and two would record. The team is expected to excavate 4 pits per day in good conditions.



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Locations of test excavation pits

4017 Anna Bay Sand Quarry

FIGURE 5

Imagery: (c) Nearnmap 2018-09-09

4.12 Methods of assessing heritage significance

Heritage significance will be assessed by considering each cultural or archaeological site against the significance criteria set out in the *DECCW Aboriginal Cultural Heritage Standards and Guidelines Kit* and the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH, 2011: 18)

4.13 Contingency for unforeseen circumstances

Should the excavation uncover asbestos or any other suspicious contaminants, or unexpected services or utilities the following protocol will be followed:

- all work will cease in the area;
- the excavation team will then move to another trench to continue work;
- clarification and clearance will be sought from a suitably qualified specialist;
- the pit being excavated would be moved 10 to 20 meters on either side of the existing location when possible to continue the investigation; and
- if the area cannot be made safe it will be abandoned.

4.14 Sensitive Cultural Information- Management Protocol

During the consultation process Tattersall Lander Pty Ltd and Niche will provide the opportunity for RAPs to provide cultural information, including a statement of the value of identified sites and other matters. The input points for this have been listed in the ACHA; however, information will be **accepted at any point during the Project or prior to the finalisation of the ACHA report**.

Please be aware that Tattersall Lander Pty Ltd and Niche staff may seek cultural information and supporting evidence in regard to matters of cultural value.

In the event that a RAP has sensitive or restricted public access information, it is proposed that Tattersall Lander Pty Ltd will manage this information, on behalf of Hay Enterprises NSW Pty Ltd, (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- Any restrictions on access and material
- Any restrictions on communication of the material (confidentiality)
- Any restrictions on the location/storage of the material
- Any cultural recommendations on handling the material
- Any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and degree of authorisation.
- Any details of any consent given in accordance with customary law
- Any access and use requirements/ requests by the RAPs of the cultural information in the material.

4.15 Critical Timelines

Critical timelines for the ACHA are outlined in Table 5. Please note that some of these timeframes are estimates at this stage in the process and are provided to allow forward planning of personnel and resources.

Table 5: Critical timelines for the Anna Bay Sand Quarry ACHA

Project item	Due date
Provision of the draft ACHA report and AHIP test excavation methodology (including the proposed management and mitigation measures) to registered Aboriginal stakeholders for review.	08 March 2019, cut-off date 28 days later 08 April 2019
AHIP submission	16 th April 2019, OEH has 60 days to assess 11 th June 2019
7 days prior to excavation OEH notified of AHIP initiation	July 2019, cut-off date June/July 2019
AHIP testing program	July 2019
Development of ACHA/AR for potential harm/Destroy AHIP	Within two weeks of completion of testing program.

4.16 Who to contact

If you would like to provide information for the methodology or ACHA, or if you would like to discuss the project do not hesitate to contact:

Dr Morgan Disspain
 Senior Heritage Consultant
 Niche Environment and Heritage
 PO Box 2443
 North Parramatta NSW 1750
 T: 0488 774 566
 E: mdisspain@niche-eh.com

5. References

- Anna Bay Public School, 2014. A Brief History of Anna Bay and its School. URL <http://www.annabay-p.schools.nsw.edu.au/documents/31694767/31702034/A%20BRIEF%20HISTORY%20OF%20ANNA%20BAY%20AND.pdf>
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Niche Environment and Heritage

A specialist environmental and heritage consultancy.

Head Office

Niche Environment and Heritage

PO Box 2443 North Parramatta NSW 1750

Email: info@niche-eh.com

All mail correspondence should be through our Head Office

Appendix C: Aboriginal Community Consultation

Appendix C: Consultation records

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B1 Stage 1 – Notification of project proposal and registration of interest

B1.1 Notification of agencies

Request for Search of Tribunal Registers

*mandatory fields are marked with an asterisk

1. Your details*

NAME:	<input type="text" value="Caitlin Marsh"/>
POSITION:	<input type="text" value="Heritage Consultant"/>
COMPANY/ORGANISATION:	<input type="text" value="Niche Environment and Heritage"/>
POSTAL ADDRESS:	<input type="text" value="PO BOX 2443 North Parramatta NSW 1750"/>
TELEPHONE:	<input type="text" value="0488 224 014"/>
EMAIL:	<input type="text" value="cmarsh@niche-eh.com"/>
YOUR REFERENCE:	<input type="text" value="4017ACHA"/>
DATE OF REQUEST:	<input type="text" value="17/4/2018"/>

2. Reason for your request - please complete either Part A OR Part B*

Part A - Are you a party to a native title proceeding? ☐ Yes ☐ No

Please provide Federal Court/Tribunal file number/or application name:

OR

Part B - Do you need to identify existing native title interests to comply with the *Native Title Act 1993* (Cth) or other State/Territory legislation? ☒ Yes ☐ No

Please provide brief details of these obligations here:

3. Identify the area to be searched - please complete either Part A OR Part B*

Part A - Mining tenure

Tenement ref/s:

State/Territory:

OR

Part B - Other tenure type

- ☒ Crown Land, crown reserve
- ☒ Agricultural/pastoral lease
- ☒ Freehold (privately owned)**

State/Territory:

Local Government Area:

4. Description (please provide as many details as possible)

Provide any additional details to describe the area, including attaching maps with landmarks clearly shown.

Lot and plan details:

Property name:

Pastoral Lease number or name:

County:

Parish:

Town:

Section:

Hundred:

Northern Territory Portion:

5. Submit your request

NNTT Office	Search jurisdiction	Email address	Fax
Perth	WA searches	waenquiries@nntt.gov.au	(08) 9425 1193
Melbourne	VIC, TAS searches	vicandtasenquiries@nntt.gov.au	(03) 9606 0680
	SA, NT searches	sa_and_ntenquiries@nntt.gov.au	(03) 9606 0680
Sydney	NSW, ACT searches	nswenquiries@nntt.gov.au	(02) 9227 4030
Brisbane	QLD searches	qldenquiries@nntt.gov.au	(07) 3307 5050

Or post to: National Native Title Tribunal, GPO Box 9973 (Perth 6848, Melbourne 3001, Sydney 2001, Brisbane 4001)

- There is no charge for conducting searches of the Tribunal's databases.
- Timeframe for providing results is generally 3-5 business days.
- Register and schedule extracts, plus map attachments will be provided with your results. Technical coordinates may be omitted.

Did you know?

Native Title Vision (NTV) is the National Native Title Tribunal's free online visualisation, mapping and query tool. All that is needed to use NTV is a computer connected to the internet, a current web browser and an NTV user account. NTV puts you in the driver's seat in exploring native title and brings together:

- a geospatial view of the Tribunal's registers and databases
- overlays of administrative regions, non-freehold land parcels and resources tenure.

To obtain a NTV user account visit the [Geospatial section](#) on our website.

****Native title & freehold tenure**

Under the *Native Title Act 1993* (Cth), the valid grant of a freehold estate (other than certain types of Aboriginal and Torres Strait Islander land) on or before 23 December 1996 is known as a 'previous exclusive possession act'. This means that native title has been extinguished over the area.

The Tribunal is not the custodian of the data for freehold estates. To determine whether a particular parcel of land is freehold land, you may wish to seek such information from the relevant state/territory government custodian.

24 April 2018

Office of Environment and Heritage - Hunter Central Coast Regional Operations Division
Mr Steven Cox
Locked Bag 1002
Dangar NSW 2309
rog.hcc@environment.nsw.gov.au

Dear Steven Cox,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period.

In accordance with Section 4.1.3 of the Office of Environment and Heritage *Aboriginal Cultural Heritage Requirements for Proponents 2010* (NSW Department of Environment, Climate Change and Water, 2010) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, Tattersall Lander will conduct a community consultation process with relevant Aboriginal people to assist Tattersall Lander with the preparation of an Aboriginal Cultural Heritage Assessment to inform the Environmental Impact Statement (EIS) and comply with the Department of Planning's Secretary's Environmental Assessment Requirements (SEARS 1172). The requirements of the SEARS 1172 are as follows:

"An assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage".

Where an Aboriginal Heritage Impact Permit is required, the purpose of the community consultation with Aboriginal people will be to assist the proponent in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the Office of Environment and Heritage in his or her consideration and determination of the application.

In accordance with Section 4.1.2 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010), we are seeking the names and contact details of Aboriginal groups or individuals that may have an interest in the project and hold knowledge relevant to determining the cultural significance of the Subject Areas.

We would appreciate correspondence regarding this matter by 5pm on 10 May 2018. Contact details of Aboriginal groups and/or individuals can be forwarded to:

Tattersall Lander
c/ Jess Cuskelly
Niche Environment and Heritage

PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 224 968
Email: jcuskelly@niche-eh.com

Tattersall Lander will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process. The Proponent's contacts details are: Tattersall Lander Pty Ltd, PO Box 580 Raymond Terrace NSW 2324, PH: 4987 1500

Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

Figure 1: General location of the Subject Area, with the boundary outlined in red.

24 April 2018

Hunter LLS
Mr Toby Whaleboat
toby.whaleboat@lls.gov.au

Dear Toby Whaleboat,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period.

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Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

24 April 2018

Office of the Registrar Aboriginal Land Rights Act 1983 (NSW)

PO Box 5068
Parramatta NSW 2124
adminofficer@oralra.nsw.gov.au

Dear Sir or Madam,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period.

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Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

Figure 1: General location of the Subject Area, with the boundary outlined in red.

24 April 2018

Port Stephens Local Council

116 Adelaide St
Raymond Terrace NSW 2324
Dear Sir or Madam,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

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c/ Jess Cuskelly
Niche Environment and Heritage
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North Parramatta NSW 1750

Telephone: 0488 224 968

Email: jcuskelly@niche-eh.com

Tattersall Lander will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process. The Proponent's contacts details are: Tattersall Lander Pty Ltd, PO Box 580 Raymond Terrace NSW 2324, PH: 4987 1500

Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

24 April 2018

Worimi Local Aboriginal Council

2163 Nelson Bay Rd
Williamstown NSW 2314
Dear Sir or Madam,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period.

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Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

24 April 2018

NTS Corp Limited
Mr Peter Shultz
PO Box 2105
Strawberry Hills NSW 2012
Dear Peter Shultz,

Re: 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period.

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Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

B1.2 Advertisement

Place your ad in the News Of The Area classifieds - THEY WORK!

Very Low Rates!

Special "RUN TIL SELL" options too!

SOLD

SOLD

SELL Locally with NOTA

SOLD

Public Notices

AGM
Myall Masters Swimming Club
to be held in the Committee Room
Tea Gardens Pool
1st May at 7pm
All members welcome.

GUITAR & BASS
Tuition Theory & Musicianship.
Studio Fantabulous
N/Bay. 25yrs exp
49844731

Public Notices

Myall Park Tennis Club
PLAYERS WANTED
for New Thursday Night Comp.
Expressions of Interest sort for new Club Competition.
Grading 26th April.
To register your interest phone
Robyn 0408412680
Visit our website for more info.
www.tennis.com.au/hawksnest

Garage Sale

HUGE Combined
Garage Sale Saturday
28 April 8 am to 2pm. At 1 Starboard Way, Tea Gardens. Books, DVDs, CDs, Curtains, Ornaments, hand bags, shoes, jewellery, crockery, clothes, toys and paintings, lots more.

CLASSIFIEDS in the News Of The Area
ads@mcnota.com.au
Email for Price & Proof

For Sale

1940's upholstered 2seater lounge and 2 chairs call 49970694 to inspect \$200 ono

ANTIQUE cedar d/ side table \$150. 0423 309410

ANTIQUE bottles, furniture & collectibles plus 2 beach rods and ALVEY Reel. Phone: 02 4984 1198

BARIATRIC Wheelie Walker. As new, \$200. Raymond Tce Ph 0414531597

BBQ matador Functional 6 burner with Side pot cooker, gas Bottle, tools and manuals. Almost new. \$850 ono. 49198044

BOBBIN sanding machine. Carba-tec complete with four bobbin sizes, extra sleeves and cabinet. As new \$280. 49844510 / 0439437047

CLASSIFIEDS in the News Of The Area
ads@mcnota.com.au
Email for Price & Proof

CHAISE 3 seater lounge. Light grey 7 months Old \$600 0408401999

For Sale

DINNER set willow pattern six places 49191637 \$30 Soldiers Point

CLASSIFIEDS
ads@mcnota.com.au

ELECTRIC chair near new \$450 by suide. 499704 Tea Gardens

FLATTOP truck conversion to utility sides back and front \$850 4997 0986

FREEZER Westinghouse 6 drawers 180Ltr. \$299 or \$499 very good condition. Ph 49979783 Tea Gardens

FRONT door fly screen, heavy duty fancy shell motive, with key. \$275 4997 0986

GENKI Advanced Fitness Inversion Table for Gravity Back Pain and Exercise Home Gym. Hardly used. \$80 ono. Kerrie Wright. 49970960 Tea Gardens

GRAMOPHONE wind up, good working cond, needles available. \$500. Phone 4997 0986

GUITAR and Amp Strat copy guitar Three pick ups and quiver arm. 40 watt amp with 4 inputs and 1 mic input. A1 condition. \$320 0419212863

GUITAR Squire Acoustic With bag, strap, 3 plects, Stand, learning book. \$150 Lectern - wooden 1m Good condition \$35 0451098759

HALL Cabinet. Text for pictures. Solid Timber & Glass 1.85h x 1.68l x .45d. \$600 0428450925

IKEA toddler bed \$50. Soldiers Point 49827995

HIGH Back Cane Dining Chairs (8) Good condition. \$50 each or 8 for \$350. Phone 0415 419 741

CLASSIFIEDS in the News Of The Area
ads@mcnota.com.au
Email for Price & Proof

KAYAK MINI-X 3m. Model MALIBU-KAYAK. Near new, has seat, Paddle, set of PONTOP wheels and bike trailer with bike attachments \$575 the lot 0417821805

For Sale

KING, AH Beard Comfort Plush Mattress. \$800. 0428450925 Email for pictures.

CLASSIFIEDS in the News Of The Area
ads@mcnota.com.au
Email for Price & Proof

KITE Surfer, Naish. Kite with harness & directional board. Used once. \$450 Ph 0402290498

LOBSTER brooch. Yellow gold, diamonds and rubies. Valued at \$2950. Sell for \$1800. 0405203113

LOUNGE Cream 2 seater lounge \$45 and single armchair \$15 0427861227

LOUNGE suite dark blue leather 3seater and 2 armchairs in good cond. \$500. Lg timber extendable 49820432 Salamander.

MACROB timber extension dining table and 6 leather chairs with 3 matching wall units and entertainment unit. \$500. 0407283748 Text for photos

MOBILITY scooter Travelscot folds down. Good in car boot good Cond. \$700 ono ph 49877006

MOBILITY scooter travel scoot. Folds down, stores in Car boot. Very bag and Lumbs wool seat cover. Good Cond. \$750 Ono 0417213700

MOTOROLA mobile phone. 4G enabled unlocked. 4 months warranty remaining. As new. Purchase price \$149. Will sell for \$100. 49842583

OAK Dining table \$190 Extension with 6 chairs. Like new 0405 388 607

OUTDOOR Dining Setting. Black Glass Top Table 90 cm x 150 cm with 6 Folding Chairs \$85 Excellent Cond. 0402246253

PEARL mobility scooter, gd cond, very little use, new 1500. \$1500. \$950 Ph 4997 0986

POOL table. Three-quarter size, slate top 220 long 120 wide, excel cond \$1500. 0404477158

CLASSIFIEDS
ads@mcnota.com.au

For Sale

PRIDE Go Go Elite Traveller motor scooter with hoist (suitable for 4WD vehicles). Recently serviced, both batteries replaced, new front basket and manual. \$750 negotiable. Will separate hoist and scooter. Ph 0428291907

QB ensemble. Very Good condition. \$300 ono. 0417229070

ROWING Skiff - Euro Single. Croker Blades VG cond, \$1500 ono 0418716225

SOFA bed, plush, black, one year old, bed used only once, \$300 Ph 0427 204 450

STEELCRAFT pram \$100. Fr Newborn up Includes accessories & weather cover 0419618565

SURF Ski - Wave Master. Good condition very stable. Good in surf as well as calm/choppy conditions. Includes paddle \$375. 49822004

SWINGING metal entrance gates with latches \$300 4997 0986

TIMBER dining suite \$250 very good cond. Tea G/dns 49198091

TIMBER lounge solid 3 piece - 3 seater and 2 armchairs. \$500 0428970662

TIMBER queen bed head and Frame exc condition \$75 Ono 49971529

TREADMILL Electric walker pro form 400c. Brand new condition \$500 call John 49970435

CLASSIFIEDS
ads@mcnota.com.au

TWO QB air mattresses and elec. pump \$60 Ono for both 49841127 Nelson Bay

TYRE on steel rim, Yokohama Geolander as new 215/70R/16 \$75. ph 0416229166

UMBRELLA Shelta cantilever with canvas canopy. As new. \$500 ono 49972359

WELDER Generator 14HP petrol motor electric start 200amp welder & leads 3.5kva 240V very good welder. \$1500.00 email don@legges.id.au Ph. 0418845358

Items

DRIVE socket set, 3/4 drive in ex cond. Sizes up to 2 inch & 150mm \$60.00. Rotary Ozito Hammer drill 710W. VG \$50.00. 230mm Ozito Angle grinder only used once. \$60.00. Full Oxy/Acetylene Welding set. Less hoses. \$100. Genuine reason for selling. Ph. 4982 4249

ELECTRIC lift chair. Strong chair, beige Fabric \$350 Pride shopping scooter, 3 piece for light Easy car transport \$260 requires new battery Priced accordingly. 49970930 Tea Gardens

CLASSIFIEDS in the News Of The Area
ads@mcnota.com.au
Email for Price & Proof

OAK High quality dining table with six refurbished chairs and matching oak sideboard \$800 ono. Light brown elegant Lounge suite - 2 armchairs and one 3 seater. Matching Lamp and Oak Coffee table Sell as a set - make an offer \$200. Grey metal filing cabinets, 4 drawer \$60, 2x 3 drawers \$40 each, 3x bookshelves timber \$50-\$100, 4x Garage shelves metal \$200 for all. 49972294 Hawks Nest

OZITO Bandsaw \$100. OZITO Bench Saw \$100. RYOBI Bench Grinder \$60. RHINO Pedestal Drill \$80. OZITO Cordless Drill & Battery \$30. 2hp Tank Compressor \$100. Stud Finder \$20. Planer \$80. Orbital Sander \$40. Portable Petrol Container \$20. Power Master Angle Grinder \$60. Timber Work Bench \$60. Phone: 02 4981 0681

PARROT cage large, \$50. Chest of drawers macadamia wood \$50. Queen side bed ensemble Good cond. \$60. Recliner chair \$30. 49844123 Nelson Bay

RYOBI electric blower, Bosch electric drill w/ 2 chargeable batteries Also lots of tools & Electrical equipment. 49820432

CLASSIFIEDS
ads@mcnota.com.au

ROUND timber antique. Table 740cm \$200. Repco exercise bike \$40. Four Toyota 6 stud split rims \$120 for all. 0429485169 Nelson Bay

More ITEMS Over The Page

Public Notices



MIDCOAST
council

www.midcoast.nsw.gov.au

IMPORTANT PUBLIC NOTICE Fox Baiting Program

MidCoast Council, with support from the Hunter Local Land Services, and in cooperation with adjoining neighbours will be undertaking 1080 fox baiting within the Bulahdelah Plain Council Reserve, Lot 601 DP1171576 Booral Road Bulahdelah and 334 ha of private conservation lands at 158 Burdekins Road and 244 Myall River Road Bulahdelah.

The program will use 1080 meat baits and FOXOFF® poison baits designed specifically for fox control. Baits will be buried to reduce the risk of non-target poisoning.

The program will be conducted from Wednesday 2 May and be completed by Wednesday 30 May 2018.

The use of 1080 poison baiting is to be conducted to control the impacts of fox predation on native wildlife including threatened species. All areas will have 1080 baiting signs erected on the main access tracks where the baiting is undertaken.

Warning: 1080 poison is lethal to domestic animals.
For more information phone Peter Goonan at MidCoast Council on 6591 7306.

PO BOX 450
FORSTER NSW 2428

© NOTA Graphics - Ref MCCO_200418

(02) 6591 7222
council@midcoast.nsw.gov.au

Public Notices

4226 NELSON BAY ROAD. ANNA BAY NSW ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Tattersall Lander (the Proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) prior to the Department of Planning & Environment providing consent for the construction of a sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (The Subject Area), which backs onto the Newcastle Bight sand dune system. The proposed quarry proposes to extract a maximum of 50,000 cubic metres of sand in one year over a 30 year period.

In accordance with Section 4.1.3 of the Office of Environment and Heritage Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, Tattersall Lander is seeking to consult with any Aboriginal persons or groups who may hold cultural knowledge of, or who have the right or interest in Aboriginal cultural heritage of the project area. The purpose of the consultation will be to assist Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment to inform the EIS and comply with the Department of Planning's Secretary's Environmental Assessment Requirements (SEARS 1172). The requirements of the SEARS 1172 are as follows:

"An assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage".

The Proponent is inviting Aboriginal people or groups who hold cultural knowledge relevant to determining the significance of the Subject Area to register their interest for the consultation process.
All registrations for the project must be received by 5pm on 9th May 2018 and should be directed in writing to:

Tattersall Lander Pty Ltd
c/- Jess Cuskelly
Niche Environment and Heritage
PO Box 2443
NORTH PARRAMATTA NSW 1750
Telephone: 0488 224 968
Email: jcuskelly@niche-eh.com

Proponent's contacts details are: Tattersall Lander Pty Ltd, PO Box 580 Raymond Terrace NSW 2324, PH:4987 1500

B1.3 Notification of potential stakeholders

30 May 2018

To whom it may concern,

Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Please be advised that your contact details have been provided by the NSW Office of Environment and Heritage (OEH) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area) (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)*.

In accordance with Section 4.1.3 of the Office of Environment and Heritage *Aboriginal Cultural Heritage Requirements for Proponents 2010* (NSW Department of Environment, Climate Change and Water, 2010) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, Tattersall Lander will conduct a community consultation process with relevant Aboriginal people to assist Tattersall Lander with the preparation of an Aboriginal Cultural Heritage Assessment to inform the Environmental Impact Statement (EIS) and comply with the Department of Planning's Secretary's Environmental Assessment Requirements (SEARS 1172). The requirements of the SEARS 1172 are as follows:

"An assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage".

Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project are invited to register an interest in a process of community consultation with Tattersall Lander.

Where an Aboriginal Heritage Impact Permit is required, the purpose of the community consultation with Aboriginal people will be to assist the proponent in the preparation of an application for an Aboriginal Heritage Impact Permit and to assist the Director General of the Office of Environment and Heritage in his or her consideration and determination of the application.

The Proponent can be directly contacted on:

Tattersall Lander Pty Ltd
PO Box 580
Raymond Terrace NSW 2324

Written registration should be forwarded to:

Tattersall Lander
c/ Jess Cuskelly
Niche Environment and Heritage
PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 224 968
Email: jcuskelly@niche-eh.com

Inclusion in the consultation process does not automatically result in paid site assessment. In accordance to Section 3.4 of the consultation guidelines, the decision on who is engaged for delivering particular services is decided by the proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

Please be advised that, as per the *Aboriginal cultural heritage consultation requirements for proponents* (NSW Department of Environment, Climate Change and Water, 2010) the Proponent is required to forward the names of Aboriginal persons and groups who register an interest to the Office of Environment and Heritage and Worrimi Local Aboriginal Land Council, unless the person or group specifies they do not want their details released.

Please provide written confirmation of your registration by 5pm on 14th June 2018 to the address or email address above

Yours sincerely,



Balazs Hansel
Senior Archaeologist & Heritage Consultant
Niche Environment and Heritage

Drawn by: GT Project Manager: VG Project Number: 4017 Date: 22/01/2018 T:\spatial\projects\4000a4017_NelsonBayRd_AnnaBay_HA\Map\report\AHAA4017_Figure_1_Location_AHA.mxd



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Location map

B1.4 Registrations

Samuel Ward

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Wednesday, 30 May 2018 1:16 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW.
ACHA and possible AHIP application - Stage 1 Letter

Good afternoon Balazs

Didge Ngunawal Clan would like to register an interest into Re: sand quarry at 4226 Nelson bay Road Anna Bay

Kind regards DNC
Lilly carroll & Paul Boyd
0426823944

Sent from myMail for iOS

Wednesday, 30 May 2018, 1:10 pm +1000 from Balazs Hansel <bhansel@niche-eh.com>:

To whom it may concern,

Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Please be advised that your contact details have been provided by the NSW Office of Environment and Heritage (OEH) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area) (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)*.

In accordance with Section 4.1.3 of the Office of Environment and Heritage *Aboriginal Cultural Heritage Requirements for Proponents 2010* (NSW Department of Environment, Climate Change and Water,

Samuel Ward

From: Deidre Perkins <dedemaree3@hotmail.com>
Sent: Wednesday, 30 May 2018 2:13 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW.
ACHA and possible AHIP application - Stage 1 Letter

Hello Balazs,
I hope you are fine. I would like to register for The sand quarry at 4226 Nelson rd Anna Bay.
I have worked in cultural and heritage for over 15 years and have a great knowledge of the land, people and culture.
I am a fit wonneruah woman and would enjoy working with you on this project.
Thank you Deidre.

Get [Outlook for Android](#)

From: Balazs Hansel <bhansel@niche-eh.com>
Sent: Wednesday, May 30, 2018 1:10:55 PM
To: Clare Leever
Cc: Balazs Hansel; Jessica Cuskelly
Subject: 4017.- Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. ACHA and possible AHIP application - Stage 1 Letter

To whom it may concern,

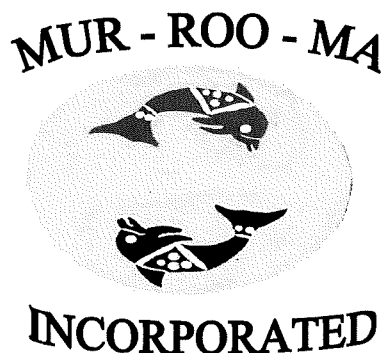
Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Please be advised that your contact details have been provided by the NSW Office of Environment and Heritage (OEH) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area) (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)*.

In accordance with Section 4.1.3 of the Office of Environment and Heritage *Aboriginal Cultural Heritage Requirements for Proponents 2010* (NSW Department of Environment, Climate Change and Water, 2010) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, Tattersall Lander will conduct a community consultation process with relevant Aboriginal people to assist Tattersall Lander with the preparation of an Aboriginal Cultural Heritage Assessment to inform the Environmental Impact Statement (EIS) and comply with the Department of Planning's Secretary's Environmental Assessment Requirements (SEARS 1172). The requirements of the SEARS 1172 are as follows:

"An assessment of the potential impacts on Aboriginal heritage (cultural and archaeological), including evidence of appropriate consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage".



9 Vardon Road Fern Bay 2295 NSW
49281910
0402827482

ABN: 97 807 719 484

Thursday 14th June, 2018

Niche Environment and Heritage

Att: Tattersall Lander

c/o Jess Cuskelly

Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW

To Jess,

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

Murrooma have completed a due diligence of this proposed project area as outlined and advised Niche of our recommendations whilst onsite.

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 Port Stephens/Anna Bay region. We are both Traditional Custodians of the Worimi area and are in a position to speak for country.

The project area is located close to 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.

Yours Truly

Bec Young- Operations Manager

Anthony Anderson- CEO

From: lennie.anderson011 lennie.anderson011
To: [Jessica Cuskelly](#)
Subject: Propoised Quarry Anna Bay
Date: Tuesday, 1 May 2018 6:05:02 PM

Hi Jess,

I would like to Register my interest in this Proposal, The other two Organisations I can recommend are Worimi LALC, and Murrooma Inc (there is a 4th Group Maingal) but they don't believe in insurances for onsite work.
Hoping this has helped!

Leonard James Anderson OAM (Lennie)

Nur-Run-Gee Pty Ltd (Director)

Worimi Traditional Custodian (Registered and Recognised)

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From: [stephen talbott](#)
To: [Jessica Cuskelly](#)
Subject: Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application
Date: Sunday, 1 July 2018 8:01:04 PM
Attachments: [image001.png](#)

Hi Jessica

I would like to register my expression of interest for the above said project

My contact details are:

Steven Talbott

73 KIAH road gillieston Heights nsw 2321

0476893944

Kind regards

Amanda Heard

From: Jessica Cuskelly <jcuskelly@niche-eh.com>
Sent: Friday, 22 June 2018 12:16 PM
To: Clare Leever
Subject: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

To whom it may concern,

Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Please be advised that your contact details have been provided by the NSW Office of Environment and Heritage (OEH) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area) (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)*.

Please see link below.

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4017_ACHA_Notification_RAP_Drft01_Karuah_20180622.pdf	216.5 KB
<div>Download Attachments</div> <div>Jessica Cuskelly uses ShareFile to share documents securely. Learn More.</div>	

Kind Regards,
Jess

Jessica Cuskelly BA (Hons)

Heritage Consultant

Sydney Head Office



Excellence in your environment

M 0488 224 968 **T** 02 9630 5658

A PO Box 2443 North Parramatta NSW 1750

E jcuskelly@niche-eh.com **W** niche-eh.com



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From: [Jessica Cuskelly](#)
To: ["WIDESCOPE ."](#)
Subject: RE: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application
Date: Friday, 29 June 2018 4:25:56 PM
Attachments: [image001.png](#)
[4017_ACHA_Notification_RAP_Drft01_Karuah_20180622.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)

Afternoon Steven,

Thank you for your interest in the project, you have been registered and we will be in touch soon with further information. I have attached a pdf file for your interest and any further information will not be sent to you through ShareFile.

Have a great weekend,

Kind Regards,
Jess

Jessica Cuskelly BA (Hons)
Heritage Consultant
Sydney Head Office



Excellence in your environment

M 0488 224 968 **T** 02 9630 5658
A PO Box 2443 North Parramatta NSW 1750
E jcuskelly@niche-eh.com **W** niche-eh.com

From: WIDESCOPE . [<mailto:widescope.group@live.com>]
Sent: Friday, 29 June 2018 4:15 PM
To: Jessica Cuskelly
Cc: Clare Leever
Subject: RE: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Hi Jessica

Thank you, please register my interest in the project I am a recognized cultural knowledge holder. I hold knowledge in determining Aboriginal Objects and Place,

Regards
Steven Hickey

Please note I am not able to access ShareFile Attachments

From: Jessica Cuskelly <jcuskelly@niche-eh.com>
Sent: Friday, June 22, 2018 12:16:51 PM
To: Clare Leever
Subject: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

To whom it may concern,

Re: Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW. Aboriginal Cultural Heritage Assessment and possible Aboriginal Heritage Impact Permit application

Please be advised that your contact details have been provided by the NSW Office of Environment and Heritage (OEH) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area) (see Figure 1). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Section 78A(8) of the *Environmental Planning and Assessment Act 1979 (EPA Act)*.

Please see link below.

ShareFile Attachments	
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<div>Download Attachments</div> <div>Jessica Cuskelly uses ShareFile to share documents securely. Learn More.</div>	

Kind Regards,
Jess

Jessica Cuskelly BA (Hons)
Heritage Consultant
Sydney Head Office



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M 0488 224 968 T 02 9630 5658
A PO Box 2443 North Parramatta NSW 1750
E jcuskelly@niche-eh.com W niche-eh.com

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From: [Graeme Russell](#)
To: [Jessica Cusackly](#)
Cc: [Andrew Bond](#)
Subject: Proposed sand quarry at 4226 Nelson Bay Road Anna Bay NSW
Date: Friday 1 June 2018 10:47:55 AM
Attachments: [image007.png](#)
[image008.png](#)
[image009.png](#)

Hi Jess

Please be advised and accept this as confirmation of registration that the Worimi Conservation Lands Board of Management as a stakeholder registers its interest in the Proposed sand quarry at 4226 Nelson Bay Road Anna Bay NSW.

Kind regards



Graeme Russell
Joint Management Coordinator
Worimi Conservation Lands
Hunter Central Coast Branch
NSW National Parks and Wildlife Service



www.worimiconservationlands.com
W nationalparks.nsw.gov.au

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Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.
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B1.5 Section 4.1.6 notification of OEH and LALC

13 August 2018

Steven Cox
Senior Team Leader Planning
Hunter Central Coast Branch
Regional Operations Division
Office of Environment & Heritage
Locked Bag 1002
DANGAR NSW 2309

NSW 2324

Via email: steven.cox@environment.nsw.gov.au

Dear Mr Cox

Re: List of Registered Aboriginal Parties - Aboriginal Cultural Heritage Assessment for 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380).

I am writing to inform the Office of Environment and Heritage, as per Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* that the following Aboriginal groups have registered for the above mentioned project:

- Didge Ngunawal Clan - Paul Boyd and Lilly Carroll
- Divine Diggers Aboriginal Cultural Consultants – Deirdre Perkins
- Karuah Indigenous Corporation – David Feeney
- Murra Bidgee Mullangari Aboriginal Corporation - Ryan Johnson, Darleen Johnson-Carroll
- Mur-Roo-Ma Incorporated – Bec Young
- Nur-Run-Gree Pty Ltd - Leonard Anderson
- Steve Talbott – Steve Talbott
- The Worimi Local Aboriginal Land Council – Andrew Smith
- Widescope Indigenous Group – Steven Hickey
- Worimi Local Aboriginal Land Council – Andrew Smith and Jamie Merrick
- Worimi Traditional Owners Indigenous Corporation – Candy Lee Towers

Also included with this letter is a copy of our letter of notification for Aboriginal people as identified in Stage 1, section 4.1.2 of the consultation process.

Yours sincerely



Jess Cuskelly
Heritage Consultant
Niche Environment and Heritage

PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 224 968
Email: jcuskelly@niche-eh.com

Tattersall Lander will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process. The Proponent's contacts details are: Tattersall Lander Pty Ltd, PO Box 580 Raymond Terrace NSW 2324, PH: 4987 1500

Yours sincerely



Caitlin Marsh
Heritage Consultant
Niche Environment and Heritage

B2 Stage 2 - Presentation of project information

20 August 2018

Dear Sir/Madam,

Re: 4017 - Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW – Project information and methodology for an Aboriginal Cultural Heritage Assessment under Section 4.2 and Section 4.3 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents* (2010)

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Part 4 of the Environmental Planning and Assessment Act 1979 (EPA Act).

The Proponent can be directly contacted on:

Tattersall Lander Pty Ltd
PO Box 580
Raymond Terrace NSW 2324

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents* (2010), please find enclosed the project information and methodology for the proposed assessment.

If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Areas or the Lachlan Region in general, please contact Niche Environment and Heritage as soon as possible. **The statutory time frame for commenting on the methodology closes at 5 pm, 18 September 2018.**

Please provide any cultural information you wish to share in a format you deem suitable and please don't hesitate to call and discuss any special requirements you may have regarding this information. Things you may wish to consider include:

- a. The nature of your cultural connection to the country on which the Subject Areas are located. Please include any relevant cultural knowledge.
- b. Whether you know of Aboriginal objects of cultural value to Aboriginal people within or in close proximity to the area of the proposed project, and
- c. Whether you know of any places of cultural value to Aboriginal people within or in close proximity to the area of the proposed project. This includes places of social, spiritual and cultural value,

historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

- d. If you have any contributions to how culturally appropriate information is gathered or the methodology for the assessment of cultural values
- e. cultural heritage management options for any objects, places or cultural values within the Subject Area

We are planning to conduct our archaeological field survey over one full day during the second part of the week of 17 September 2018, the exact date will be confirmed closer to the proposed time.

Registered Aboriginal Parties will need to **provide the following information prior the 18 September 2018** to be considered for any fieldwork:

- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual

Once we have finalised numbers for participation in the field survey we will begin to organise logistics such as time and meeting place.

In accordance to Section 3.4 of the consultation guidelines, the decision on who is engaged for delivering particular services is decided by the proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

Please direct all correspondence to me at the contact details provided below:

Tattersall Lander
c/ Jess Cuskelly
Niche Environment and Heritage
PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 224 968
Email: jcuskelly@niche-eh.com

Yours sincerely,



Balazs Hansel
Senior Archaeologist & Heritage Consultant
Niche Environment and Heritage



4226 Nelson Bay Rd, **Anna Bay, NSW**

Project Methodology Aboriginal Cultural Heritage Assessment

Tattersalls Lander Pty Ltd

20 August 2018

Document control

Project no.:	4017
Project client:	Tattersalls Lander Pty Ltd
Project office:	Head Office, Sydney
Document description:	Methodology and project information for 4226 Nelson Bay Rd, Anna Bay NSW
Project Director:	Renée Regal
Project Manager:	Balazs Hansel
Authors:	Balazs Hansel
Internal review:	Renée Regal
Document status:	Final
Local Government Area:	Port Stephens

Document revision status

Author	Revision number	Internal review	Date issued
Clare Leever	Draft REV01	Renée Regal	25/07/2018
Jessica Cuskelly	Draft Rev02	Balazs Hansel	9/08/2018
Jessica Cuskelly	FINAL	Balazs Hansel	13/08/2018

Niche Environment and Heritage

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PO Box 2443
North Parramatta NSW 1750
Phone: **02 9630 5658**
Email: **info@niche-eh.com**

Locations

Sydney
Central Coast
Illawarra
Armidale
Newcastle
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Cover Image: View looking south at sand quarry area at 4226 Nelson Bay Road, Anna Bay NSW (Source: Niche, 2018).

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1. Introduction

1.1 Background and purpose of this document

Tattersall Lander (the proponent) has been requested to provide an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) to support a 'Designated Development' under Part 4 of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry (with ancillary manager's residence/site office) at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (see Figure 1 and Figure 2). There is an AHIMS registered Aboriginal site within the Subject Area that may be impacted by the proposed activity and therefore an Aboriginal Cultural Heritage Assessment (ACHA) is necessary to support an Aboriginal Heritage Impact Permit (AHIP).

This document presents a proposed methodology for the assessment of Aboriginal cultural heritage and will form part of the ACHA.

This proposed methodology has been designed to conform to the relevant requirements of various advisory documents and guidelines. These guidelines and documents include:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH, 2011a).
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Part 6 National Parks and Wildlife Act, 1974)* (DECCW, 2010a).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) [hereafter referred to as the 'Code of Practice'.
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia International Council on Monuments and Sites [ICOMOS], 1999).
- *Aboriginal Cultural Heritage Standards and Guidelines Kit* (NSW National Parks and Wildlife Service, 1997).

1.2 Objective of community consultation

The objective of the community consultation is for Aboriginal people to have the opportunity to improve assessment outcomes by:

- Providing relevant information about the cultural significance and values of the Aboriginal object (s) and/or place(s) in or immediately adjacent to the Subject Area.
- Influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s).
- Actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the Subject Area; and
- Commenting on the draft assessment report before it is submitted to the government.

The presentation of this proposed project information should provide the opportunity for:

(a) The proponent to present the proposal, outline project details relevant to the nature, scope, methodology, and environmental and other impacts.

(b) The proponent to outline the impact assessment process including the input points into the investigation and assessment activities.

(c) The proponent to specify critical timelines and milestones for the completion of assessment activities and delivery of reports.

(d) The proponent and registered Aboriginal parties to clearly define agreed roles, functions and responsibilities.

(e) The Registered Aboriginal Parties to identify, raise and discuss their cultural concerns, perspectives and assessment requirements (if any).

The aim of this methodology is to facilitate a process whereby registered Aboriginal parties can:

(a) contribute to culturally appropriate information gathering and the research methodology,

(b) provide information that will enable the cultural significance of Aboriginal objects and/or places on the proposed project area to be determined, and

(c) have input into the development of any cultural heritage management options.

2. Project information

2.1 4226 Nelson Bay

Tattersalls Lander Pty Ltd (the proponent) seek an ACHA to inform an EIS to support a 'Designated Development' under Section Part 4 of the *Environmental Planning and Assessment Act 1979 (EPA Act)* prior to the construction of a sand quarry and ancillary manager's residence/site office at 4226 Nelson Bay Road, Anna Bay (Lot 591 DP 1191380). The location of the proposed project area lies within the Local Government Area (LGA) of Port Stephens and Local Aboriginal Land Council (LALC) of Worimi.

2.2 What is being proposed

The development project will involve the establishment of a sand quarry to extract a maximum of 50,000 cubic metres of sand in any year over a 30 year period. This work will involve the excavation and relocation of sand which will disturb or destroy any existing stratigraphy, and may potentially harm Aboriginal objects that may exist within the Subject Area.

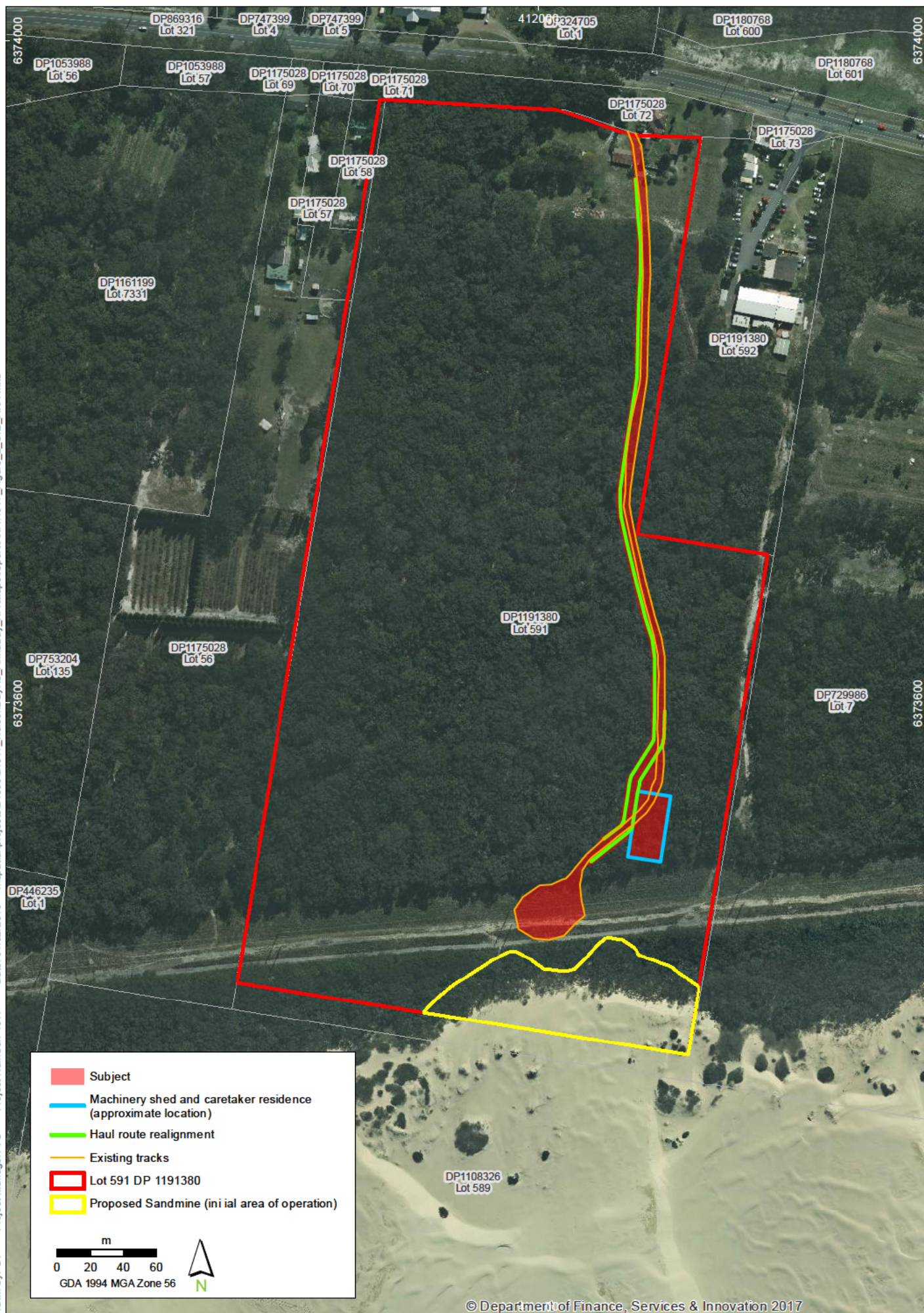
Ancillary development includes a manager's residence and site office within one building.

Drawn by: GT Project Manager: VG Project Number: 4017 Date: 22/01/2018 T:\spatial\projects\4000a4017_NelsonBayRd_AnnaBay_HA\Map\report\A4017_Figure_1_Location_AHA.mxd



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Location map



Suburb: Anna Bay, LGA: Port Stephens Council, Parish: Tomaree

Subject Area

3. Existing cultural heritage knowledge

3.1 Historic context

The development of Anna Bay begins with the early history of the Port Stephens area. Port Stephens consists of the submerged estuary of the Myall and Karuah Rivers and inhabited by the *Worimi* and *Gringai* tribes of Aborigines. The Worimi comprised of a number of tribes including the Garuagal, Maiangal, Gamipingal, Garrawerrigal, Buraigal, Warringal, Birroongal, Birrimbai, Yerrungal and Wallamba (McCardle Cultural Heritage, 2015:16).

The Worimi people have been, and still remain the traditional custodians of a large area known as ‘Worimi country’. Worimi country was generally bounded by the four rivers: the Hunter River to the south, Manning River to the north and the Allyn and Patterson Rivers to the west, including the adjoining ocean and waterways. Within Worimi country there were 18 clan groups or ‘ngurras’, and spoke the Gathang language (McCardle Cultural Heritage, 2015:17). The Worimi people have occupied the area for thousands of years and have a strong cultural connection, as the area is still utilised for fishing and recreational activities by the Worimi people (McCardle Cultural Heritage, 2015:17).

The area was a rich resource, with direct access to marine (both ocean and estuarine), forest and stone resources from the neighbouring headlands. The history of the Worimi people and the connection with the area is abundantly evident in the extent and diversity of the cultural material present throughout the adjoining areas. For example, spears used for fishing were made from the flowering stem of the Grass Tree or Gynea Lily, with prongs of ironbark used on the tips. The Worimi used the beaches to travel between Nelson Bay to the north and Stockton to the south (McCardle Cultural Heritage, 2015:14). The Stockton Beach Dune System is the largest mobile dune in coastal Australia and represents an important area of cultural heritage (OEH, 2004).

The Worimi Country can be mapped archaeologically and with traditional knowledge of areas/sites including sacred sites, meeting places, burial ground(s), and travel routes of a large society. There has been a considerable amount of archaeological investigation and reporting throughout the area, with large numbers of sites identified. Dean-Jones (1990, 1992) and Umwelt (2000) have done extensive work in the Worimi Conservation Land. Investigations of a smaller section of the area were Comber (1990) and ERM (1995, 2001). Additionally, Umwelt (1997), Hall (1928), MCH (2004, 2005) and Dyll (2004) have conducted archaeological investigations at Birubi Point.¹

Shell middens are quite extensive in the area, with shell deposits consisting predominately of pipi (*Plebidonaz deltoids*) shell. Some also contain mud whelk (*Pyrazus ebininus*) and cockle (*Anadara trapezia*) shells; stone artefacts, bird, fish and animal bones (McCardle Cultural Heritage, 2015:17). Additionally, burial sites are recorded within the Worimi Conservation Land and are difficult to predict within the landscape.

Following the initial period of dune formation and mobility between 6,000 and 4,500 years ago, there have been periods in time when the dunes have been stable. During these periods of prolonged stability, the dunes were vegetated. After each period of stability, mobile dunes developed and buried the vegetated dunes.

¹ References were taken from McCardle Cultural Heritage, 2015:17)

Although limited information is available, when combined with oral testimony and archaeological evidence, the Worimi people prospered within the environment. Sites including shell middens, artefact scatters, hearths, sacred sites, burials and Coorobori grounds demonstrate the extensive utilisation of the area.

3.2 Historic accounts

In April 1770, James Cook sighted the Port and named it in honour of Sir Phillip Stephens, Secretary to the Admiralty, noting in his log book that it appeared “to be sheltered from all winds” and that “there might be a sufficient depth for shipping water in the bay” (NSW Education, unknown:1).

Port Stephens was not entered by Europeans until late 1871 when the ‘Salamander’, docked, transporting convicts to Sydney. It appears that the earliest Europeans to live in the area were five escaped convicts, wrecked at Port Stephens in 1790 (McCardle Cultural Heritage 2015:18). The Worimi, were extremely accommodating taking them into their tribe (McCardle Cultural Heritage 2015:19). Five years later they were ‘rescued’ by Captain W.R. with the Reliance and Supply.

In 1797, Lieutenant John Shortland sailed the narrow inlet around 30km to the south of Port Stephens, finding coal. The settlement of Newcastle soon followed, on Port hunter, initially a convict settlement. By 1822 the town was prospered as free settlement and became the gateway to the Hunter Valley (NSW Education, unknown: 2).

In 1830 a historical account by Robert Dawson described the Worimi Tribe as “utilising spears and shields, wearing belts of opossum fur and using combs formed from the leg bones of kangaroos” (Dawson, 1830:115 in McCardle Cultural Heritage, 2015:17).

Much of the land has changed drastically since 1788, and dispossession has had significant impacts on Worimi people and their culture.

3.3 Aboriginal Heritage Information Management System (AHIMS)

A search of the Aboriginal Heritage Information System (AHIMS) was undertaken on 7 November 2017 (AHIMS Client ID #311311). A total of 105 Aboriginal sites and one Aboriginal place were identified within a 22 km² search area (see Figure 3). One Aboriginal site, known as ‘NBRd 4’ comprising shell fragments (AHIMS ID#38-5-0320) is located within the Subject Area. Another Aboriginal site, known as ‘NBR3/PAD4’ comprising a Potential Archaeological Deposit (PAD) (AHIMS ID#38-5-0325) is situated on the north-west corner of the Subject Area potentially extending into the Subject Area.

Table 1: Results of the AHIMS search collated by site feature

Site features	Total
Aboriginal Resource and Gathering	14
Artefact/Isolated find	2
Artefact Scatter	13
Artefact and Shell	3
Artefacts/Open Camp Site	1
Burial(s)	2
Habitation Structure	2

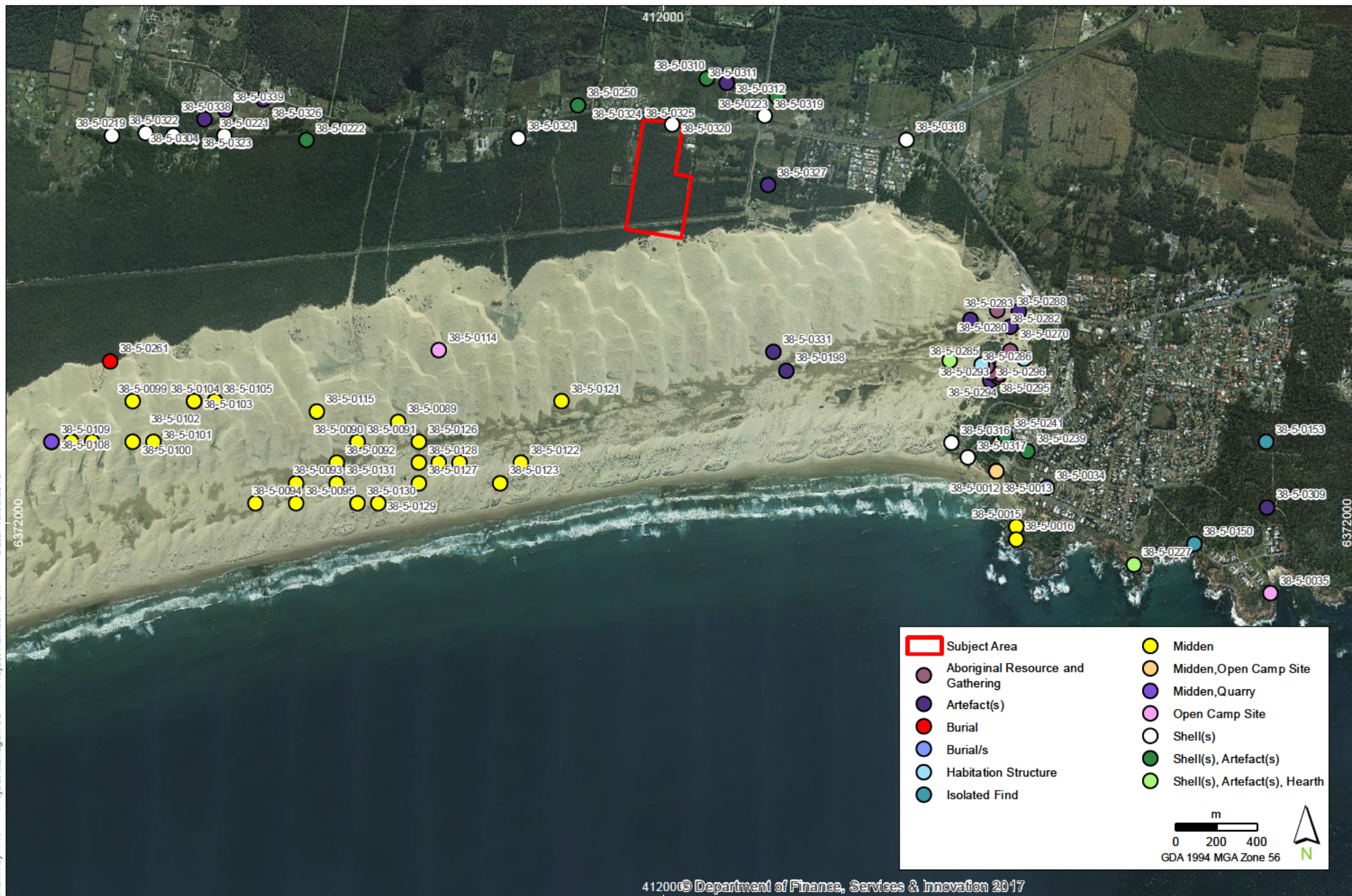
Potential Archaeological Deposit (PAD)	6
Shell Midden	50
Shell Midden/Artefact(s)	7
Shell Midden/Artefact(s)/Hearth	1
Shell Midden/Open Camp Site	2
Shell Midden/Quarry	1
Restricted	1
Total	105

The Subject Area is located in the Coastal Zone of the Hunter Valley, in particular, it is situated within the Outer Holocene Barrier and sand dunes. The resources in this area would have been well established by Aboriginal people in the past, but modifications including residential developments are likely to have disturbed areas containing archaeological materials. The Outer Holocene Barrier have stable dunes and the potential to contain stratified deposits dating back to 4,500PB (Dean-Jones 1992).

The Stockton Bight is a unique coastal embayment and a well preserved example of a dual barrier system close to the major metropolitan centres of Newcastle and Sydney (Australian Heritage Database). The Newcastle Bight has some of the largest Midden sites in NSW as well as burial and educational sites (Australian Heritage Database). The barrier dune system of the Stockton Bight is 31km long and ranges from one to two kilometres in width (Eric Martin and Associates, 2002:33). The stabilised dunes are transgressive that overrode the strand plain during the Holocene (Eric Martin and Associates, 2002:33).

The frequencies of site types within the search area are consistent with regional trends identified during previous studies within close proximity to the current assessment. Sites are variable distances from permanent water sources throughout the search area, with the majority (of those located in proximity to the Subject Area) located approximately 1km from the ocean and approximately 2.5km from Tilligerry Creek (Figure 3).

The most common site type in the surrounding area are shell middens with only shell, followed by Aboriginal Resource Gathering sites and artefact scatters (see Table 1).



T:\spatial\projects\4000\4017_NelsonBayRd_AnnaBay_HA\Maps\report\4017_Figure_1_AH MS.mxd

3.4 Previous archaeological assessments of the Subject Area

3.4.1 Dean-Jones (1990)

The most significant study carried out in the Newcastle Bight was carried out by Pam Dean-Jones. Although the hard copy could not be accessed among the archaeological literature. Dean-Jones (1990) identified numerous sites across the Port Stephens geomorphic zone.

3.4.2 Eric Martin and Associates (2002)

A Conservation Management Plan (CMP) was commissioned by the NSW National Parks and Wildlife Service (NPWS) in 2002 to provide a basis for the ongoing conservation and management of Tomaree Head. Tomaree Head is situated at the southern entrance to Port Stephens and is of significance to Aboriginal people. The CMP concludes that the NPWS as the custodian and landlord of Tomaree, is responsible for the conservation, management of Tomaree Head, and to increase public access to it as a state significant prominent landmark with WWII fortifications,.

3.4.3 McCardle Cultural Heritage (2015)

A due diligence assessment of 781 Marsh Rd, Port Stephens was undertaken by McCardle Cultural Heritage in 2015. It included both a desktop assessment and a field survey (which included the Subject Area). The subject area was situated within a floodplain and was assessed as having low sensitivity due to clearing and past land use impacts.

3.4.4 McCardle Cultural Heritage (2015)

Additionally McCardle Cultural Heritage (2015) conducted a Salvage AHIP excavation at 108 Nelson Bay Rod, Bobs Farm to Anna Bay (Cromarty Lane to Port Stephens Drive). They concluded that the archaeological evidence recovered from within the study area, can be interpreted in relation to the traditional way of life that was practiced by Aboriginal people. They also concluded that site 38-5-0310 was extremely complex with numerous locations with few pieces of shell with high stone artefact densities.

3.4.5 Niche (2017)

A field survey of the Subject Area was undertaken by Niche in 2017 and forms part of the ongoing assessment of this report. The area contains landscape features which suggest a potential for archaeological deposits (proximity to a waterway and containing a ridgeline within 200 m of waters).

3.4.6 OEHL, Board of Management for the Worimi Conservation Lands

In 2015, the Plan of Management was jointly adopted by the Minister of the Environment and the Minister for Lands and Water. The report was prepared by the Board of Management for the Worimi Conservation Lands with staff of the Lower North coast Region of the NPWS.

3.5 Predictive model

Detailed predictive modelling has been developed for the area utilising data from archaeological, geological and geomorphic research. Previous archaeological studies undertaken throughout the area provide a good indication of site types and site patterning in the area. These studies have shown that shell middens associated with stone artefacts and middens with only shell fragments are the most predominate site types within the area. The most common site location is the seaward area of active transgressive dunes/ active blowout. This is then followed by the beach foredune and outer basin (Eric Martin and Associates, 2002:34).

The Subject Area lies in the Outer Holocene barrio and sand dunes. These dunes are stable and the potential to contain stratified deposits dating back to 4,500 BP (Dean-Jones 1992).

The general predictions and key trends are listed below:

- The most common site types are open sites containing shell with artefacts, followed by isolated finds.
- Sites are usually located within 50 metres of reliable water source.
- Sites are located both on the Holocene and Pleistocene dunes overlooking the interbarrier depression.
- Sites are not usually found in the interbarrier depression.
- Site types are predominately shell middens, stone tools and may also contain charcoal.
- Artefact scatters, isolated finds, scarred trees, burials and ceremonial sites may also be found along the dunes.
- Larger sites with higher densities of artefacts are more likely to be found close to stream confluences and permanent water sources, such as Tillegerry Creek (approximately two kilometres from the Subject Area).
- Artefacts typically date to the Holocene.
- Both middens (including estuarine shell species, rock oysters and mud whelk) and open camp sites are located on the inner landward margin of the Holocene dunes.
- Stone artefact types include flakes, flaked pieces, broken flakes, cores and tools.
- Artefact scatters are most commonly linked in close proximity to permanent water sources including creeks, swamps, the inter barrier depression and the coast.
- Frequency and density of artefacts are directly related to location within the landscape.
- Large sites increase markedly with proximity to permanent water sources.
- The majority of sites will be subject to disturbances including human and natural.
- High concentrations of artefacts are more likely to be located within resource rich areas.

A site specific predictive model was developed and is described below. This predictive model has been developed based on a review of landscape context and individual landforms, ethno historical evidence of traditional land use, distribution of natural resources, the results of previous archaeological work in the vicinity of the study area and the predictive modelling proposed in previous investigations.

- Shell artefacts and stone artefacts will be the most common site type across the landscape and are the most likely site type to occur within the Subject Area.
- Sites will most commonly be low density open artefact scatters or isolated finds, although high density scatters may also be present.
- Artefact sites can be found across environmental contexts, but are most easily identified where vegetation is limited and ground surface is visible.
- Stands of remnant old growth vegetation retain the potential for scarred trees to be present but large scale land clearance of the area in general means that such stands are rare.
- The majority of sites will be predominated by tuff obtained locally and and/or silcrete, chert or quartz that have been traded/transported from the Hunter Valley area.
- Relatively undisturbed soils have potential to contain subsurface archaeological deposits.
- The potential for intact deposits is not necessarily completely destroyed by ploughing of an area, as this generally only affects the top 30 cm of soil.

- Excavations within the region suggest that high densities of artefacts are present around 50 m from water sources, and that subsurface material may be much greater than indicated by surface numbers of artefacts.
- The following site types are **unlikely** to occur in the Subject Area:
 - Stone quarry sites, axe grinding grooves, stone engravings/art and shelter sites due to the lack of suitable geology.
 - Scarred or carved trees due to the extent of vegetation clearing in the region.
 - Burials and ceremonial sites (including stone arrangements) given the environmental conditions, and disturbances. Burial sites can occur anywhere but generally in significant landform locations and generally inhumations in soft soils.

4. Proposed methodology for cultural heritage assessment

4.1 Aboriginal Cultural Heritage Assessment (ACHA)

The Aboriginal cultural heritage assessment will follow the guidelines set out in the:

- *Aboriginal cultural heritage consultation requirements for proponents 2010*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales.*

The ACHA will:

- Synthesise the results of technical investigations.
- Include an assessment of significance of any Aboriginal objects or Aboriginal cultural heritage values identified.
- Include an impact assessment and provide management and mitigation measures to inform any AHIP application as required, and
- Detail community consultation process and any Aboriginal cultural heritage values identified, in compliance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* guidelines.

The ACHA will follow the general methodology described by the tasks below:

- **Desktop assessment** - Some of this work has already been completed by Niche (2017). To avoid repeating previous work, as much information as possible would be incorporated into the Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Report (AR).
- **Survey** - A comprehensive site survey would be undertaken by Niche along with representatives from the Registered Aboriginal Parties (RAPs).
- **Reporting** - A draft report that satisfies the requirements of the Code of Practice (DECCW, 2010a), the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010b) and the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) will be prepared.

4.2 Aboriginal community input points for the assessment process

The DECCW (2010b) *Aboriginal cultural heritage consultation requirements for proponents 2010* suggest a number of points during the ACHA for input from RAPs including:

- During Stage 1 – Notification of project proposal and registration of interest
- During Stage 2 - Presentation of information about the proposed project (this methodology).
- During Stage 3 - Gathering information about cultural significance (this methodology).
- During fieldwork.
- During Stage 4 - Review of draft cultural heritage assessment report.

In addition to this, any input and suggestions into the project (or the consultation process itself) up to the end of the commenting period of Stage 4 is welcomed. Unless it becomes clear during the process of the assessment that they are required, no specific meetings (other than during fieldwork) have been included for this assessment.

4.3 Archaeological and Cultural Heritage Survey

The purpose of this section is to describe the method to conduct an archaeological survey. The aim of the survey is to inspect the impact footprint of the Subject Area and try to identify and ground-truth any

Aboriginal site that is already registered, and also to identify Aboriginal sites that may be present within the Subject Area. It also aims to provide further information on the Aboriginal cultural heritage values of the Subject Area. The survey team will walk the entire Subject Area in transects and record all data in accordance with the Code of Practice as listed below.

- Recording all transects on pro formas, relevant information includes the GPS coordinates of the start and finish of each transect, landform type, existing environment and level of disturbance.
- Photographic recording of all landforms, disturbance type and surface features relevant to each transect.
- Flagging and recording the location of artefacts and features using a hand held non-differential GPS unit.
- Photographic recording of the location and surroundings of flagged artefacts and features.
- Recording every identified archaeological site on pro formas, including details such as a written description, photographic recording, a sketch of the context of the recorded site and extent using a hand held non-differential GPS unit.

4.4 Sensitive cultural information – management protocol

During the consultation process Tattersall Lander Pty Ltd and Niche will provide the opportunity for RAPs to provide cultural information, including a statement of the value to identified sites and other matters. The input points for this have been listed in Section 4.2, information however will be accepted up to the end of the commenting period of Stage 4 or prior to the finalisation of the ACHA report.

Please be aware that Tattersalls Lander Pty Ltd and Niche staff may seek cultural information and supporting evidence in regard to matters of cultural value.

In the event that your or your organisation has sensitive or restricted public access information it is proposed that Tattersall Lander Pty Ltd will manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- Any restrictions on access and material
- Any restrictions on communication of the material (confidentiality)
- Any restrictions on the location/storage of the material
- Any cultural recommendations on handling the material
- Any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and degree of authorisation
- Any details of any consent given in accordance with customary law
- Any access and use by the RAPs of the cultural information in the material.

Please consider the above list when providing your recommendations regarding any culturally sensitive information.

4.5 Critical timelines

Critical timelines for the ACHA are outlined in Table 2. Please note that some of these timeframes are estimates at this stage in the process and are provided to allow forward planning of personnel and resources.

Table 2: Critical timelines for the 4226 Nelson Bay Rd, Anna Bay ACHA

Project item	Due date
Provision of comments on the proposed methodology (this document)	Within 28 days from delivery of this document starting on the 20 August 2018. Comment period will end on 18 September 2018.
Archaeological survey	One day during the week starting on 17 September 2018
Provision of the draft ACHA report (including the proposed management and mitigation measures) to registered Aboriginal stakeholders for review.	Within two weeks of the completion of the field survey at the end of September 2018. Should the field survey confirm that additional investigation in the forms of test excavation needed, this time frame would change accordingly.
Provision of comments on draft ACHA report	Within 28 days from delivery of the draft report, during October 2018.
Collation of cultural significance information	Ongoing throughout the process until end of the draft ACHA report review period.
Finalisation of the ACHA report in consideration of comments received	Generally within one week of the draft report comment deadline early to mid-November 2018.

4.6 Who to contact

If you would like to provide information for the ACHA, or if you would like to otherwise discuss the project please do not hesitate to contact:

Tattersall Lander Pty Ltd
 c/o
 Balazs Hansel
 Senior Archaeologist
 Niche Environment and Heritage
 PO Box 2443
 North Parramatta NSW 1750
 T: 0488 224 300
 E: bhansel@niche-eh.com

References

- Australia ICOMOS. (2013). *The Australia ICOMOS Charter for Places of Cultural Significance - The Burra Charter*. Australia International Council on Monuments and Sites [ICOMOS].
- McCardle Cultural Heritage. (2015). *781 Marsh Rd, Bobs Farm, Aboriginal due diligence assessment*. Sydney: Prepared for Telstra.
- McCardle Cultural Heritage. (2015). *Volume 1 MR 108 Nelson Bay Rd, Bobs Farm to Anna Bay Stage 2- Cromarty Lane to Port Stephens Drive. Archaeological Salvage AHIP 1132063*. Sydney: Prepared for Roads and Maritime.
- OEH. (2015). *Worimi Conservation Lands Plan of Management*. Sydney. Office of Environment and Heritage.
- Eric Martin and Associates. (2002). *Tomeree Head, Conservation Management Plan*. Sydney: Prepared for NSW National Parks and Wildlife Service.
- NSW Education. (unknown). *A Brief History of Anna Bay and its School*. [Online] at <http://www.annabay-p.schools.nsw.edu.au/documents/31694767/31702034/A%20BRIEF%20HISTORY%20OF%20ANNA%20BAY%20AND.pdf>
- Office of Environment and Heritage [OEH] . (2011). *Guide to investigating, assessing and reporting Aboriginal cultural heritage in NSW: Part 6 National Parks and Wildlife Act 1974*. Office of Environment and Heritage.
- OEH. (2004). Stockton Beach Dune System [Online] at <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2280081>
- Department of Environment, Climate Change and Water NSW [DECCW] . (2010b). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales: Part 6 National Parks and Wildlife Act 1974*. Department of Environment, Climate Change and Water NSW.
- Department of Environment, Climate Change and Water NSW [DECCW]. (2010a). *Aboriginal cultural heritage consultation requirements for proponents 2010: Part 6 National Parks and Wildlife Act 1974*. Department of Environment, Climate Change and Water NSW.
- NSW National Parks and Wildlife Service. (1997). *Aboriginal Cultural Heritage Standards and Guidelines*. NSW National Parks and Wildlife Service.
- Office of Environment and Heritage [OEH] . (2011). *Guide to investigating, assessing and reporting Aboriginal cultural heritage in NSW: Part 6 National Parks and Wildlife Act 1974*. Office of Environment and Heritage.

Niche Environment and Heritage

A specialist environmental and heritage consultancy.

Head Office

Niche Environment and Heritage

PO Box 2443 North Parramatta NSW 1750

Email: info@niche-eh.com

All mail correspondence should be through our Head Office

B3 Stage 3 - Gathering information about the cultural significance of the Subject Area

B3.1 Assessment methodology

08 March 2019

Dear Sir/Madam,

Re: 4017 - Proposed sand quarry at 4226 Nelson Bay Road, Anna Bay NSW – Project information and methodology for an Aboriginal Cultural Heritage Assessment under Section 4.2 and Section 4.3 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents* (2010)

Niche Environment and Heritage has been commissioned by Tattersall Lander (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay (hereafter referred to as the Subject Area). The Subject Area backs onto the Newcastle Bight sand dune system. The proposed quarry will extract a maximum of 50,000 cubic metres of sand in a year over a 30 year period. The EIS will support a 'Designated Development' under Part 4 of the Environmental Planning and Assessment Act 1979 (EPA Act).

The Proponent can be directly contacted on:

Tattersall Lander Pty Ltd
PO Box 580
Raymond Terrace NSW 2324

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage *Aboriginal cultural heritage consultation requirements for proponents* (2010), please find enclosed the project information and methodology for the proposed test excavation assessment.

If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Area and its immediate surrounds, please contact Niche Environment and Heritage as soon as possible. **The statutory time frame for commenting on the methodology closes at 5 pm, 8 April 2019.**

Please provide any cultural information you wish to share in a format you deem suitable and please don't hesitate to call and discuss any special requirements you may have regarding this information. Things you may wish to consider include:

- a. The nature of your cultural connection to the country on which the Subject Area is located. Please include any relevant cultural knowledge.
- b. Whether you know of Aboriginal objects of cultural value to Aboriginal people within or in close proximity to the area of the proposed project.
- c. Whether you know of any places of cultural value to Aboriginal people within or in close proximity to the area of the proposed project. This includes places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.

- d. If you have any contributions to how culturally appropriate information is gathered or the methodology for the assessment of cultural values.
- e. Cultural heritage management options for any objects, places or cultural values within the Subject Area.

We are planning to conduct our archaeological test excavation over three days during April/May 2019, the exact date will be confirmed closer to the proposed time.

Registered Aboriginal Parties will need to **provide the following information prior to 8 April 2019** to be considered for any fieldwork:

- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual to participate in test excavations.

Once we have finalised numbers for participation in the field survey we will begin to organise logistics such as time and meeting place.

In accordance to Section 3.4 of the consultation guidelines, the decision on who is engaged for delivering particular services is decided by the proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

Please direct all correspondence to me at the contact details provided below:

Tattersall Lander
c/ Dr Morgan Disspain
Niche Environment and Heritage
PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 774 566
Email: mdisspain@niche-eh.com

Yours sincerely,



Dr Morgan Disspain
Senior Archaeologist & Heritage Consultant
Niche Environment and Heritage

B3.2 Responses to project information and assessment methodology

Samuel Ward

From: Jessica Cuskelly
Sent: Friday, 7 September 2018 12:45 PM
To: Balazs Hansel
Subject: FW: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information
Attachments: Niche - Anna Bay response.docx; COFC 2018-19.pdf; Workers Comp 2017-2018.pdf

From: Anthony Anderson [mailto:murroomainc1@gmail.com]
Sent: Thursday, 6 September 2018 2:15 PM
To: Jessica Cuskelly
Subject: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Hi Jess-

Please find enclosed Murrooma Response to ACHA/Methodology- Anna Bay.
I have also attached our current insurances.

Consultant and Availability:
Bec Young will be available for the Survey (the week of the 17th Sept)
Wednesday 19th and Friday 21st of Sept if that suits?

Thanks
Bec Young

--

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

This email has been scanned for spam and viruses by Proofpoint Essentials. Click [here](#) to report this email as spam.



9 Vardon Road Fern Bay 2295 NSW
49281910
0402827482

ABN: 97 807 719 484

6th of September 2018

Tattersall Lander

c/ Jess Cuskelly

Niche Environment and Heritage

Re: Proposed Sand Quarry at 4226 Nelson Bay Road, Anna Bay NSW

To Jess,

Murrooma have read and fully understand the ACHA/Methodology for the proposed Sand Quarry at Anna Bay.

Murrooma has completed a due diligence of this proposed project area with Niche – Vicki Gordon previously, we discussed some recommendations whilst onsite. This included a Cultural Heritage Management Plan that is put in place in line with all other Sand Quarries within the Worimi area.

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 Port Stephens/Anna Bay region. We are both Traditional Custodians of the Worimi area and are in a position to speak for country.

The project area is located close to a noted Aboriginal Place and this area and surrounding areas are very significant to our local Aboriginal people. There are many places within this area that have significant cultural value to Worimi people and are in close proximity to the proposed project. These places of social, spiritual and cultural value are traditional areas with direct linkage to our ancestors and storylines.

We have previously been involved in the extensive salvage (Salvage AHIP excavation at 108 Nelson Bay Road, Bobs Farm to Anna Bay- McCardle Heritage) directly across the road from this proposed development and we believe that the midden material outlined in the AHIMS search (AHIMS ID#38-5-032) may be a continuation of this previous salvaged site.

We agree with the methodology for the archaeological and cultural heritage survey assessment and Murrooma will be able to discuss cultural values and collection of information further onsite.

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 or engagement process.

Thankyou

Rebecca Young- Operations Manager

Anthony Anderson- CEO

From: [Ryan Johnson](#)
To: [Jessica Cuskelly](#)
Cc: [Balazs Hansel](#)
Subject: acha - methodology 4226 Nelson Bay road, Anna Bay
Date: Tuesday, 21 August 2018 10:22:26 PM
Attachments: [murra bidgee public liability 2018.pdf](#)
[murra Bidgee workers compensation current.pdf](#)

Hi Jess,

I have read the project information ACHA and methodology for the above project and endorse the recommendations made by Niche. My family and members have a long history in the Anna Bay area, my grandfather resided in Anna Bay for over 10 years, our contact person for this project would be Ryan 0475565517 or Shaun 0400637554. Please see attached insurances.

Kind regards

Ryan Johnson | **Murra Bidgee Mullangari**



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147
E: murrabidgeemullangari@yahoo.com.au
ICN: 8112

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Samuel Ward

From: Worimi TOC <worimitoc@hotmail.com>
Sent: Monday, 17 September 2018 1:41 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information
Attachments: [REDACTED]

Hi Balazs,

Please find attached current certificates of insurance.
Site officer who will attend the field inspection will be myself, my details are below.

The subject areas 4226 Nelson Bay Road, Anna Bay NSW, is culturally significant to the Worimi Tribe as this area is located not too far from the shore line. I could identify that the Worimi people would have used this area for generations. I have not inspected the area personally but the area does tell me that there is a lot of potential for Aboriginal objects to be present. Also members of Worimi TOIC claim the area to be significant to Worimi people.

Cheers,

Candy Towers
Site Officer
Worimi Traditional Owners Indigenous Corporation
Ph: 0412 475 362
e: worimitoc@hotmail.com



WORIMI TOIC

Guudji Yiigu, I am a Worimi and Yorta Yorta woman from Newcastle NSW, I acknowledge and pay my respects to the traditional owners and custodians of the land on which I live and work, to their continuing connection to land, water, culture and community and pay my respects to the Elders past, present and to our future generations.

From: Balazs Hansel
Sent: Friday, 14 September 2018 11:18 AM
To: Balazs Hansel
Cc: Jessica Cuskelly
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information
[Dear All,](#)

Samuel Ward

From: Sites <Sites@worimi.org.au>
Sent: Monday, 17 September 2018 8:54 AM
To: Balazs Hansel
Subject: Proposed Sand Quarry
Attachments: COC Public Liability.pdf; Workers Comp.pdf

Hi Balazs Worimi agrees with the methodology and would like to register our interest in the project please [see](#) the attachments

Kind Regards,

Jamie Merrick
Senior Sites Officer
Worimi Local Aboriginal Land Council
2163 Nelson Bay Road,
WILLIAMTOWN NSW 2318

Ph: 02) 4033 8814 | Fax: 02) 4033 8899
Email: sites@worimi.org.au



Samuel Ward

From: WIDESCOPE . <widescope.group@live.com>
Sent: Friday, 14 September 2018 6:17 PM
To: Balazs Hansel
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Attachments:

Hi Balazs,

Thank you, I have reviewed and support the Methodology Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3

Please see Insurances attached

Contact Donna Hickey (Admin) 0425232056

Nominated Individual Steven Hickey 0425230693

Thank you
Steven Hickey

From: Balazs Hansel
Sent: Friday, September 14, 2018 11:18:41 AM
To: Balazs Hansel
Cc: Jessica Cuskelly
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information
Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

Please provide your feedback before that date. Please also provide the following documentations should you want to be considered for the upcoming field inspection:

- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual

Please be advised that the fieldwork might be pushed back by a week given that we still waiting on response for the methodology.

Please do not hesitate to contact us should you have any questions or discussing the project further.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney


niche
Environment and Heritage

Samuel Ward

From: lennie.anderson011 lennie.anderson011 <lennie.anderson011@bigpond.com>
Sent: Friday, 14 September 2018 4:07 PM
To: Balazs Hansel
Subject: Re: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Attachments:



Hello,

Wasn't sure if our offices had passed on the information you required?

We have read the Methodology agree with it's recommendations etc, but would like to discuss some finer points onsite, as persons not engaged on the proposal can and will read any statements and utilize for their own intelligence gathering outside of the Project!

The Representatives of this Company Are: Myself, Chris Collison, Caitlin Moran (which ever is available owing to other work commitments) All correspondence is to be forwarded to me.

Please find attached insurances as requested. If any difficulties please contact me!

Thanking You

Lennie Anderson OAM
Nur-Run-Gee Pty Ltd (Director)

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

From: "Balazs Hansel"
To: "Balazs Hansel"
Cc: "Jessica Cuskelly"
Sent: Friday, 14 Sep, 2018 At 11:18 AM
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

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- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual

Samuel Ward

From: David Feeney <karuahindigenous@outlook.com>
Sent: Tuesday, 25 September 2018 4:37 PM
To: Balazs Hansel
Subject: RE: Nelson Bay Road 4226 (our ref.4017)

Hi Balazs;

The Project Methodology for 4226 Nelson Bay Road,
Anna Bay
Aboriginal Cultural Heritage Assessment is all good what I have read

Thank you

Dave Feeney
Karuah Indigenous Corporation
0421114853

Sent from [Mail](#) for Windows 10

From: Balazs Hansel
Sent: Tuesday, September 25, 2018 1:45:59 PM
To: 'David Feeney'
Subject: RE: Nelson Bay Road 4226 (our ref.4017)
[Hi David,](#)

[Sorry for that. Could you please let me know your contact number and I'll give you a call.](#)

[Regards,](#)
[Balazs](#)

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney



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M 0488 224 300 T 02 9630 5658
A PO Box 2443 North Parramatta NSW 1750
E bhansel@niche-eh.com W niche-eh.com



From: David Feeney [mailto:karuahindigenous@outlook.com]
Sent: Tuesday, 25 September 2018 1:38 PM
To: Balazs Hansel
Subject: RE: Nelson Bay Road 4226 (our ref.4017)

Hi Can not down load file

Sent from [Mail](#) for Windows 10

From: Balazs Hansel <bhansel@niche-eh.com>
Sent: Monday, September 24, 2018 2:19:17 PM
To: 'David Feeney'
Subject: RE: Nelson Bay Road 4226 (our ref.4017)

Dear Dave,

In addition to my previous email, could you please send through your certificate of currency for Public liability insurance and also the copy of your workerscomp as well?

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney



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A PO Box 2443 North Parramatta NSW 1750
E bhansel@niche-eh.com W niche-eh.com



From: Balazs Hansel
Sent: Monday, 24 September 2018 1:53 PM
To: 'David Feeney' <karuahindigenous@outlook.com>
Subject: RE: Nelson Bay Road 4226 (our ref.4017)

Dear Dave,

The pdf you are having problem to open is just a logo. Please find the two documents you need to read attached again. Please note that the period for commenting has already been closed so please let us know your feedback asap.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)

Senior Heritage Consultant
Sydney



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A PO Box 2443 North Parramatta NSW 1750

E bhansel@niche-eh.com W niche-eh.com



From: dave.feeney@bigpond.com [<mailto:dave.feeney@bigpond.com>]

Sent: Monday, 17 September 2018 9:45 AM

To: Jessica Cuskelly

Subject: Nelson Bay Road 4226

Hi Balazs;

I can not open 9.55KB doc can you please send as Word


Thank you

Dave Feeney
Karuah Indigenous Corporation
0421114853

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Samuel Ward

From: Deidre Perkins <dedemaree3@hotmail.com>
Sent: Friday, 14 September 2018 11:31 AM
To: Balazs Hansel
Subject: Methodology
Attachments: 

I will be doing the work and my contact number is 0425654290.

Thanks
DeidrePerkins

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Samuel Ward

From: Deidre Perkins <dedemaree3@hotmail.com>
Sent: Friday, 14 September 2018 11:22 AM
To: Balazs Hansel
Subject: Re: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Sorry for the delay,
All seem good with me to go ahead.
DeidrePerkins

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From: Balazs Hansel
Sent: Friday, September 14, 2018 11:18:41 AM
To: Balazs Hansel
Cc: Jessica Cuskelly
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

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- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual

Please be advised that the fieldwork might be pushed back by a week given that we still waiting on response for the methodology.

Please do not hesitate to contact us should you have any questions or discussing the project further.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney



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A PO Box 2443 North Parramatta NSW 1750
E bhansel@niche-eh.com W niche-eh.com



From: Balazs Hansel
Sent: Monday, 20 August 2018 9:49 PM
To: Balazs Hansel
Cc: Jessica Cuskelly
Subject: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Samuel Ward

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 14 September 2018 2:17 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Hi Balasz,

So far the nominated rep for DNC would be Eddie Funaki- 0447994800, thanks heaps Balasz,

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC

Sent from Yahoo Mail for iPhone

On Friday, September 14, 2018, 11:18 am, Balazs Hansel wrote:

Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

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- Name and contact details of the nominated individual

Please be advised that the fieldwork might be pushed back by a week given that we still waiting on response for the methodology.

Please do not hesitate to contact us should you have any questions or discussing the project further.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant

Sydney

The logo for 'niche Environment and Heritage' features the word 'niche' in a bold, lowercase sans-serif font. A green leaf-like graphic is positioned above the 'e'. Below 'niche' are the words 'Environment and Heritage' in a smaller, all-caps sans-serif font.

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A PO Box 2443 North Parramatta NSW 1750

Samuel Ward

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 14 September 2018 1:59 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

Hi Balasz,

Keep us posted for any further updates

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC

Sent from Yahoo Mail for iPhone

On Friday, September 14, 2018, 11:18 am, Balazs Hansel wrote:

Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

Please provide your feedback before that date. Please also provide the following documentations should you want to be considered for the upcoming field inspection:

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- Name and contact details of the nominated individual

Please be advised that the fieldwork might be pushed back by a week given that we still waiting on response for the methodology.

Please do not hesitate to contact us should you have any questions or discussing the project further.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant

Sydney

The logo for 'niche Environment and Heritage' features the word 'niche' in a bold, lowercase sans-serif font. A small green leaf icon is positioned above the 'e'. Below 'niche' are the words 'Environment and Heritage' in a smaller, lighter sans-serif font.

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A PO Box 2443 North Parramatta NSW 1750

Samuel Ward

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 14 September 2018 2:11 PM
To: Balazs Hansel
Subject: Re: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 2 and 3 Methodology and project information

DNC agrees to the proposed methodology @ Nelson Bay Rd, Anna Bay

Sent from Yahoo Mail for iPhone

On Friday, September 14, 2018, 11:18 am, Balazs Hansel wrote:

Dear All,

This is a reminder email that the period for commenting on the methodology for the abovementioned project will be closing at 5pm, next Tuesday on 18 September 2018.

Please provide your feedback before that date. Please also provide the following documentations should you want to be considered for the upcoming field inspection:

- Current insurances (certificate of currency and workers compensation insurance).
- Name and contact details of the nominated individual

Please be advised that the fieldwork might be pushed back by a week given that we still waiting on response for the methodology.

Please do not hesitate to contact us should you have any questions or discussing the project further.

Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant

Sydney



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E bhansel@niche-eh.com W niche-eh.com



Samuel Ward

From: Anthony Anderson <murroomainc1@gmail.com>
Sent: Thursday, 10 January 2019 1:16 PM
To: Balazs Hansel
Subject: Re: our ref. 4017 - 4226 Nelson Bay Rd, Anna Bay - ACHA Stage 3 requesting information

Hi Balazs,

After reading your email I was unsure if there was a timeframe to respond or if we should just wait to respond to the draft ACHAR- Im happy to do both:

Your recommendations as outlined do reflect the project area however I'd like to note a few things:

- the site which is identified on the site card (AHIMS ID#38-5-0320) and within the project area has already been destroyed by the property that has been recently built and the owner/proponent needs to be aware of this. As a group we have taken this further and are in current discussions with OEH and Port Stephens Council regarding BA approval on top of our registered site.
- GPR is a good idea within the dune system but i'm unsure how much this would be able to penetrate to detect sites. I'd like to know more information on scope of works for the shed/operator's house as there may be other sites as visibility was very low in this area (possible testing there?).
- In keeping with all other local sand quarries we have Heritage Management Plans in place to ensure any future detection of cultural material and to monitor ongoing sand mining for protection of all cultural material. As you are aware the dunes are always moving and this area is extremely significant to our local people. An example within these plans are cultural awareness training for employees and monthly sieve/screen monitoring. I believe this should be implemented for this quarry also as all others are following our heritage guidelines within the area.

Thanks
Bec Young
Murrooma Operations Manager

On Thu, Dec 6, 2018 at 8:21 PM Balazs Hansel <bhansel@niche-eh.com> wrote:

Dear All,

Thank you again for the contribution to this project so far and also for those who have already provided some feedback for the project.

WE are in the process of drafting the ACHAR/AR and will meet with the client and possibly OEH in relation to our recommendations for the project.

I thought it would be the best to have a discussion with all the RAPs in relation to our assessment of the proposed sand quarry and associated access track before we finalise the draft and send it out for you to comment on. It is our understanding that this would serve the best of the consultation guidelines, the mutual respect to exchange information and also to make sure that everyone has the opportunity to have their say.

Please find a summary of what we have found out during the project so far below:

B3.3 Cultural heritage survey

Morgan Disspain

From: Balazs Hansel
Sent: Monday, 8 October 2018 7:18 AM
To: Balazs Hansel
Subject: RE: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 3 Site inspection/survey
Attachments: 4017_Figure_2_Site_AHA.pdf; 4017_Figure_1_Location_AHA.pdf

Dear All,

Further to my previous email, please find a couple of maps for the Subject Area attached. The address is 4226 Nelson Bay Road, Anna Bay.

Kind Regards,

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney



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A PO Box 2443 North Parramatta NSW 1750
E bhansel@niche-eh.com W niche-eh.com



From: Balazs Hansel
Sent: Sunday, 7 October 2018 9:22 AM
To: Balazs Hansel
Subject: 4017 - Re: 4226 Nelson Bay Road, Anna Bay NSW - Stage 3 Site inspection/survey

Dear All,

Thank you for your continuous contribution for the consultation process for the above mentioned project. Please note that the Proponent made a decision on including in the field inspection all of those Registered Aboriginal Parties who provided all required documents.

Please find the details of the site survey below:

- Survey take place at 9:00am on the 11 October, next Thursday. Please be on site at least 10 minutes to 9 to allow us to run through all safety procedures and a short toolbox.
- Please wear appropriate clothing and also bring wet weather gear as well.
- The field survey is scheduled to last approximately 3 to 4 hours.
- The Proponent is offering to pay \$330.00/half day, plus disbursements.

Should you agree with the above listed details and decide to take part in the field survey, please respond as soon as possible and include the name and contact details of the nominated site officer attending the survey.

Kind Regards

BALAZS HANSEL MA(Arch) MA(Hist)
Senior Heritage Consultant
Sydney



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A PO Box 2443 North Parramatta NSW 1750
E bhansel@niche-eh.com **W** niche-eh.com



B3.4 Notification of archaeological test excavation

From: [Morgan Disspain](#)
To: ["Andrew@worimi.org.au"](mailto:Andrew@worimi.org.au)
Subject: Anna Bay test excavation (4017)
Date: Wednesday, 3 July 2019 11:21:07 AM

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

Please note: These dates are tentative relying on advice from OEH and may change.

Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.

Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.

Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,
Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com **W** niche-eh.com

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From: [Morgan Disspain](#)
To: ["karuahindigenous@outlook.com"](mailto:karuahindigenous@outlook.com)
Subject: Anna Bay Test excavations 4017
Date: Wednesday, 3 July 2019 11:20:33 AM

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

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Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,
Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com **W** niche-eh.com

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From: [Morgan Disspain](#)
To: ["murroomainc1@gmail.com"](mailto:murroomainc1@gmail.com)
Subject: Anna Bay test excavation (4017)
Date: Wednesday, 3 July 2019 11:19:06 AM

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

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Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,
Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com **W** niche-eh.com

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From: [Morgan Disspain](#)
To: ["lennie.anderson011@bigpond.com"](mailto:lennie.anderson011@bigpond.com)
Subject: Anna Bay Test excavation (4017)
Date: Wednesday, 3 July 2019 11:18:04 AM

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

Please note: These dates are tentative relying on advice from OEH and may change.

Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.

Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.

Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,
Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com **W** niche-eh.com

EXCELLENCE IN YOUR ENVIRONMENT



From: [Morgan Disspain](#)
To: ["worimitoc@hotmail.com"](mailto:worimitoc@hotmail.com)
Subject: Anna Bay Test Excavation (4017)
Date: Wednesday, 3 July 2019 11:17:35 AM

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

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Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,
Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

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A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com **W** niche-eh.com

EXCELLENCE IN YOUR ENVIRONMENT



Wade Goldwyer

From: /O=SECURE/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9D18E18C92F546608406D6519689AE4A-MDISSPAIN_NICHE
Sent: Monday, 8 July 2019 11:17 AM
To: lennie.anderson011 lennie.anderson011
Subject: RE: Anna Bay Test excavation (4017)

Hello Lennie,

Thank you for your email and insurances.

Please be advised that the client has agreed to pay [REDACTED]

Kind regards,
Morgan

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 T 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com W niche-eh.com

EXCELLENCE IN YOUR ENVIRONMENT



From: lennie.anderson011 lennie.anderson011 [mailto:lennie.anderson011@bigpond.com]
Sent: Thursday, 4 July 2019 2:58 PM
To: Morgan Disspain
Subject: Re: Anna Bay Test excavation (4017)

Hi Morgan,

Information as requested, you will note current rates of pay which has been in the system for well over six (6) Months.

Thanking You

Lennie Anderson OAM
Nur-Run-Gee Pty Ltd
(Director)
Mob;0431 334 365

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

From: "Morgan Disspain"

To: "'lennie.anderson011@bigpond.com'"

Sent: Wednesday, 3 Jul, 2019 At 11:18 AM

Subject: Anna Bay Test excavation (4017)

Dear Sir/Madam,

Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.

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Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.

The client has agreed to pay [REDACTED]. Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the

change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.

Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

Please send me the name and contact details of your nominated site officer as soon as you are able.

Looking forward to having you onsite.

Kind regards,

Morgan Disspain

DR MORGAN DISSPAIN BArch. (Hons), PhD

Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant

Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658

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P PO Box 1156 Port Macquarie NSW 2444

E mdisspain@niche-eh.com **W** niche-eh.com

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B3.5 Archaeological test excavation

Wade Goldwyer

From: /O=SECURE/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9D18E18C92F546608406D6519689AE4A-MDISSPAIN_NICHE
Sent: Monday, 29 July 2019 9:27 AM
To: Julie Wells
Subject: Worimi TOIC invoice (4017)
Attachments: Invoice 1143 .pdf

Good morning Julie,

Please find the attached invoice from Worimi Traditional Owners Indigenous Corporation for last week's test excavation.

Kind regards,
Morgan

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 T 02 9630 5658
A 25 Sherwood Drive Port Macquarie NSW 2444
P PO Box 1156 Port Macquarie NSW 2444
E mdisspain@niche-eh.com W niche-eh.com

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From: Worimi TOC [<mailto:worimitoc@hotmail.com>]
Sent: Friday, 26 July 2019 1:21 PM
To: Morgan Disspain
Subject: Re: 4017 Anna Bay excavations next week.

Hi Morgan,

Please see attached invoice for payment.
Could you please forward to accounts for payment.

Regards,
Candy

Candy Towers

Worimi Custodian
Worimi Traditional Owners Indigenous Corporation
Ph: 0412 475 362
e: worimitoc@hotmail.com



Guudji Yiigu, I am a Worimi and Yorta Yorta woman from Newcastle NSW, I acknowledge and pay my respects to the traditional owners and custodians of the land on which I live and work, to their continuing connection to land, water, culture and community and pay my respects to the Elders past, present and to our future generations.

From: Morgan Disspain <mdisspain@niche-eh.com>
Sent: Wednesday, 17 July 2019 12:05 PM
To: Wade Goldwyer <wgoldwyer@niche-eh.com>
Cc: 'julie@tatland.com.au' <julie@tatland.com.au>
Subject: 4017 Anna Bay excavations next week.

Dear Sir/Madam,

Please be advised that the test excavation at Anna Bay (4226 Nelson Bay Road) is confirmed for Tuesday 23rd July through to Thursday 25th of July. Start of work will be on site at 8am and will finish at 4pm. Please meet at the front of the property.

Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.

If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule.

Could you please send through the name and phone number of the representative that will be assisting with the excavation.

If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.

If you haven't already sent me the sub consultancy agreement, can you please do so by the end of this week.

See you all next week!

Kind regards,
Morgan

DR MORGAN DISSPAIN BArch. (Hons), PhD
Associate Member, Australian Association of Consulting Archaeologists Inc.
Senior Heritage Consultant
Coffs Harbour NSW

M 0488 774 566 **T** 02 9630 5658
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E mdisspain@niche-eh.com **W** niche-eh.com

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B4 Stage 4 – Review of draft Aboriginal cultural heritage assessment report

20 August 2019

Dear Sir/Madam,

Re: Anna Bay Sand Quarry – Draft Aboriginal Cultural Heritage Assessment report (Niche ref #4017)

Thank you for your contributions to the Anna Bay Sand Quarry project to date. As a Registered Aboriginal Party, we are writing to ask for your feedback on the Draft Aboriginal Cultural Heritage Assessment for the project in accordance with Stage 4 of the NSW Office of Environment and Heritage (OEH) *Aboriginal Cultural Heritage consultation requirements for proponents 2010* guidelines.

The Aboriginal Cultural Heritage Assessment report includes an archaeological report (Appendix 1).

Please provide any written comments or submissions on the draft reports **within 28 days, or by 17 September 2019**.

In your review, please provide relevant information about:

- Management and mitigation options for Aboriginal object(s) or place(s) that you consider appropriate.
- The cultural values of any identified Aboriginal objects or places within the project
- Whether there are any additional Aboriginal objects of cultural value to Aboriginal people in the area of the proposed project.
- Whether there are any additional places of cultural value to Aboriginal people in the area of the proposed project (whether they are Aboriginal places declared under s 84 of the National Parks and Wildlife Act 1974 or not). This will include places of social, spiritual and cultural value, historic places with cultural significance and potential places/areas of historic, social, spiritual and/or cultural significance.
- Whether there are any intellectual property or information restrictions on the information you are providing and how that information should be managed.
- Any additional information that you see as relevant.

Please send your feedback to:

Tattersall Lander
c/ Dr Morgan Disspain
Niche Environment and Heritage
PO Box 2443
North Parramatta NSW 1750
Telephone: 0488 774 566
Email: mdisspain@niche-eh.com

Yours sincerely,



Dr Morgan Disspain
Senior Archaeologist & Heritage Consultant
Niche Environment and Heritage

B4.1 Responses to draft ACHA report for Aboriginal Heritage Impact Permit Application

From: [lilly_carroll](#)
To: [Morgan Disspain](#)
Subject: Re: 4017 Anna Bay ACHA and test excavation methodology
Date: Saturday, 9 March 2019 8:22:52 PM
Attachments: [image001.png](#)

Hi Morgan,

DNC agrees with the methodology for Anna Bay test excavation,

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC

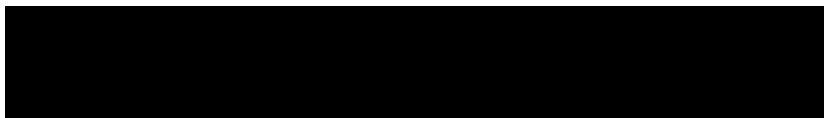
[Sent from Yahoo Mail for iPhone](#)

On Friday, March 8, 2019, 3:37 pm, Morgan Disspain <mdisspain@niche-eh.com> wrote:

Dear Paul,

Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP [1191380](#): 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage Aboriginal cultural heritage consultation requirements for proponents (2010), please find enclosed the drop box link to the project information and methodology for the proposed test excavation assessment.



If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Area and its immediate surrounds, please contact Niche Environment and Heritage as soon as possible. The statutory time frame for commenting on the methodology closes at 5 pm, 8 April 2019.

Kind regards,

Morgan Disspain

From: Morgan Disspain
Sent: Tuesday, 5 February 2019 3:32 PM
To: 'didgengunawalclan@yahoo.com.au'
Subject: 4017 Anna Bay ACHA

Dear Paul,

Please be advised that the Anna Bay Sand Quarry ACHAR will be proceeding over the next few months.

As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.

Kind regards,

Morgan

Dr Morgan Disspain
Senior Heritage Consultant

Coffs Harbour



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M [0488 774 566](tel:0488774566) T [02 9630 5658](tel:0296305658)

A PO Box 2443 North Parramatta NSW 1750
E mdisspain@niche-eh.com W niche-eh.com



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From: [WIDESCOPE.](#)
To: [Morgan Disspain](#)
Subject: RE: 4017 Anna Bay ACHA and test excavation methodology
Date: Friday, 15 March 2019 3:34:33 PM
Attachments: [image001.png](#)

Hi,

I have reviewed and support the Anna Bay ACHA and test excavation methodology

Regards
Steven Hickey

From: Morgan Disspain <mdisspain@niche-eh.com>
Sent: Friday, March 8, 2019 3:38:14 PM
To: 'Widescope.group@live.com'
Subject: RE: 4017 Anna Bay ACHA and test excavation methodology

Dear Steven,

Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage Aboriginal cultural heritage consultation requirements for proponents (2010), please find enclosed the drop box link to the project information and methodology for the proposed test excavation assessment.

[REDACTED]

If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Area and its immediate surrounds, please contact Niche Environment and Heritage as soon as possible. The statutory time frame for commenting on the methodology closes at 5 pm, 8 April 2019.

Kind regards,
Morgan Disspain

From: Morgan Disspain
Sent: Tuesday, 5 February 2019 3:35 PM
To: 'Widescope.group@live.com'
Subject: 4017 Anna Bay ACHA

Dear Steven,

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As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.

Kind regards,
Morgan

Dr Morgan Disspain
Senior Heritage Consultant
Coffs Harbour



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M 0488 774 566 **T** 02 9630 5658
A PO Box 2443 North Parramatta NSW 1750
E mdisspain@niche-eh.com **W** niche-eh.com

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From: [Anthony Anderson](#)
To: [Morgan Disspain](#)
Subject: Re: 4017 Anna Bay ACHA and test excavation methodology
Date: Friday, 29 March 2019 10:26:10 AM
Attachments: [image001.png](#)
[Niche- draft assessment methodology Anna Bay.doc](#)

Hi Morgan,

Please find attached Murrooma's response to the ACHA and Methodology for Proposed Sand Quarry- Anna Bay.
Any questions
please call
Thanks

Bec Young
Operations Manager
0421078695

On Fri, Mar 8, 2019 at 3:30 PM Morgan Disspain <mdisspain@niche-eh.com> wrote:

Dear Bec,

-

Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.

-

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage Aboriginal cultural heritage consultation requirements for proponents (2010), please find enclosed the drop box link to the project information and methodology for the proposed test excavation assessment.

-

[REDACTED]

-

-

If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Area and its immediate surrounds, please contact Niche Environment and Heritage as soon as possible. The statutory time frame for commenting on the methodology closes at 5 pm, 8 April 2019.

-

Kind regards,

[Morgan Disspain](#)

-

-

From: Morgan Disspain

Sent: Tuesday, 5 February 2019 3:34 PM

To: 'murroomainc1@gmail.com'

Subject: 4017 Anna Bay ACHA

-

Dear Bec,

-

Please be advised that the Anna Bay Sand Quarry ACHA will be proceeding over the next few months.

As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.

-

Kind regards,

Morgan

-

-

Dr Morgan Disspain

Senior Heritage Consultant

[Coffs Harbour](#)



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-

M 0488 774 566 **T** 02 9630 5658

A PO Box 2443 North Parramatta NSW 1750

E mdisspain@niche-eh.com **W** niche-eh.com

-



-

-

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

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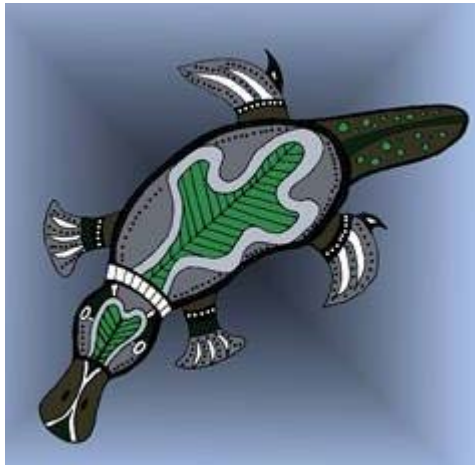
From: [Ryan Johnson](#)
To: [Morgan Disspain](#)
Subject: RE: 4017 Anna Bay ACHA and test excavation methodology
Date: Wednesday, 3 April 2019 4:17:13 PM
Attachments: [image009.png](#)
[image010.png](#)
[image012.png](#)
[image014.png](#)

Hi Morgan,

I have read the ACHA and test excavation methodology for the above project, I endorse the recommendations made by Niche, please feel free to contact me if you require further details.

Kind regards

Ryan Johnson | **Murra Bidgee Mullangari**
0475565517



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147
E: murrabidgeemullangari@yahoo.com.au
ICN: 8112

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From: Morgan Disspain [mailto:mdisspain@niche-eh.com]
Sent: Friday, 8 March 2019 3:37 PM
To: 'murrabidgeemullangari@yahoo.com.au' <murrabidgeemullangari@yahoo.com.au>
Subject: RE: 4017 Anna Bay ACHA and test excavation methodology

Dear Sir/Madam,

Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.

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[REDACTED]

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Kind regards,
Morgan Disspain

From: Morgan Disspain
Sent: Tuesday, 5 February 2019 3:31 PM
To: 'murrabidgeemullangari@yahoo.com.au'
Subject: 4017 Anna Bay ACHA

To whom it may concern,

Please be advised that the Anna Bay Sand Quarry ACHAR will be proceeding over the next few months.

As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.

Kind regards,
Morgan

Dr Morgan Disspain
Senior Heritage Consultant
Coffs Harbour



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M 0488 774 566 T 02 9630 5658

A PO Box 2443 North Parramatta NSW 1750
E mdisspain@niche-eh.com **W** niche-eh.com

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From: [Deidre Perkins](#)
To: [Morgan Disspain](#)
Subject: Re: 4017 Anna Bay sand quarry and test excavation methodology
Date: Tuesday, 19 March 2019 8:40:50 AM
Attachments: [image001.png](#)

Goodmorning Morgan,
No comment it all seems good and I know if any issues came up on site it would be look after.
Sincerely Deidre

Get [Outlook for Android](#)

From: Morgan Disspain <mdisspain@niche-eh.com>
Sent: Friday, March 8, 2019 3:36:26 PM
To: 'dedemaree3@hotmail.com'
Subject: RE: 4017 Anna Bay sand quarry and test excavation methodology

Dear Sir/Madam,

Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.

In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage Aboriginal cultural heritage consultation requirements for proponents (2010), please find enclosed the drop box link to the project information and methodology for the proposed test excavation assessment.



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Kind regards,
Morgan Disspain

From: Morgan Disspain
Sent: Tuesday, 5 February 2019 3:29 PM
To: 'dedemaree3@hotmail.com'
Subject: 4017 Anna Bay sand quarry

Dear Deidre

Please be advised that the Anna Bay Sand Quarry ACHAR will be proceeding over the next few months.

As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.

Kind regards,
Morgan

Dr Morgan Disspain
Senior Heritage Consultant
Coffs Harbour



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M 0488 774 566 **T** 02 9630 5658
A PO Box 2443 North Parramatta NSW 1750
E mdisspain@niche-eh.com **W** niche-eh.com



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MUR - ROO - MA



INCORPORATED

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

29th of March 2019

Niche Environment and Heritage
Att: Morgan Disspain

Re: Draft Assessment Methodology – Aboriginal Cultural Heritage and
Archaeological Assessment for proposed sand quarry at Lot 591 DP 1191380: 4226
Nelson Bay Road, Anna Bay

To Morgan,

Murrooma Incorporated has read and fully understands the draft Aboriginal Cultural Heritage and Archaeological Assessment from Niche, commissioned by Tattersall Lander for proposed project at Anna Bay.

We agree with all aspects of this report and have viewed the draft methodology strategies and proposed test excavation methodology as outlined. Murrooma has previously discussed the importance of this area and significance to our people. We appreciate the use of Murrooma's idea to have a potential cultural heritage management plan in line with all other sand quarries locally and understand this will be discussed further into the assessment framework.

Murrooma agrees with the test excavation methodology and agrees with the difficulty of testing the unstable land form/dune system but agree it definitely needs to be tested/sampled, due to the movement of the sand dunes and constantly changing conditions. Eg there may be a visual site there one day and then with movement of the dune you can return to same area and not be able to see any sites.

The recommendations and methodologies within this draft report meet our requirements as Traditional knowledge holders of this area and maintain the protection and best options for our local Aboriginal sites.

Please contact if you have any questions,

Thankyou

Bec Young- Murrooma -Operations Manager/Sites Officer
Anthony Anderson - Murrooma- CEO.

B4.2 Responses to draft ACHA report and Archaeological Report

Morgan Disspain

From: Wade Goldwyer
Sent: Wednesday, 21 August 2019 10:54 AM
To: Deidre Perkins
Cc: Morgan Disspain
Subject: RE: 4017 Anna Bay- ACHAR and AR Review

Good morning Deidre,

Thank you for your feedback.
Hope that you have a good week.

Kind regards,
Wade

From: Deidre Perkins <dedemaree3@hotmail.com>
Sent: Tuesday, 20 August 2019 4:38 PM
To: Wade Goldwyer <wgoldwyer@niche-eh.com>
Subject: Re: 4017 Anna Bay- ACHAR and AR Review

Hello Wade,
I have read over the draft and it seems fine to me .
Thank you
Deidre 😊

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From: Wade Goldwyer <wgoldwyer@niche-eh.com>
Sent: Tuesday, August 20, 2019 1:30:23 PM
Cc: Morgan Disspain <mdisspain@niche-eh.com>
Subject: 4017 Anna Bay- ACHAR and AR Review

Dear Sir/Madam,

Thank you for your contributions to the Anna Bay Sand Quarry project to date. As a Registered Aboriginal Party, we are writing to ask for your feedback on the attached Draft Aboriginal Cultural Heritage Assessment for the project in accordance with Stage 4 of the NSW Office of Environment and Heritage (OEH) *Aboriginal Cultural Heritage consultation requirements for proponents 2010* guidelines.

The Aboriginal Cultural Heritage Assessment report includes an archaeological report. Please see link attached:
<https://niche-eh.sharefile.com/d-s8617f40a3294ac38>

Please provide any written comments or submissions on the draft reports within 28 days, or by 17 September 2019.

Kind regards,
WADE GOLDWYER BA (Hons)
Cultural Heritage Technical Assistant
Sydney Head Office

M 0458 001 164 T 02 9630 5658
A L4/460 Church Street Parramatta NSW 2150
P PO Box 2443 North Parramatta NSW 1750
E wgoldwyer@niche-eh.com W niche-eh.com

EXCELLENCE IN YOUR ENVIRONMENT

Morgan Disspain

From: Wade Goldwyer
Sent: Wednesday, 28 August 2019 8:21 AM
To: David Feeney
Cc: Morgan Disspain
Subject: RE: 4017 Anna Bay- ACHAR and AR Review

Hi Dave,

Thank you very much for your response regarding the Anna Bay ACHAR and AR review.
We will be in touch with regards to further works.

Kind regards,
Wade

From: David Feeney <karuahindigenous@outlook.com>
Sent: Tuesday, 27 August 2019 1:57 PM
To: Wade Goldwyer <wgoldwyer@niche-eh.com>
Subject: Re: 4017 Anna Bay- ACHAR and AR Review

Date: 27th August 2019

WADE GOLDWYER BA (Hons)
Cultural Heritage Technical Assistant

Sydney Head Office

L4/460 Church Street Parramatta NSW 2150

PO Box 2443 North Parramatta NSW 1750

Hi Wade;

Firstly; thanks for the Draft report, I have read the report and understand all parts of the report also the including the archaeological survey report in which I found to be OK.

I also agree to all recommendation of the report and happy to continue with any works around the Anna Bay Sand Quarry project Lot 4017_4226 Nelson Bay Road, Anna Bay NSW, and give and information as required around Cultural & Heritage with this project.

Thank you

Dave Feeney

Dave Feeney

Snr Aboriginal Cultural Officer

Karuah Indigenous Corporation

From: Wade Goldwyer <wgoldwyer@niche-eh.com>

Sent: Tuesday, August 20, 2019 5:30 AM

Cc: Morgan Disspain <mdisspain@niche-eh.com>

Subject: 4017 Anna Bay- ACHAR and AR Review

Dear Sir/Madam,

Thank you for your contributions to the Anna Bay Sand Quarry project to date. As a Registered Aboriginal Party, we are writing to ask for your feedback on the attached Draft Aboriginal Cultural Heritage Assessment for the project in accordance with Stage 4 of the NSW Office of Environment and Heritage (OEH) *Aboriginal Cultural Heritage consultation requirements for proponents 2010* guidelines.

The Aboriginal Cultural Heritage Assessment report includes an archaeological report. Please see link attached:

Please provide any written comments or submissions on the draft reports within 28 days, or by 17 September 2019.

Kind regards,

WADE GOLDWYER BA (Hons)

Cultural Heritage Technical Assistant

Sydney Head Office

M 0458 001 164 T 02 9630 5658

A L4/460 Church Street Parramatta NSW 2150

P PO Box 2443 North Parramatta NSW 1750

E wgoldwyer@niche-eh.com W niche-eh.com

EXCELLENCE IN YOUR ENVIRONMENT





9 Vardon Road
Fern Bay NSW 2295
Ph: 0421078695
M: 0402827482
Murroomainc1@gmail.com
ABN: 97 807 719 484

Friday 6th of September 2019

Niche

Att: Morgan Disspain

Re: Draft Assessment Methodology – Aboriginal Cultural Heritage and
Archaeological Assessment for Proposed Anna Bay Sand Quarry- Anna Bay.

To Morgan,

Murrooma Incorporated has read and fully understands the draft Aboriginal Cultural
Heritage and Archaeological Assessment report for Anna Bay Sand Quarry.

As per our phone discussion, no sand will be quarried from any part of the remnant
dune and only drift sand will be utilised for proposed works- for the entirety of the
sand mining contract .

We agree with all aspects of this report including the results of the test excavation,
proposed mitigation and recommendations and this meets our requirements as
Traditional Knowledge Holders of the Worimi area and maintains the protection and
best options for our local Aboriginal sites.

Please contact if you have any questions,

Thankyou

Bec Young- Murrooma -Operations Manager/Sites Officer
Anthony Anderson - Murrooma- CEO.

B5 Consultation Log

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
15/03/2018	Charmaine Murfet	Corporate & Community Lachlan Shire Council	Email	Clare Leevers	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	07:00am	CL	No further response required
15/03/2018	Samantha Wynn	Senior Team Leader, Planning Office of Environment and Heritage Planning and Aboriginal Heritage Section PO Box 211 Dubbo NSW 2830	Letter registration #60436363457090	Clare Leevers	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	n/a	CL	No further response required
15/03/2018	Jodie Rikiti	The Registrar Office of the Registrar, Aboriginal Land Rights Act 1983 (NSW) PO Box 5068 Parramatta NSW 2124	Email	Clare Leevers	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	07:00am	CL	No further response required
15/03/2018	George Tonna	NTS Corp Limited PO Box 2105 Strawberry Hills NSW 2012	Email and Letter registration #60436363558094	Clare Leevers	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	n/a	CL	No further response required

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
15/03/2018	Graham Kelly	Senior Strategic Land Services Officer (Aboriginal Communities) Local Land Services - Central West PO Box 108 Coonabarabran NSW 2357	Letter registration #60436363561094	Clare LeEVERS	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	07:00am	CL	No further response required
15/03/2018	Mr Dave Carter Snr	CEO Condobolin Local Aboriginal Land Council	Email	Clare LeEVERS	Niche Environment and Heritage	Stage 1 Notification - Agency Letter	07:00am	CL	No further response required
15/03/2018	To whom it may concern	National Native Title Tribunal	Web from	Clare LeEVERS	Niche Environment and Heritage	Stage 1 registry search	07:00am	CL	No further response required
24/04/2018	Mr Stephen Cox	Hunter OEH	Email with letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent	16:00	CM	
24/04/2018	Mr Peter Shultz	NTS Corp Limited PO Box 2105 Strawberry Hills NSW 2012	Email with letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent	16:00	CM	
24/04/2018		NNTT	Email request form	Caitlin Marsh	Niche Environment and Heritage	Search of Native Title	16:00	CM	
24/04/2018		Office of the Registrar Aboriginal Land Rights Act 1983 (NSW)	Email with letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent	16:00	CM	
24/04/2018	Toby Whaleboat	Hunter Local Land Services	Email with letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent	4:00 PM	CM	
24/04/2018		Port Stephens Local Council	letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent			

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
24/04/2018		Worimi Local Aboriginal Land Council	letter	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Agency Letter sent			
25/04/2018	Local Community	News of the Area	Newspaper Advertisement	Caitlin Marsh	Niche Environment and Heritage	Stage 1 Newspaper Ad	n/a	CM	no follow up required
26/04/2018	Caitlin Marsh	Niche Environment and Heritage	Email		National Native Title Tribunal	Stage 1 Agency response	0:00	CM	Subject Area freehold land; no follow up required
01/05/2018	Caitlin Marsh	Niche Environment and Heritage	email	Jodie Rikiti	Office of the Registrar Aboriginal Land Rights Act 1983 (NSW)	Stage 1 Agency letter response	14:00	CM	Noted that the Subject Area may be within the Worimi Conservation Lands area.
01/05/2018	Jess Cuskelly	Niche Environment and Heritage	email	Jamie Merrick	Worimi Local Aboriginal Land Council	Stage 1 Agency response	11:00	CM	LALC notifying of other groups: Anthony Anderson; Murroomainc1@gmail.com; Lennie Anderson
01/05/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Leonard James Anderson	Nur-Run-Gee Pty Ltd	Stage 1 Agency response	18:00	CM	Registering interest in project, notifying of Worimi LALC & Murrooma Inc. and Maingal
02/05/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Brett Gardiner	Port Stephens LC	Stage 1 Agency response	10:48	CM	List more interest groups for consultation: 355c Committee being the Birubi Point Cultural Heritage Advisory Panel; Carol Ridgeway-Bissett: Traditional Owner; Graeme Russell is the Joint Management Coordinator of the Worimi Conservation Lands Board of Management. File names in the Consultation Register
09/05/2018	Balazs Hansel	Niche Environment and Heritage	Email	Steven Cox	OEH	Stage 1 response	19:00	BH	Noted that the right list came through and filed.
30/05/2018	All potential RAPs	All potential RAPs	Email/Express post	Balazs Hansel	Niche Environment and Heritage	Stage 1 Letter	15:00	BH	Stage 1 letter for all potential RAPs have been sent out via email and two express post envelopes (Crimson Rosie and Carol Ridgeway-Bassett)
30/05/2018	Balazs Hansel	Niche Environment and Heritage	Email	Lilly Carroll	Didge Ngunawal	Registering on project	13:20	BH	Acknowledged, filed and responded.
30/05/2018	Balazs Hansel	Niche Environment and Heritage	Email	Deidre Perkins	Divine Diggers	Registering on project	14:15	BH	Acknowledged, filed and responded.
04/06/2018	Balazs Hansel	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Registering on project	16:25	BH	Acknowledged, filed and responded.

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
14/06/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Bec Young	Mur-Roo-Ma Inc.	Registering on project	14:16	BH	Acknowledged, filed and responded.
15/06/2018	N/A	N/A	N/A	N/A	N/A	Close of Stage 1	17:00	BH	Stage 1 /Registration closed for the project
22/06/2018	Resent OEH extra	OEH extra RAPS	Email	Jess Cuskelly	Niche Environment and Heritage	Stage 1 Letter	12:25	JC	Stage 1 letter for all potential RAPs have been sent out via email and two express post envelopes (Roger Matthews Consultancy, Wonnarua Elders Council, Carol Ridgeway-Bissett, Steve Talbott)
29/06/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Steven Hickey	Widescope	Registering on project	4:30	JC	Hi Jessica Thank you, please register my interest in the project I am a recognized cultural knowledge holder. I hold knowledge in determining Aboriginal Objects and Place, Regards Steven Hickey
01/07/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Amanda Heard	Steve Talbott	Registering on project	20:01	JC	Hi Jessica I would like to register my expression of interest for the above said project My contact details are: Steven Talbott 73 KIAH road gillieston Heights nsw 2321 0476893944 Kind regards Amanda Heard
20/08/2018	Balazs Hansel	All RAPs	Email	Balazs Hansel	Niche Environment and Heritage	Initiating Stage 2 and 3	9:00	BH	Filing delivery receipts.
21/08/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Stage 2/3 Methodology Response	10:22 PM	JC	Hi Jess, I have read the project information ACHA and methodology for the above project and endorse the recommendations made by Niche. My family and members have a long history in the Anna Bay area, my grandfather resided in Anna Bay for over 10 years, our contact person for this project would be Ryan 0475565517 or Shaun 0400637554. Please see attached insurances. Kind regards

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
07/09/2018	Jess Cuskelly	Niche Environment and Heritage	Email	Anthony Anderson	Mur-Roo-Ma Inc.	Stage 2/3 Methodology Response	12:45pm	BH	N/A
14/09/2018	All RAPs	All RAPs	Email	Balazs Hansel	Niche Environment and Heritage	Follow-up for Stage 2/3 response.	11:00	BH	N/A
14/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Steve Bernasconi	Community Services Section manager-Port Stevens Council on behalf of Birubi Point Cultural Heritage Advisory Panel	Stage 2/3 Methodology Response	11:36	BH	He will pass-on the information to the panel.
14/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Lilly Carroll	Didge Ngunawal	Stage 2/3 Methodology Response	14:07	BH	Filed and responded.
14/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Leonard James Anderson	Nur-Run-Gee Pty Ltd	Stage 2/3 Methodology Response	16:07	BH	Filed and responded. Lennie raised his concerns in relation to handling of information for the project. It will be discussed with the Proponent and RAPs.
14/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Steven Hickey	Widescope	Stage 2/3 Methodology Response	18:17	BH	Filed and responded.
17/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Stage 2/3 Methodology Response	9:45 AM	BH	Filed and responded.
17/09/2018	Balazs Hansel	Niche Environment and Heritage	Email	Jamie merrick	Worimi Local Aboriginal Land Council	Comments on methodology	8:54am	MD	Hi Balazs Worimi agrees with the methodology and would like to register our interest in the project please see the attachments Kind Regards, Jamie Merrick Senior Sites Officer Worimi Local Aboriginal Land Council
18/09/2018	N/A	N/A	N/A	Balazs Hansel	Niche Environment and Heritage	Close of Stage 2 and 3.	17:00		Consolidate all responses of Stage 2 and 3.

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07/10/2018	All RAPs	All RAPs	Email	Balazs Hansel	Niche Environment and Heritage	Details of field survey	9:20am	BH	File and save delivery receipts
07/10/2018	Balazs Hansel	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Confirming field survey attendance	11:30am	BH	filed and responded
07/10/2018	Balazs Hansel	Niche Environment and Heritage	Email	Lilly Carroll	Didge Ngunawal	Confirming field survey attendance	10:12pm	BH	filed and responded
08/10/2018	Balazs Hansel	Niche Environment and Heritage	text message	Ryan Johnson	MBMAC	Confirming field survey attendance	10:50am	BH	filed and responded asking for email confirmation as well
08/10/2018	Balazs Hansel	Niche Environment and Heritage	phone call	Andrew Smith	WLALC	Discussing field survey and site officer availability	1:00pm	BH	He'll sort it out and respond via email
12/10/2018	N/A	N/A	N/A	N/A	N/A	Field inspection at the Subject Area	9:30-12:30pm	BH	Field inspection and survey was carried out successfully with the RAPs. Worimi Traditional Owners have discussed site access with two groups (MBMAC, Didge Ngunawal) before the survey and asked the representatives to exclude themselves from the survey. They agreed and left before the survey.
29/10/2018	All RAPs	All RAPs	Email	Balazs Hansel	Niche Environment and Heritage	Confirming site inspection results and providing invoicing details	8:30am	BH	N/A
06/12/2018	All RAPs	All RAPs	Email	Balazs Hansel	Niche Environment and Heritage	Providing information on proposed meeting with client and OEH in relation to further works that might be needed for the ACHA	8:20pm	BH	N/A

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
06/12/2018	Balazs Hansel	Niche Environment and Heritage	Email	Deidre Perkins	Divine Diggers	Expressing satisfaction with the project and supporting the proposed recommendations	8:40pm	BH	Responded, filed.
10/12/2018	Balazs Hansel	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Expressing satisfaction with the project and suggesting monitoring should any excavation happen.	10:50am	BH	Responded, filed. Outlined that the monitoring is not an option but further investigation in the form of test excavation or the use of a GPR investigation might be options.
10/12/2018	N/A	N/A	N/A	N/A	N/A	Meeting with OEH and the Proponent at the Newcastle OEH offices	3:30-4:30 pm	BH	Discussion on the different options to further investigate Aboriginal heritage constraints for the development. It has been decided that amongst other options, an additional test excavation will be needed under an AHIP to further investigate the presence of any Aboriginal objects.
05/02/2019	All RAPS	All RAPS	Email	Morgan Disspain	Niche Environment and Heritage	Informing RAPS of project status	3:37pm	MD	<p>To whom it may concern,</p> <p>Please be advised that the Anna Bay Sand Quarry ACHAR will be proceeding over the next few months. As you are registered to be involved in this project, I wanted to update you on the project status. I will be in touch again soon regarding documents to be reviewed and further cultural heritage works at the location.</p> <p>Kind regards, Morgan</p>
05/02/2019	Morgan Disspain	Niche Environment and Heritage	Email	Lennie Anderson	Nur-Run-Gee Pty Ltd	Informing RAPS of project status	7:36pm	MD	<p>Thank You Morgan, much appreciated.</p> <p>Lennie A</p>

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05/02/2019	Morgan Disspain	Niche Environment and Heritage	Email	Lilly Carroll	Didge Ngunawal Clan	Informing RAPS of project status	4:22pm	MD	Thank you for that Morgan, plz let me know as it progresses
05/02/2019	Morgan Disspain	Niche Environment and Heritage	Email	Andrew Smith	Worimi Local Aboriginal Land Council	Informing RAPS of project status	4:12pm	MD	Hi Morgan, Thank you for the brief. I look forward to hearing back from you shortly. Regards
06/02/2019	Morgan Disspain	Niche Environment and Heritage	Email	Deidre Perkins	Divine Diggers Aboriginal Cultural Consultants	Informing RAPS of project status	12:07pm	MD	Thank you Morgan
14/02/2019	Morgan Disspain	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Informing RAPS of project status	5:43pm	MD	Thanks

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
08/03/2019	All RAPs	All RAPs	Email	Morgan Disspain	Niche Environment and Heritage	Sending ACHA and test excavation methodology for comment	3:44pm	MD	<p>Dear Sir/Madam,</p> <p>Niche Environment and Heritage has been commissioned by Tattersall Lander to prepare an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) of a proposed sand quarry at Lot 591 DP 1191380: 4226 Nelson Bay Road, Anna Bay. The Subject Area backs onto the Newcastle Bight sand dune system.</p> <p>In accordance with Section 4.2 and Section 4.3 of the Office of Environment and Heritage Aboriginal cultural heritage consultation requirements for proponents (2010), please find enclosed the drop box link to the project information and methodology for the proposed test excavation assessment.</p> <p>If you have any comments, suggestions or queries regarding the methodology, or wish to supply any knowledge regarding the cultural significance of the Subject Area and its immediate surrounds, please contact Niche Environment and Heritage as soon as possible. The statutory time frame for commenting on the methodology closes at 5 pm, 8 April 2019.</p> <p>Kind regards, Morgan Disspain</p>
09/03/2019	Morgan Disspain	Niche Environment and Heritage	Email	Lilly Carroll	Didge Ngunawal Clan	Stage 4 Response	6:21pm	SW	<p>Hi Morgan,</p> <p>DNC agrees with the methodology for Anna Bay test excavation,</p> <p>Kind regards Paul Boyd & Lilly Carroll Directors DNC</p>

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
15/03/2019	Morgan Disspain	Niche Environment and Heritage	Email	Steven Hickey	Widescope	Stage 4 Response	15:40	MD	Hi, I have reviewed and support the Anna Bay ACHA and test excavation methodology Regards Steven Hickey
19/03/2019	Morgan Disspain	Niche Environment and Heritage	Email	Deidre Perkins	Divine Diggers Aboriginal Cultural Consultants	Stage 4 Response	9:36am	MD	Good morning Morgan, No comment it all seems good and I know if any issues came up on site it would be look after. Sincerely Deidre

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
29/03/2019	Morgan Disspain	Niche Environment and Heritage	Email	Bec Young	Mur-Roo-Ma Inc.	Stage 4 Response	10:51	MD	<p>To Morgan,</p> <p>Murrooma Incorporated has read and fully understands the draft Aboriginal Cultural Heritage and Archaeological Assessment from Niche, commissioned by Tattersall Lander for proposed project at Anna Bay.</p> <p>We agree with all aspects of this report and have viewed the draft methodology strategies and proposed test excavation methodology as outlined. Murrooma has previously discussed the importance of this area and significance to our people. We appreciate the use of Murrooma's idea to have a potential cultural heritage management plan in line with all other sand quarries locally and understand this will be discussed further into the assessment framework.</p> <p>Murrooma agrees with the test excavation methodology and agrees with the difficulty of testing the unstable land form/dune system but agree it definitely needs to be tested/sampled, due to the movement of the sand dunes and constantly changing conditions. E.g. there may be a visual site there one day and then with movement of the dune you can return to same area and not be able to see any sites.</p> <p>The recommendations and methodologies within this draft report meet our requirements as Traditional knowledge holders of this area and maintain the protection and best options for our local Aboriginal sites.</p> <p>Please contact if you have any questions,</p> <p>Thankyou</p> <p>Bec Young- Murrooma -Operations Manager/Sites Officer Anthony Anderson- Murrooma- CEO. +J63</p>
05/04/2019	Morgan Disspain	Niche Environment and Heritage	email	Ryan Johnson	Murra Bidgee Mullangari	Stage 4 Response	4.17 pm	LH	Hi Morgan, I have read the ACHA and test excavation methodology for the above project, I endorse the

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
									recommendations made by Niche, please feel free to contact me if you require further details.
03/07/2019	Karuah Indigenous Corporation	Karuah Indigenous Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.</p> <p>Please note: These dates are tentative relying on advice from OEH and may change.</p> <p>Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the day's fieldwork resulting in lost employment for the group they are representing.</p> <p>Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation</p>

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									<p>insurance and public liability insurance.</p> <p>Time on site of four hours or less shall be counted as a half day, with all time above four hours deemed a full day of work. If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule. Please ensure that contact details provided to Niche are up to date in order to ensure timely communication.</p> <p>Invoices should be addressed to the Proponent: Hay Enterprises NSW Pty Ltd, and sent through to Niche – they will then be forwarded on to the client.</p> <p>If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.</p> <p>Please send me the name and contact details of your nominated site officer as soon as you are able.</p> <p>Looking forward to having you onsite.</p> <p>Kind regards, Morgan Disspain</p>
03/07/2019	Murra Bidgee Mullangari Aboriginal Corporation	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.</p> <p>Please note: These dates are tentative relying on advice from OEH and may change.</p>

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03/07/2019	Mur-Roo-Ma Incorporated	Mur-Roo-Ma Incorporated	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.</p> <p>Please note: These dates are tentative relying on advice from OEH and may change.</p> <p>Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the</p>

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03/07/2019	Nur-Run-Gee Pty Ltd	Nur-Run-Gee Pty Ltd	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of</p>

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03/07/2019	Worimi Traditional Owners Indigenous Corporation	Worimi Traditional Owners Indigenous Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.</p> <p>Please note: These dates are tentative relying on advice from OEH and may change.</p> <p>Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical</p>

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03/07/2019	Worimi LALC	Worimi LALC	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement		MD	<p>Dear Sir/Madam,</p> <p>Thank you for your continued involvement in the ACHA project for the Anna Bay sand quarry at 4226 Nelson Bay Road, Anna Bay, NSW (Lot 591 DP 1191380). Personnel for field involvement have now been finalised and I am pleased to invite one representative from your organisation to participate in three days of excavations on the 23rd, 24th and 25th July 2019. Start of work will be on site at 8am and will finish at 4pm.</p> <p>Please note: These dates are tentative relying on advice from OEH and may change.</p> <p>Niche considers Health, Safety & Environment (HSE) to be essential in our project work and asks for your cooperation in ensuring a safe work site for yourself and your workmates. As per Niche HSE Policy we will be running a Safe Work Methods Statement (SWMS) and sign-on sheet each day, and ask that any representatives with existing medical conditions please bring any necessary medication with them to site.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.</p> <p>Considering the amount of time that has passed since the site survey, please send through updated insurance certificates of currency including workers compensation insurance and public liability insurance.</p> <p>Time on site of four hours or less shall be counted as a</p>

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03/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Test Excavation Engagement Response	12:10	MD	<p>Hi Morgan</p> <p>Yes we will be available, thank you for including our corporation.</p> <p>Ryan 0475565517</p>
03/07/2019	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	12:15pm	MD	<p>Fantastic,</p> <p>Can you please send through Insurance certificates of currency.</p> <p>Thank you very much.</p> <p>Kind regards, Morgan</p>

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03/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Test Excavation Engagement Response	12:30pm	MD	Hi Morgan, Sorry please see attachments. Thanks Ryan Johnson Murra Bidgee Mullangari
03/07/2019	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	12:30pm	MD	Thank you very much.
03/07/2019	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	13:48	MD	Dear Ryan, Thank you for your quick reply to my earlier emails. Please be advised that your involvement is no longer required in the test excavation at this stage. My apologies for the inconvenience. Kind regards, Morgan
03/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Test Excavation Engagement Response	14:00	MD	Hi Morgan That was quick what happened
03/07/2019	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	14:30	MD	Hi Ryan, The client has advised that they only wish to engage the people that were originally involved in the site inspection. Apologies again for the inconvenience, I have recently inherited this project and am still getting up to speed on the consultation process to date. Kind regards, Morgan

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03/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Ryan Johnson	Murra Bidgee Mullangari	Test Excavation Engagement Response	14:40	MD	That's ok no problem
03/07/2019	Ryan Johnson	Murra Bidgee Mullangari Aboriginal Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	14:42	MD	Thank you very much for your understanding. Kind regards, Morgan
03/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Andrew Smith	Worimi Local Aboriginal Land Council	Outside concerns	17:00	MD	<p>Hi Morgan,</p> <p>Thank you for your phone call today; greatly appreciated.</p> <p>Following our discussion; unfortunately due to my Inbox being excessively FULL, my outlook system has automatically archived (and deleted) some folders? As such; I cannot put my hands on the emails forwarded to Hay's Enterprises at this time however; I have attached the annexures that accompanied my correspondence and I'm confident that they (Allan Hay?) would be aware of the issues raised (noting that my emails did not bounce back?).</p> <p>Nonetheless; we (the Worimi LALC and Aboriginal Community) are not impressed with the complacency demonstrated around a adequate onsite land management being conducted by the company.</p> <p>You will note on the survey (as instructed by us and attached for your info); it has listed those items dumped onto our property.</p> <p>In addition to this; we have serious concern about extraction activities in the area and the destabilisation of the common boundary sand dune (in parts).</p> <p>Our desire is that this the area is cleared of debris and other materials and restored (restabilised) ASAP and/or if not, we seek to have our concerns clearly highlighted in the Environmental issues identified as part of the planning assessments 'and' they will be raised with the</p>

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									<p>Local Council.</p> <p>Not having had ANY response to our raised concerns; only lends itself to a greater sense of distrust towards any ongoing and/or future enterprise developments by the company.</p> <p>Thank you for your time and I look forward to hearing back from you soon.</p> <p>Warm Regards</p> <p>Andrew Smith Chief Executive Officer Worimi Local Aboriginal Land Council</p>
04/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Lennie Anderson	Nur-Run-Gee Pty Ltd	Test Excavation Engagement Response	15:00	MD	<p>Hi Morgan,</p> <p>Information as requested, you will note current rates of pay which has been in the system for well over six (6) Months.</p> <p>Thanking You</p> <p>Lennie Anderson OAM Nur-Run-Gee PtyLtd (Director) Mob;0431 334 365</p>
04/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Bec Young	Mur-Roo-Ma Inc.	Test Excavation Engagement Response			<p>Hi Morgan,</p> <p>Murrooma will have a representative on site for the test excavations This will be myself or David Kirk (due to other jobs we will notify who the rep will be once closer)</p> <p>I have attached our up to date insurances as requested Thanks Bec Young 0421078695</p>

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04/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Jamie Merrick	Worimi Local Aboriginal Land Council	Test Excavation Engagement Response	11:00	MD	Good Morning Morgan See attached Kind Regards, Jamie Merrick Senior Sites Officer
05/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Candy Towers	Worimi Traditional Owners Indigenous Corporation	Test Excavation Engagement Response	13:00	MD	Hi Morgan, I will be sending Aboriginal site officer Luke Knight to attend on behalf of Worimi TOIC on the 23rd/24th and 25th July. Regards, Candy Candy Towers Worimi Custodian Worimi Traditional Owners Indigenous Corporation Ph: 0412 475 362 e: worimitoc@hotmail.com
08/07/2019	Candy Towers	Worimi Traditional Owners Indigenous Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Test Excavation Engagement Response	11:21	MD	Thank you very much Candy. Can you please send through your certificates of currency for insurances as requested? Kind regards, Morgan
08/07/2019	All RAPs	All RAPs	Email	Morgan Disspain	Niche Environment and Heritage	AHIP Notification	16:30	MD	To whom it may concern, Thank you for your ongoing involvement in the Anna Bay sand quarry Aboriginal Cultural Heritage Assessment. Please find the attached AHIP advice and final ACHAR for your records. If you have any questions, please do not hesitate to contact me.

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15/07/2019	David Feeney	Karuah Indigenous Corporation	Email	Wade Goldwyer	Niche Environment and Heritage	Test Excavation Engagement	10:13	WG	Good morning David, I hope that you had a good weekend. I was just following up with regards to the Anna Bay excavation next week. Is there anyone from your organisation that will be attending?
15/07/2019	RAPs engaged for test excavation	Worimi Traditional Owners Indigenous Corporation, Worimi LALC, Karuah Indigenous Corporation, Mur-Roo-Ma Inc, Nur-Run-Gee Pty Ltd	Email	Morgan Disspain	Niche Environment and Heritage	Subconsultancy agreement for test excavation	9:30	MD	Good morning all, Please find the attached sub consultancy agreement for the Anna Bay test excavation next week. Can you please fill in the appropriate information and send it back to me before Wednesday this week? If you have your own version that you would prefer to use, please send us a copy to sign. Thank you very much. Kind regards, Morgan
15/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Candy Towers	Worimi Traditional Owners Indigenous Corporation	Subconsultancy agreement for test excavation	6:27 PM	MD	Hi Morgan, Please see attached completed form and Public Liability. Regards, Candy
16/07/2019	Candy Towers	Worimi Traditional Owners Indigenous Corporation	Email	Morgan Disspain	Niche Environment and Heritage	Subconsultancy agreement for test excavation	10:30	md	Good morning Candy, Thank you very much.

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17/07/2019	RAPs engaged for test excavation	Worimi Traditional Owners Indigenous Corporation, Worimi LALC, Mur-Roo-Ma Inc, Nur-Run-Gee Pty Ltd	Email	Morgan Disspain	Niche Environment and Heritage	Test excavation logistics	12:00	MD	<p>Dear Sir/Madam,</p> <p>Please be advised that the test excavation at Anna Bay (4226 Nelson Bay Road) is confirmed for Tuesday 23rd July through to Thursday 25th of July. Start of work will be on site at 8am and will finish at 4pm. Please meet at the front of the property.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.</p> <p>If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule.</p> <p>Could you please send through the name and phone number of the representative that will be assisting with the excavation.</p> <p>If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.</p> <p>If you haven't already sent me the sub consultancy agreement, can you please do so by the end of this week.</p> <p>See you all next week!</p>

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17/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	David Feeney	Karuah Indigenous Corporation	Test excavation logistics	5:35	MD	Hi Morgan; Regarding the My Insurance I will get a copy from Allianz tomorrow and send into you by Lunch time Dave Feeney Snr Cultural Officer Karuah Indigenous Corporation PS: Sorry been late as I have been in Vic rom Sunday and did not look at any emails
17/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Lennie Anderson	Nur-Run-Gee Pty Ltd	Test excavation logistics	18:28	MD	Hi Morgan, Our Consultant for Tuesday is Chris Collison, he complies with all requirements and has the Sub Consultancy Agreement with him. Thanking You Lennie Anderson OAM ASM Nur-Run-Gee Pty Ltd (Director)
18/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Test excavation logistics	10:23	MD	Hi Morgan; Please fine attached the Statement of Coverage Insurance Thank you Dave Feeney Snr Cultural Officer Karuah Indigenous Corporation
17/07/2019	RAPs engaged for	Worimi Traditional Owners	Email	Morgan Disspain	Niche Environment and Heritage	Test excavation logistics	12:00	MD	Dear Sir/Madam, Please be advised that the test excavation at Anna Bay

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	test excavation	Indigenous Corporation, Worimi LALC, Mur-Roo-Ma Inc, Nur-Run-Gee Pty Ltd							<p>(4226 Nelson Bay Road) is confirmed for Tuesday 23rd July through to Thursday 25th of July. Start of work will be on site at 8am and will finish at 4pm. Please meet at the front of the property.</p> <p>Please ensure that the field officer nominated work is of sufficient good health and fitness for the physical work required, that they bring both their own food and water to site, and that they wear full PPE (wide brimmed hat, safety glasses, long sleeved hi-vis shirt, long pants and steel capped safety boots). Please bring wet weather gear. Any representative not wearing appropriate PPE may be unable to be engaged for the days fieldwork resulting in lost employment for the group they are representing.</p> <p>If there are changes in the weather and fieldwork is cancelled, then RAPs will be contacted the day/evening before to notify of the change in schedule.</p> <p>Could you please send through the name and phone number of the representative that will be assisting with the excavation.</p> <p>If you are unable to attend the relevant dates then please let me know as soon as possible so I can organise replacement field staff.</p> <p>If you haven't already sent me the sub consultancy agreement, can you please do so by the end of this week.</p> <p>See you all next week!</p> <p>Kind regards, Morgan</p>

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18/07/2019	Morgan Disspain	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	Test excavation logistics	10:23	MD	<p>Hi Morgan;</p> <p>Please find attached the Statement of Coverage Icare Workers Insurance and the My Business Pack Certificate of Currency Allianz Insurance</p> <p>Thank you</p> <p>Dave Feeney Snr Cultural Officer Karuah Indigenous Corporation</p>
20/08/2019	All RAPs	All RAPs	Email	Wade Goldwyer	Niche Environment and Heritage	ACHAR and AR Review	5:30	MD	<p>Dear Sir/Madam,</p> <p>Thank you for your contributions to the Anna Bay Sand Quarry project to date. As a Registered Aboriginal Party, we are writing to ask for your feedback on the</p>

DATE	INDIVIDUAL CONTACTED	ORGANISATION CONTACTED	HOW CONTACTED	CONTACTED BY	ORGANISATION REPRESENTED	NATURE OF CONSULTATION	TIME	Staff Member	Follow up required/detail of correspondence
									<p>attached Draft Aboriginal Cultural Heritage Assessment for the project in accordance with Stage 4 of the NSW Office of Environment and Heritage (OEH) Aboriginal Cultural Heritage consultation requirements for proponents 2010 guidelines.</p> <p>The Aboriginal Cultural Heritage Assessment report includes an archaeological report. Please see link attached:</p> <p>Please provide any written comments or submissions on the draft reports within 28 days, or by 17 September 2019.</p> <p>Kind regards, WADE GOLDWYER BA (Hons)</p>
20/08/2019	Wade Goldwyer	Niche Environment and Heritage	Email	Deidre Perkins	Divine Diggers Aboriginal Cultural Consultants	ACHAR and AR Review	16:38	WG	<p>Hello Wade,</p> <p>I have read over the draft and it seems fine to me.</p> <p>Thank you</p> <p>Deidre</p>
27/08/2019	Wade Goldwyer	Niche Environment and Heritage	Email	Dave Feeney	Karuah Indigenous Corporation	ACHAR and AR Review	13:57	WG	<p>Hi Wade;</p> <p>Firstly; thanks for the Draft report, I have read the report and understand all parts of the report also the including the archaeological survey report in which I found to be OK.</p> <p>I also agree to all recommendation of the report and happy to continue with any works around the Anna Bay Sand Quarry project Lot 4017_4226 Nelson Bay Road, Anna Bay NSW, and give and information as required around Cultural & Heritage with this project.</p> <p>Thank you</p>
30/08/2019	Morgan Disspain	Niche Environment and Heritage	phone call	Bec Young	Mur-Roo-Ma Inc	ACHAR and AR Review	10:15am	MD	<p>Phone conversation with Bec Young about the nature of works within the sand quarry - she wanted to know- will the works target only the drift sand? As per the project description and advice from Hay Enterprises, this is correct, only the drift sand will be removed during the works.</p>

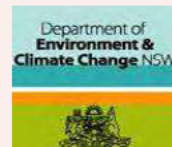
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Appendix D: Site Cards for Registered Sites within the Subject Area



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220



Office Use Only

Site Number 3 8 5 0 3 2 0

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

For Further Information Contact:

☐ Nominated Trustee

Title Surname First Name Initials

Organisation

Address

Phone number Fax

☐ Knowledge Holder

Title Surname First Name Initials

Organisation

Address

Phone number Fax

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Office Use Only

Client on system

Client on system

Geographic Location

Site Name N B R d 4

Easting 4 1 2 0 4 6 Northing 6 3 7 3 9 4 2 AGD/GDA GDA

Mapsheet N c a s t l e , P o r t S t e p h

Zone 56

Location Method Non-Differential GPS

Other Registration

Primary Recorder

Title Surname First Name Initials

M s M c C a r d l e P e n n y

Organisation M c C a r d l e C u l t u r a l H e r i t a g e

Address P O B o x 1 6 6 A d a m s t o w n N S W 2 2 8

Phone number 0 4 1 2 7 0 2 3 9 6 Fax 5 9 5 2 5 5 0 1

Date recorded 29/05/2013

Client on system

page 2

Open Site

Landform

Slope

degrees

☐ Tidal Flat
☐ Cliff
☐ Crest
☒ Flat
☐ Lower slope
☐ Mid slope

- ☐ Upper slope
- ☐ Plain
- ☐ Ridge
- ☐ Tor
- ☐ Valley flat
- ☐ Levy

- ☐ Stream bank
- ☐ Stream channel
- ☐ Swamp
- ☐ Terrace
- ☐ Terrace flat

<input type="checkbox"/>	Closed forest
<input checked="" type="checkbox"/>	Grasslands
<input checked="" type="checkbox"/>	Isolated clumps of trees
<input type="checkbox"/>	Open forest
<input type="checkbox"/>	Open woodland
<input type="checkbox"/>	Scrub
<input type="checkbox"/>	Woodland
<input type="checkbox"/>	Cleared
<input type="checkbox"/>	Revegetated
<input type="checkbox"/>	N/A

- ☐ Conservation
- ☐ Established urban
- ☐ Farming-intensive
- ☐ Farming-low intensity
- ☐ Forestry
- ☐ Industrial
- ☐ Mining
- ☒ Pastoral/grazing
- ☐ Recreation
- ☐ Semi-rural
- ☐ Service corridor
- ☐ Transport corridor
- ☐ Urban expansion
- ☐ N/A

Distance to permanent water source

10 metres

Distance to temporary water source

metres

Name of nearest permanent water source

Name of nearest temporary water

Directions for Relocation

A 10x10 grid map with compass directions (N, NE, E, SE, S, SW, W, NW) and a north arrow. The grid is composed of 10 columns and 10 rows. The directions are labeled at the corners: NW (top-left), N (top-center), NE (top-right), W (middle-left), E (middle-right), SW (bottom-left), S (bottom-center), and SE (bottom-right). A north arrow is located on the right side of the grid, pointing upwards.

<input type="checkbox"/> Public	National Park / other Government Dept.
<input type="checkbox"/> Private	

I.D. (I.D. Office Use only)

[illegible]

General Site Information

Closed Site

Shelter/Cave Formation

- ☐ Boulder
☐ Wind erosion
☐ Water erosion
☐ Rock collapse

Rock Surface Condition

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Condition of Ceiling

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Shelter Aspect

- ☐ North
☐ North East
☐ East
☐ South East
☐ South
☐ South West
☐ West
☐ North West

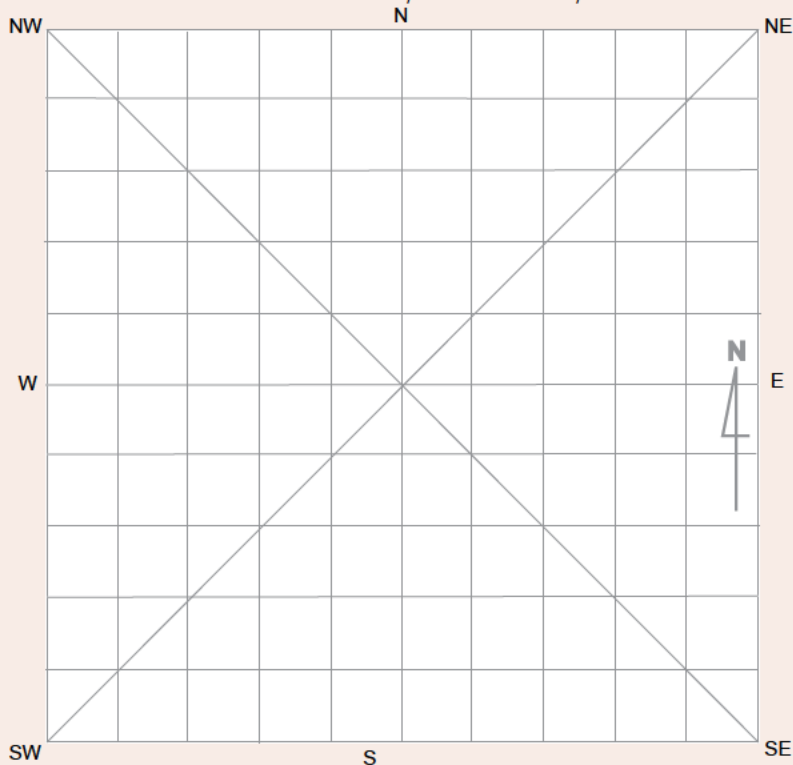
Open Site

Site Orientation

- ☒ N-S
☐ NE-SW
☐ E-W
☐ SE-NW
☐ N/A

Features

- ☐ 1. Aboriginal Ceremony & Dreaming
☐ 2. Aboriginal Resource & Gathering
☐ 3. Art
☐ 4. Artefact
☐ 5. Burial
☐ 6. Ceremonial Ring
☐ 7. Conflict
☐ 8. Earth Mound
☐ 9. Fish Trap
☐ 10. Grinding Groove
☐ 11. Habitation Structure
☐ 12. Hearth
☐ 13. Non Human Bone & Organic Material
☐ 14. Ochre quarry
☐ 15. Potential Archaeological Deposit
☐ 16. Stone Quarry
☒ 17. Shell
☐ 18. Stone Arrangement
☐ 19. Modified Tree
☐ 20. Water Hole

Site Plan Indicate scale, boundaries of site, features

Site Dimensions

Closed Site Dimensions (m)

- Internal length
 Internal width
 Shelter height
 Shelter floor area

Open Site Dimensions (m)

- 1.5m Total length of visible site
 1.5m Average width of visible site
 Estimated area of visible site
 Length of assessed site area

AHIMS site ID: 38-5-0347

Date recorded: 18-02-2019

Site Location Information

Site name: Anna Bay PAD 1

Easting: 412042

Northing: 6373398

Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

25

Zone: 56

Location method:

Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title

Surname

First name

Dr.

Disspain

Morgan

Organisation:

Niche Environment and Heritage

Address:

Phone: 0488774566

E-mail:

mdisspain@niche-eh.com

Site Context Information

Land Form
Pattern:

Dune Field

Land Use:

Mining

Land Form
Unit:

Dune

Vegetation:

Isolated clumps of trees

Distance to
Water (m):

1.23

Primary
Report:

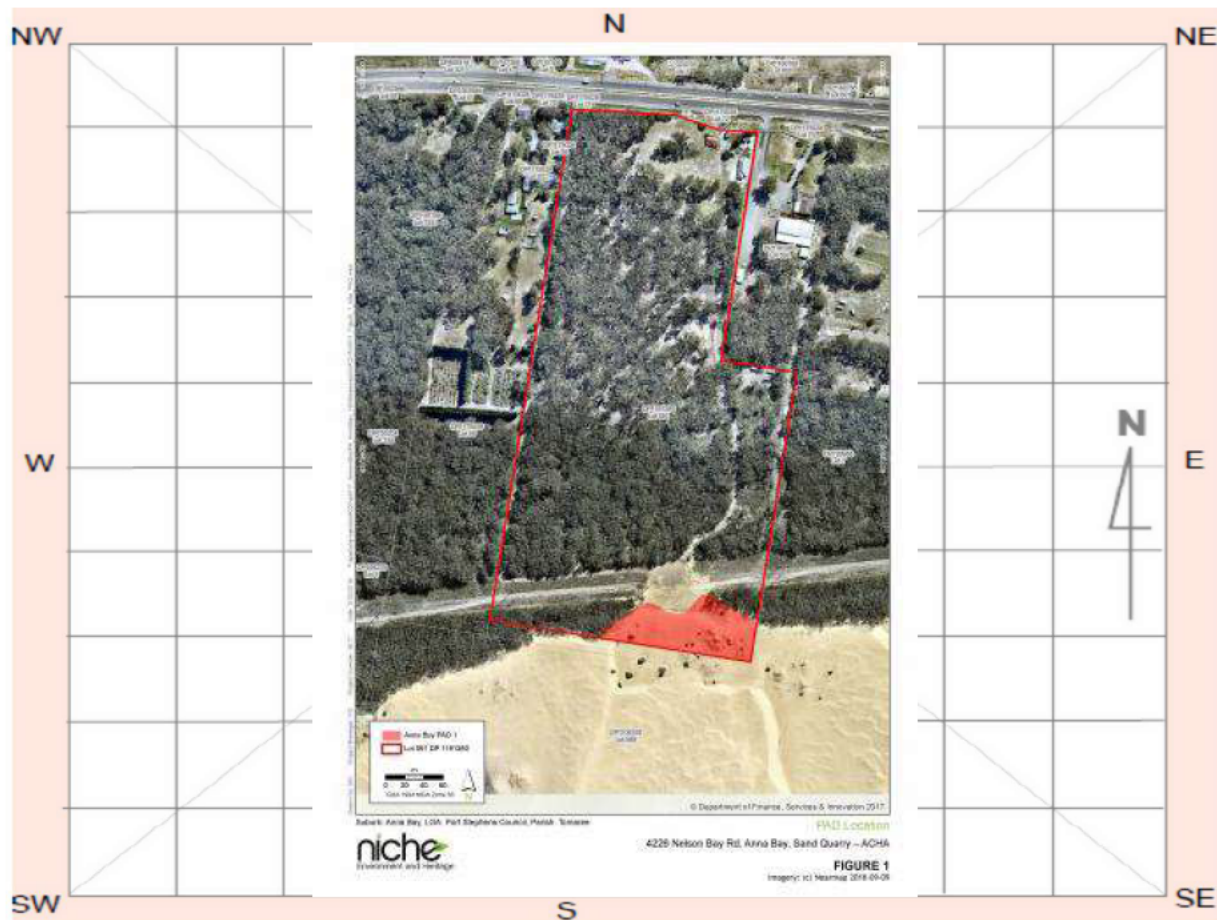
How to get
to the site:

The PAD is located within the southern portion of Lot591 DP1191380.
Access is through the lot, which is private property and requires
access permission. Address is 4226 Nelson Bay Road.

Other site
information:

A large, cleared and maintained transmission line easement is located
directly north of the PAD. Pad likely to have experienced disturbance
during easement construction, clearing of vegetation and aeolian
movement of dune system.

Site location map



Site contents information

open/closed site:

Open

Site condition:

Unstable Struct

Features:

1.

Potential Archaeological Deposit

Number of
features

Length of
feature(s)
extent (m)

180

Width of
feature (s)
extent (m)

60

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar shape

Tree Species

Description:

The PAD encompasses the immediate vicinity and foreground of a dynamic sand dune. The boundaries are determined by the Subject Area under assessment, and the PAD could extend beyond. The current coastline is located approx. 1.1 km to the south across a highly dynamic dune field.

Features:

2.

Number of
features

Length of
feature(s)
extent (m)

Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)

Regrowth
(cm)

Scar shape

Tree Species

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
3. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
4. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

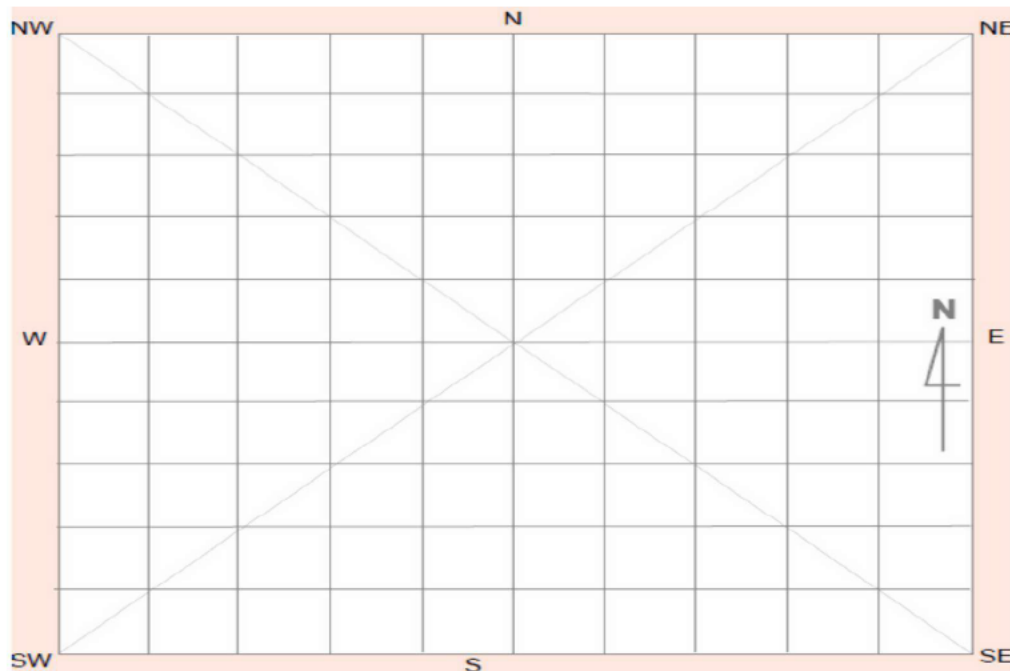
	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
5. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

A large, cleared and maintained transmission line easement is located directly north of the PAD. Pad likely to have experienced disturbance during easement construction, clearing of vegetation and aeolian movement of dune system.

Site plan

Site photographs



Description: Anna Bay PAD1 dune surface facing west



Description: Anna Bay PAD1 dune surface facing east



Description: Anna Bay PAD1 transmission easement



Description: Ann Bay PAD dune ground surface

Site restrictions

Do you want to
Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail:

