



**- AN ABORIGINAL CULTURAL HERITAGE ASSESSMENT -**

**LAKE AINSWORTH FORESHORE IMPROVEMENTS, LENNOX HEAD, BALLINA LOCAL  
GOVERNMENT AREA, NEW SOUTH WALES**

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**A Report To:** Ballina Shire Council

**Date:** 02 November 2017

**Prepared For:** Ballina Shire Council, Cherry Street, Ballina, New South Wales. 2478

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Isaiah 37:4b

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### Document Verification

Project Name	LENNOX HEAD lake ainsworth aboriginal cultural heritage assessment				Project No:	RA1701
Report Title	An Aboriginal Cultural Heritage Assessment – Lake Ainsworth Foreshore Improvements, Lennox Head, Ballina Local Government Area, New South Wales					

Revision No	Date	Nature of Review	Prepared	Finalised	Submission	
					Method	Date
-	29-08-17	Draft	gk		E-mail	29-08-17
1	30-10-17	Proponent review	gk		E-mail	30-10-17
	02-11-17	Final	gk	02-11-17	E-mail	02-11-17

## EXECUTIVE SUMMARY

In July 2017 Ballina Shire Council engaged Remnant Archaeology to carry out an Aboriginal cultural heritage assessment (ACHA) for their proposed upgrades of Pacific Parade and Camp Drew Road at Lake Ainsworth, Lennox Head in northern New South Wales. Although the project had been approved under Part V of the *EP&A Act 1979*, Council were keen to take into consideration concerns by members of the community and as such although the project (as approved under Part V of the *EP&A Act*) does not require a cultural heritage assessment (CHA) to be carried out unless an EIS is required, Council were still keen to take into consideration concerns expressed by members of the community and so commissioned REMNANT Archaeology to complete a CHA regardless. Survey and inspection of Pacific Parade and Camp Drew Road was completed on 12 July 2017 and was carried out by members of the local Aboriginal Community that had registered as Aboriginal parties (RAPs) to the project (Ms Lois Cook, Mr Mik Smith and Mr Marcus Ferguson), along with Remnant Archaeology's field archaeologist (Graham Knuckey) and Mr Ian Fox, who assisted the archaeologist. No Aboriginal objects or places were located during the site inspection; a small collection of oyster shells were found however they were identified as being too young to have originated from an Aboriginal shell midden or to have any connection with Aboriginal cultural activity from the past. Despite impacts from the recent past however, including military, mining and recreational activities, potential for Aboriginal cultural heritage resources to exist within the barrier dune that separates Lake Ainsworth from Seven Mile Beach still exists.

As a result of the investigation, outcomes and assessment contained in this cultural heritage assessment report it is recommended that:

1. No further archaeological investigation is required along the sections of Pacific Parade and Camp Drew Road designated for upgrade works.
2. The barrier dune and paperbark trees along Pacific Parade can be avoided.
3. Monitoring by representatives of the RAPs should take place during initial ground disturbance activity along the eastern verge of Pacific Parade.
4. It is recommended here that Council staff and contractors who have not previously (or recently) participated in Ballina Shire Council CH Induction Programs be required to do so. The CH induction program should be developed in collaboration with the local Aboriginal Community and should include a maintained record, including timing, of all personnel and contractors involved for the duration of the project.

In conjunction with induction training developed in collaboration with the local Aboriginal Community, Council is encouraged to include a program of cultural awareness. A cultural awareness program would provide an opportunity for explanation of the cultural significance to Aboriginal people of the Lake Ainsworth area and strengthen the relationships Council is seeking to build.

5. It is recommended that Ballina Shire Council maintain consultation with the RAPs. Ongoing consultation should be for the duration of the upgrade works.
6. It is recommended a Stop Work Procedure (SWP) is to be installed in recognition of the potential for discovery of unexpected or incidental finds. Note that any works that may reveal or disturb cultural heritage objects or sites will require an AHIP from OEH in order for the find(s) to be mitigated (if avoidance is not an option). The SWP procedure is outlined in the table below and has been adapted from earlier reports completed in the region (Fox 2014a; 2014b; 2014c; Knuckey 2016).

Council must ensure every on-site contractor/worker is provided with a copy of the SWP process and that all on-site workers are made aware if/when the SWP is brought into action.

Should the work being undertaken include the use of large earth working equipment (large-scale excavators, for example), it may be possible in some instances to isolate the cultural object and continue working without further disturbance. Advice from a heritage consultant or cultural monitors (if present) should be sought, but a nominal buffer of up to 5m may be required, with high-visibility barrier fencing/mesh surrounding the find location.

# The proposed stop work procedure (SWP).

<b>STOP WORK</b>	Immediately, upon becoming aware of a potential cultural heritage object or archaeological resource
<b>CONTACT</b>	A qualified cultural heritage professional as soon as possible
<b>NOTIFY</b>	<p>The Ballina Shire Council's Heritage (or Senior Project) Officer, Jali LALC, the RAPs (if they are not already present), and advise OEH as soon as practicable.</p> <p>If bones or potential human remains are discovered, Police must be notified immediately. Police must provide written notification to proceed. If human remains are identified as Aboriginal, OEH will provide written notification of required actions.</p>
<b>ASSESS</b>	<p>The cultural heritage professional in conjunction with OEH and the registered Aboriginal parties should assess the significance of the resource and recommend a course of action e.g.:</p> <p>Protect and avoid; or</p> <p>Investigate, in accordance with the Code of Practice for Archaeological Investigations; or</p> <p>Develop management strategies to inform an AHIP to regulate the unavoidable harm to Aboriginal objects</p>
<b>ACTION</b>	Identification of a previously unrecorded cultural heritage object will require registration as an Aboriginal site on the OEH AHIMS database. Registration is required as soon as practicable
<b>APPLY</b>	To OEH for an AHIP if necessary
<b>RECOMMENCE</b>	Only when OEH has approved a course of action and/or provided conditions of approval for an AHIP

- In the event that skeletal remains are uncovered, work must cease immediately in the area surrounding the find and the area cordoned off. The NSW Police Department is to be contacted and no further action taken until written advice is received from the Police allowing work to recommence. If the remains are determined to be of Aboriginal origin, the Office of Environment and Heritage must be notified along with the RAPs to the project and the Jali Local Aboriginal Land Council. A plan of management for the preservation of the remains must be put in place prior to works recommencing and it must be developed in consultation with the RAPs.

## ACKNOWLEDGEMENTS

The author acknowledges with gratitude the assistance provided by Ian Fox of Ian Fox & Associates, in community consultation and in preparation for the fieldwork component of this project. Ian's advice with regard to logistical matters, report preparation, and his working relationship with the local Aboriginal Community was invaluable to the completion of this cultural heritage assessment.

The author acknowledges the Ballina Aboriginal Community and the interest and advice offered by the various registered Aboriginal parties (RAPs) to the project. In particular, acknowledgement and thanks go to the members of the field team that assisted during the field inspection on 12 July 2017. Those individuals included: Lois Cook, Mik Smith and Marcus Ferguson.

The author also acknowledges the assistance of Malcolm Milner; for his time and for access and advice regarding the Lennox Head Heritage Committee historical photograph collection.

## TERMINOLOGY

<b>Amorphous piece</b>	A stone that displays attributes that identifies it as an artefact but it is not a flake or a core; also known by other names such as 'blocky' fragment and 'angular' fragment.
<b>Artefact</b>	Any item that has been created or modified by humans.
<b>Artefact scatter</b>	A concentration or 'scatter' of artefacts found on the ground surface indicating prehistoric human activity at that location. Also known as 'open' sites, surface scatter, general artefact scatter and when found in association with hearths can be called a 'campsite'.
<b>Assemblage</b>	Any collection of items from an archaeological site or deposit. The term can describe a group of similar items: the lithic assemblage or the faunal assemblage, for example. Or it can be used to describe all items, the archaeological assemblage from Test Pit 10, for example.
<b>Axe blank</b>	A lithic artefact, usually an igneous raw material (but not always) that has been 'shaped' using direct percussion, to a particular shape suitable for use as an axe. The edge has not yet been ground onto it. Also called 'bifaces'.
<b>Backed artefact</b>	Uni- or bi-directional retouch along one lateral margin of an artefact, often a flake but not always. Tends to occur on the opposite margin to the intended working edge.
<b>Background scatter</b>	Defined by Hiscock (1988) as a continuous scatter of stone artefacts the density of which varies in response to the nature and amount of prehistoric activity. Also called 'off-site archaeological material'.
<b>Bi-facial flaking</b>	When, during the knapping process, flakes are removed from both the dorsal and ventral surfaces of a flake. The resulting artefact is often called a 'biface', which can be a 'blank' that is in the process of being made into something else (an axe for example), or it can be a source of raw material - a core.
<b>Bi-facial point</b>	Any point that has been struck after initial removal, where the scars occur on both surfaces, ventral and dorsal (initiated from either lateral margin).
<b>Blade</b>	A flake that measures greater in the longitudinal plane than it does in the transverse plane, usually greater than twice the width. This term does not indicate function without further clarification. For example use wear along the margins.
<b>Bulb of percussion</b>	The 'lump' directly below the point of force application at the proximal end of the ventral surface of a flake. The bulb represents the point at which force applied through the PFA has removed the greatest mass. As the force passes through the flake it is reduced and so less mass is removed. The bulb is the primary diagnostic feature used when identifying flaked artefacts. Conversely, the negative bulb appears on the surface of the core from which the flake was removed.
<b>Chert</b>	This is a cryptocrystalline sedimentary rock with high silica content that fractures conchoidally and is preferred as a raw material from which to make stone artefacts. Jasper and agate are forms of chert.
<b>Context</b>	This is a term used in association with ground integrity (GI) and ground surface visibility (GSV). When assessing an archaeological site the archaeologist takes into consideration the GSV, the GI, all landmarks within the site including vegetation types, lithic raw materials present and also the surrounding environment. All aspects of the on-site and off-site landscape are taken into consideration when assessing the context within which an archaeological site exists.
<b>Cortex</b>	The outer, weathered surface of a rock and is often the first thing to be removed in the initial stages of the knapping process.
<b>Core</b>	The core is one of the three basic items in the knapping process. It is the raw material resource that is struck with a hammer in order to produce a flake. The negative flake scars on their surfaces are what is used to identify cores.



## TERMINOLOGY

<b>Core: m-plat</b>	A multiple platform core is a core that has been 'rotated' so that flakes have been removed in more than one direction from more than one platform.
<b>Core: s-plat</b>	A single platform core is a core that has not been 'rotated' so that flakes have been removed in only one direction, from only one platform.
<b>Debitage</b>	The broken and fragmentary material resulting from the knapping process. The 'waste' produced when removing flakes from a core, usually small but not always.
<b>Direct percussion</b>	The primary knapping technique where one stone is used to strike a flake off another stone using direct impact. See also 'pressure flaking' as another knapping technique.
<b>Distal</b>	A term used when defining flake attributes. The distal end is the end of a flake that displays the termination. The distal end is the bottom end of a flake. See also 'proximal', 'lateral margin', 'ventral surface' and 'dorsal surface'.
<b>Dorsal surface</b>	This is the 'outside' surface of a flake: the surface that was exposed to the environment when the flake was still attached to the core. The dorsal surface often (but not always) displays the negative flake scars of flake removals taken from the core prior to the removal of the flake in question. See also 'ventral surface'.
<b>Edge-ground axe</b>	An axe the (sharp) edge of which has been created through the grinding process.
<b>Excavation spits</b>	Soil removed in layers of arbitrary depth from an archaeological excavation.
<b>Excavation units</b>	Soil removed in layers according to the soil profile and soil type, rather than in measured (arbitrary) spits.
<b>Flake</b>	The direct result of the knapping process a flake can be either the product used directly from the core or reduced further at some later time to create an implement, or, the flake can be a by-product, removed and discarded.
<b>Flaked piece</b>	A stone that displays attributes that identifies it as a flaked artefact but that cannot be identified with any more detail than as a 'flake fragment'. For example, an artefact that does not display clearly attributes such as a bulb, proximal end or distal termination, platform, dorsal or ventral surfaces, can be called a flaked piece.
<b>Ground Integrity</b>	The degree to which the ground surface has been disturbed by whatever means. Ground integrity is important in assessing the archaeological value of a place and/or items found within a place. It is closely associated with ground surface visibility (GSV).
<b>Grinding grooves</b>	The location in close proximity to permanent water and a source of soft and/or sandy rock, where linear ruts or grooves have been ground into the base rock whilst creating edge-ground axes.
<b>Grindstone</b>	A stone that has been subjected to grinding pressure by another stone to grind up various materials; grass seeds, ochre. Grindstones were also used for putting the edge onto axes or for sharpening spear tips. Large flat grindstones are called bottom-stones or base plates, whilst the smaller stone used to do the grinding is the 'muller' or topstone.
<b>Ground-edge</b>	Artefacts that have had an edge placed on them through the grinding process, rather than through knapping (percussion). This grinding process may be deliberate as with axes, or it might be a by-product of another process as with grindstones.
<b>GSV</b>	This means ground surface visibility: the degree to which the ground surface is visible.
<b>Hammerstone</b>	One of the two essential implements used in the knapping process to create flakes. See also 'core'.
<b>Implement/tool</b>	Any artefact that can be shown to have had a specific purpose. For example an axe, grindstone (base plate), muller (top stone) or tula (adze). All tools/implements are artefacts, <i>not</i> all artefacts are tools.
<b>Isolated artefact</b>	Also called an 'isolate'. Single artefact found in isolation - by itself.
<b>Knapping</b>	The mechanical process of striking one stone, the core with another stone, the hammer to produce another stone, the flake. These three stones are the foundation of the knapping process.
<b>Knapping floor</b>	A specialised type of artefact scatter where artefacts of the same raw material type are found in close proximity to one another, generally within 1m <sup>2</sup> . These artefacts can often be put back together, reconstructing the original core they were struck from.
<b>Lateral margin</b>	There are two, the left and right lateral margins (sides). Which is which is determined by how the flake is viewed. Looking at the ventral surface with the platform at the top, the 'right' lateral margin is on the right; the 'left' lateral margin is on the left.
<b>Mudstone</b>	A fine-grained sedimentary rock similar to chert but without the silica content of cherts.
<b>Negative scars</b>	The depression left on the core after a flake is removed; the place from which the flake has been fractured; the negative flake scar. These are most common on cores but are also identifiable on the dorsal surface of flakes. Flake scars on the ventral surface of flakes indicate retouch.

## TERMINOLOGY

<b>PFA</b>	Point of force application is the point at which force enters the core, the impact point. Depending upon the angle and amount of force applied a flake removal is the desired result of this application of force.
<b>Platform</b>	The surface of a core that is struck by the 'hammer' to remove a flake.
<b>Point</b>	Any artefact that has the shape of a point. This term does not indicate function.
<b>Pressure flaking</b>	One of the two main knapping techniques. When a pointed object (that focuses pressure at one place) is placed against a core and pressure applied to the margin of the core in order to 'squeeze' flakes off. Commonly used to reduce the thickness of a flake rather than its size. See also 'direct percussion'.
<b>Proximal</b>	A term used when defining flake attributes. The proximal end is the end of a flake that displays the platform and the PFA. See also 'distal', 'lateral margin', 'ventral surface' and 'dorsal surface'.
<b>Retouched flake</b>	Any artefact that has been struck after the initial impact that removed it from the core. This may be one strike; it may be more than one. The term does not indicate implement status, or function.
<b>Ring crack</b>	Another term for point of force application (PFA).
<b>Silcrete</b>	A descriptive term identifying a rock type of original, fine-, medium- or coarse-grained sedimentary material cemented together with silica in cryptocrystalline form. Grains are visible to the naked eye. Silcrete is a common source material in areas where sedimentary rocks have been subjected to low-grade contact with metamorphic processes.
<b>Soil horizon</b>	A soil horizon is a layer of soil most often parallel to the land surface, with properties that differ from the layers above and/or below it. In an archaeological deposit it is most often the A Horizon that contains the cultural deposit archaeologists are interested in - but not always.
<b>Test Pit</b>	Any location chosen for subsurface exploration using 50cm <sup>2</sup> pits to test the archaeological potential at that place.
<b>Test Pit Grid</b>	A 2m <sup>2</sup> grid subdivided into 50cm <sup>2</sup> squares superimposed over the test pit location. Designed to maximise the area opened yet constrained to remain within the requirements of the OEH Code of Practice. Used where depth of deposit is, or is perceived to be a constraint.
<b>Termination</b>	The termination of a flake is the point at which the force applied exits the core. There are a number of different 'terminations' and each indicates different things including lithic raw material quality and also the skill or otherwise of the knapper.
<b>Tree - carved</b>	A tree that has been altered in recognisable patterns/designs, the actual meaning of which may be known or unknown. Carved trees are most often associated with particular or special places, or can be directional markers.
<b>Tree - scarred</b>	A tree that has been altered through the removal of bark and/or heartwood for (most commonly) utilitarian purposes. Scarring in this fashion is the result of bark removed for coolamons, shields and canoes.
<b>Unifacial point</b>	Any point that has been struck again, after initial removal, where the scars occur on one surface only, ventral or dorsal (initiated from either lateral margin).
<b>Ventral surface</b>	This is the 'inside' surface of a flake: the surface that is not exposed to the environment that is created at the time the flake detaches from the core during the knapping process. Any flake scars on this surface indicate the flake in question has been retouched. See also 'dorsal surface'.
<b>Waisted axe</b>	An edge-ground axe that has a groove around it in the transverse plane, used for attaching a haft (handle). Also known as a 'hafted axe' even if the handle is no longer present. The groove is usually applied using direct percussion and the 'pecking' - force applied to an object that is placed upon the axe at the time of impact.

## ABBREVIATIONS

<b>ACC</b>	Aboriginal Cultural Concepts
<b>ACHAR</b>	Aboriginal cultural heritage assessment report
<b>ACHA</b>	Aboriginal cultural heritage assessment
<b>AHIMS</b>	Aboriginal Heritage Information Management System
<b>AHIP</b>	Aboriginal heritage impact permit
<b>ASL</b>	Above sea level
<b>BSC</b>	Ballina Shire Council
<b>CH</b>	Cultural heritage
<b>CM</b>	(lowercase) Centimetres
<b>DECCW</b>	Dept. of Environment Climate Change and Water (now OEH)
<b>GI</b>	Ground integrity
<b>GPS</b>	Global positioning system
<b>GSV</b>	Ground surface visibility
<b>IFA</b>	Ian Fox & Associates
<b>JLALC</b>	Jali Local Aboriginal Land Council
<b>KYA</b>	Thousand years ago
<b>LALC</b>	Local Aboriginal Land Council
<b>LGA</b>	Local government area
<b>MM</b>	(lowercase) Millimetres
<b>MYA</b>	Million years ago
<b>NPWS</b>	(New South Wales) National Parks and Wildlife Service
<b>NSWALC</b>	New South Wales Aboriginal Land Council
<b>NNTT</b>	National Native Title Tribunal
<b>NTS</b>	Native Title Services Corporation
<b>NT</b>	Native Title
<b>OEH</b>	NSW Office of Environment and Heritage (previously DECCW)
<b>RAP(s)</b>	Registered Aboriginal Party (ies)
<b>RA</b>	Remnant Archaeology
<b>TC(s)</b>	Traditional Custodian(s)
<b>TO(s)</b>	Traditional Owner(s)



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## 1 INTRODUCTION

### 1.1 The Project Description

Ballina Shire Council (BSC or simply 'Council') is in the initial planning stages of proposed improvement works along Pacific Parade and Camp Drew Road, traversing the eastern and southern shores (respectively) of Lake Ainsworth at Lennox Head (Figs. 1-2). In recent times Council sought a Part V approval under the *EP&A Act 1979* through the BSC Development Services Branch and approval was subsequently received on 3 November 2016 (Section 2.2 – Statutory Controls, see also Appendix A). Regardless of the approval process however, the project has for some time been the subject of considerable Council deliberation and public debate, attracting significant public interest both for and against. As a result of this interest and although the project (as approved under Part V of the *EP&A Act*) does not require a cultural heritage assessment (CHA) to be carried out unless an EIS is required, Council are keen to take into consideration concerns expressed by members of the community and have requested REMNANT Archaeology complete a CHA regardless.

The works are on Crown Land for which Council is the trust manager and is on land that is subject to a plan of management formulated by BSC in 2002. The proposed works will include improvements in two areas along Pacific Parade and Camp Drew Road (Fig. 2-3), and the reconstruction of the intersection between the two thoroughfares:

- Pacific Parade (Eastern Road) - Rehabilitating the road by profiling the existing pavement and constructing a footpath and landscaping the area of public reserve along to the over-bank area of the eastern shore of Lake Ainsworth.
- Camp Drew Road (Southern Road) and Foreshore Area - Reconstruction of the existing road way and formalising the adjoining car parking bays between Pacific Parade and Camp Drew Road. These works are along the over-bank area of public reserve along the southern shore of Lake Ainsworth. It includes bank stabilisation, improvement of the open spaces for passive recreation and potential pedestrian linkages between existing isolated open spaces.
- There will also be a reconstruction of the three-way intersection between Pacific Parade and Camp Drew Road adjacent to the Lennox Head/Alstonville Surf Life Saving Club. The new intersection will be a two-way intersection incorporating a turn facility and will be the termination point for Pacific Parade (open to emergency vehicle and maintenance service vehicles only).

### 1.2 The Cultural Heritage Brief

In carrying out the ACHA REMNANT Archaeology (RA) has been guided by the specifications set out in the Office of Environment and Heritage (OEH) documents, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*, and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and addresses cultural/natural and archaeological significance for registered Aboriginal objects and/or sites, and for unregistered Aboriginal objects and/or sites found during the field component of the assessment. Consultation with the local Aboriginal Community has followed along the lines set out in the OEH document *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

### 1.3 The Objectives Of This Assessment

This assessment focuses upon the proposed upgrades to Pacific Parade that runs parallel (from north to south) with Lake Ainsworth between the lake to the west and the barrier dunes to the east, and to Camp Drew Road along the southern foreshore of the lake (Fig. 2-3). The project objectives are listed below:

- Provide clear direction for the development of the final design and construction of the upgrades.
- Develop management recommendations that will assist in minimising impact on any heritage significance that is or may be associated with the land in question.
- Identify and assess the significance of known (and any potential) cultural heritage items that may be located within the project area or be impacted by works within the project area.



- Register any known Aboriginal sites within the project areas along Pacific Parade and Camp Drew Road that have not already been registered, as per NSW Office of Environment and Heritage standards.

With respect to the registered Aboriginal parties (RAPs), the assessment objectives are:

- To ensure that any input from the Aboriginal Community is recorded and that any issues or requirements of cultural groups are discussed and balanced to ensure appropriate results are obtained.
- To consult with the RAPs and based upon those discussions determine if and where cultural monitoring will be required, and to develop supporting information for any AHIP application that may be required.

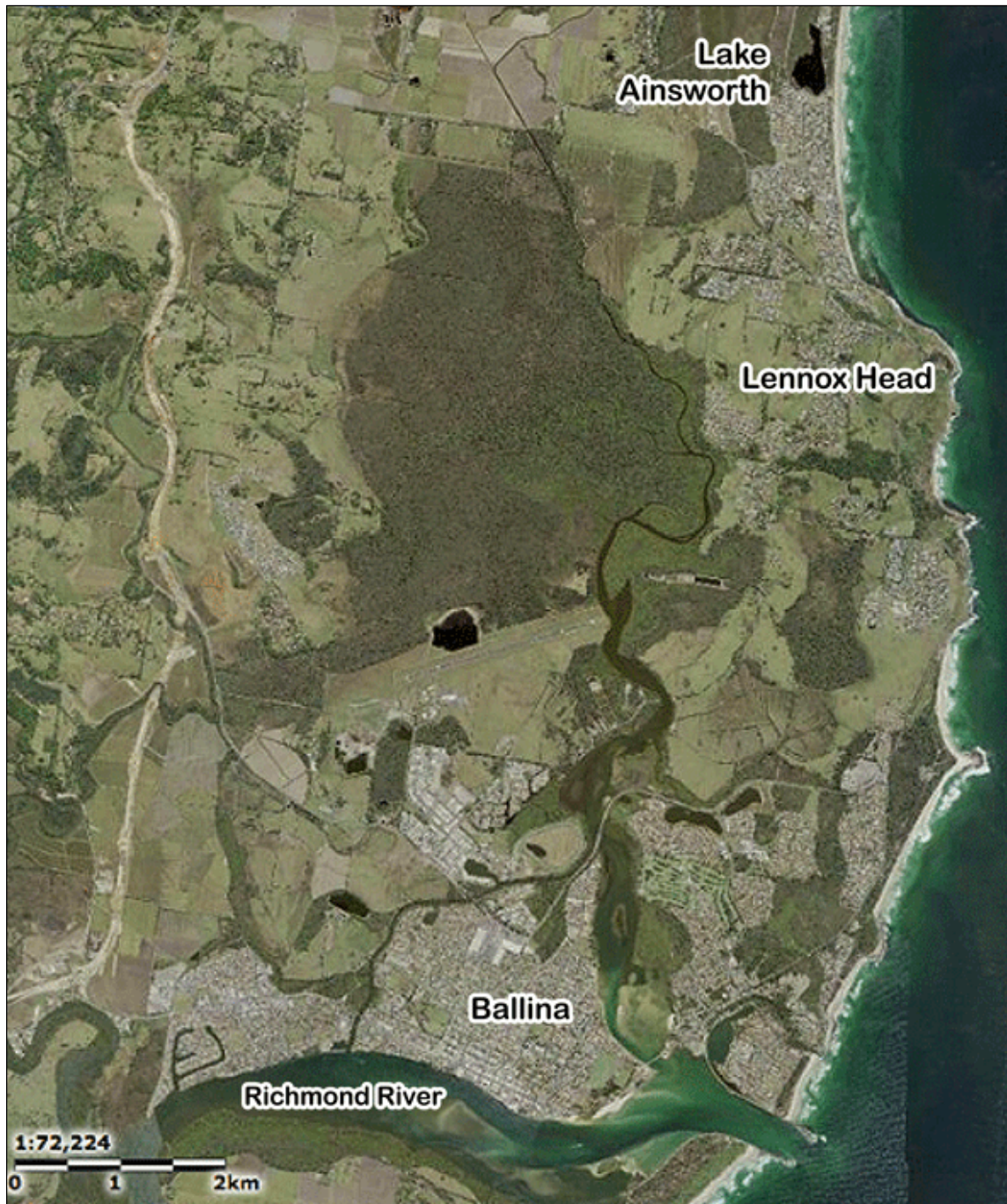


Figure 1 – The location of Lake Ainsworth in the Ballina local government area. Image source: New South Wales Spatial Information Exchange (SIX Maps) website (<https://six.nsw.gov.au>).





Figure 2 – The location of Pacific Parade and Camp Drew Road (the study area) at Lake Ainsworth in the Ballina LGA. North is up. Image source: New South Wales Spatial Information Exchange (SIX Maps) website (<https://six.nsw.gov.au>).



Figure 3 – Areas of works along Pacific Parade and Camp Drew Road at Lake Ainsworth. Image source: Ballina Shire Council.



## 2 THE LEGISLATIVE CONTEXT

### 2.1 The Legislation

#### 2.1.1 The NSW National Parks and Wildlife Act 1974

The *NSW National Parks and Wildlife Act 1974* (the '*NPW Act*') provides protection for all Aboriginal cultural heritage (ACH) sites and objects in New South Wales and promotes the conservation of Aboriginal cultural heritage objects and places that are of high cultural significance. Sections 84, 86, and 87 of the Act provide protection for Aboriginal places (S84), describe that it is an offence to harm or desecrate an Aboriginal object or declared Aboriginal place (S86) and set out defences and exemptions available for activities that have the potential to result in harm and/or desecration (S87) to Aboriginal cultural heritage objects and/or places. Section 86 also sets out the penalties and regulations as defined in the National Parks and Wildlife Regulations, Part 8A.

The *NPW Act 1974* (the '*NPW Act*') is the primary piece of legislation for the protection of Aboriginal cultural heritage in New South Wales. The Office of Environment and Heritage (OEH) administers the *NPW Act* and it provides statutory protection for Aboriginal objects by making it illegal to harm them (Aboriginal objects) and Aboriginal places, and by providing two tiers of offence against which individuals or corporations who harm Aboriginal objects or Aboriginal places can be prosecuted. The *NPW Act* defines Aboriginal objects and Aboriginal places thus:

*Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

*Aboriginal place means any place declared to be an Aboriginal place under section 84.*

If Aboriginal cultural heritage objects and/or places are present or are likely to be present and the proposed activity will harm those objects and/or places then Sections 90-90R of the *NPW Act* outline the permit process that must be followed prior to the commencement of that activity. These sections provide details of the Aboriginal Heritage Impact Permit (AHIP) system as regulated by the Director-General of the Office of Environment and Heritage (OEH) and describe the Aboriginal Heritage Information Management System (AHIMS), the database of registered Aboriginal site information across New South Wales.

In 2010 the Department of Environment, Climate Change and Water (DECCW, precursor to the OEH) introduced a range of guidelines regarding the assessment and management of Aboriginal cultural heritage in New South Wales including the;

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010a).
- *Code of Practice for the Archaeological Investigation of Archaeological Objects* (2010b).
- *Due Diligence Code Of Practice for the Protection of Aboriginal Objects* (2010c).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage* (2011).

The highest tier offences under the *NPW Act* are reserved for knowledgeable harm of Aboriginal objects or knowledgeable desecration of Aboriginal places. Second tier offences are strict liability offences—that is, offences regardless of whether or not the offender knows they are harming an Aboriginal object or desecrating an Aboriginal place—against which defences may be established under the *NSW National Parks and Wildlife Regulation 2009*.

Section 87 of the *NPW Act* establishes defences against prosecution under s.86 (1), (2) or (4). The defences are as follows:

- An Aboriginal Heritage Impact Permit (AHIP) authorising the harm (s.87 [1]).
- Exercising due diligence to establish Aboriginal objects will not be harmed (s.87 [2]) due diligence may be achieved by compliance with requirements set out in the NSW National Parks and Wildlife Regulation 2009 or a code of practice adopted or prescribed by the NPW Regulation (s.87 [3]).

### **2.1.2 The NSW Environmental Planning and Assessment Act 1979**

*The NSW Environmental Planning and Assessment Act 1979* (the *EP&A Act*) provides for the consideration of the impact upon the environment of land use planning and decision-making involving land use. In New South Wales the definition of environmental impact includes an assessment of heritage, both Aboriginal and non-Aboriginal, and there are three parts in the Act that encompass Aboriginal heritage. These sections (Parts III, IV and V) include associated regulations, schedules and guidelines.

Part III of the EP&A Act governs the preparation of State Environment Planning Policies (SEPPs), Regional Environmental Plans (REPs) and Local Environmental Plans (LEPs) and it is these policies and plans that cover the uses to which a parcel of land can be put, and, the potential constraints applicable to that land. When putting one of these documents together Department of Planning guidelines must be followed and these guidelines state that Aboriginal heritage should be assessed as part of the process.

Part IV of the Act directs the decision-making process to be followed by local government during the assessment of a development application and describes the sorts of impact that must be acknowledged before development approval is given, including impacts upon the environment. As is the case in Part III, Aboriginal heritage is included within the definition of '...the environment...'. Part IV also incorporates integrated development approvals (IDAs) and these are developments where State government bodies are linked to the DA approval process. In cases where an AHIP is required the Office of Environment and Heritage also becomes an approval body.

Part V of the EP&A Act directs the decision-making process to be followed by State government bodies when assessing proposed development activity. Under Section 111 it is the duty of the State government body involved to acknowledge environmental impacts and then, under Section 112, to determine whether the level of proposed/potential impact will trigger the requirement of an Environmental Impact Statement (EIS). As previously mentioned, it is the case that Aboriginal heritage is included here in the definition of '...environmental impacts...'. It is also the case that if an EIS is required, an assessment of cultural heritage (both Aboriginal and non-Aboriginal) must be completed as part of the EIS.

### **2.1.3 The NSW Heritage Act 1977**

Administered by the Department of Planning in New South Wales the *Heritage Act 1977* protects both natural and cultural heritage. Aboriginal heritage may be subject to the provisions of this Act if the item or place is listed on the State Heritage Register or is subject to an interim heritage order (IHO). The Minister (with the advice of the NSW Heritage Council) approves the listing of items and/or places on the register and can also prevent the destruction, demolition or alteration of items of potential heritage value through an IHO until significance has been assessed.

### **2.1.4 The NSW Aboriginal Land Rights Act 1983**

The New South Wales Aboriginal Land Rights Act 1983 established the roles of the NSW Aboriginal Land Council (NSWALC) and the Local Aboriginal Land Councils (LALC) that act under the guidance of the NSWALC. The Act places certain requirements on the ALCs at state and local level and it (the Act) acknowledges the statutory roles and responsibilities of the ALCs. The Act requires the Land Councils to:

- Take action to protect the culture and heritage of Aboriginal persons within the Council's area, subject to any other law.
- Promote awareness in the wider community of the culture and heritage of Aboriginal persons in the Council's area.

The Act also establishes a registrar the function of which includes, but is not limited to, maintaining a Register of Aboriginal Land Claims and a Register of Aboriginal Owners. Under the Act the Registrar is to give priority to the entry into the Register of the names of Aboriginal persons who have a cultural association with:

- Lands listed in Schedule 14 of the NPW Act 1974.
- Lands to which Section 36a of the ALR Act applies.

### **2.1.5 Local Government Environmental Plans**

Consideration of and protection for Aboriginal heritage is provided at the local government level under Part 5, Clause 5.10 of the Ballina Local Environmental Plan (BLEP 2012), where it states that consent is required for any impacts upon heritage items (as listed in Schedule 5) including Aboriginal objects or Aboriginal places of heritage significance. Part 5 of the BLEP (5.10 [5]) states that a heritage management document (aimed at assessing potential impact) may be required before development can be approved on land within which a heritage item is located, on land that is within a heritage conservation area, or on land that is within the vicinity of either of the previous two scenarios.

### **2.1.6 The Commonwealth Environmental Protection and Biodiversity Conservation Act 1999**

Further to the state and local government heritage legislation, federal legislation may be applicable in some cases. The *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* has provisions to protect items and/or places of national environmental/heritage significance and items listed on the various lists generated by the EPBC Act are places of national significance. These lists have all been incorporated into the Australian Heritage Database and include the:

**Register of the National Estate (RNE)** - The Register Of The National Estate includes heritage places of natural, Indigenous and historical significance from around Australia. The RNE lists over 13,000 items/places but has been frozen since 2007, which means no new places have been added since that time. Places cannot, however, be removed. The list has no statutory power and has since been replaced by the National and Commonwealth heritage lists. Listing of an item on the RNE places no particular obligations on the owner prior to development and the Federal Minister is no longer obliged to give consideration to items on the list. The RNE is still accessible and is an important source of information.

**National Heritage List (NHL)** - The National Heritage List is maintained by the Commonwealth Department of the Environment and was established for much the same reasons as the RNE, that is, to acknowledge natural, Indigenous and historic places of national significance. This list is current and has replaced the RNE as the primary list for items/places that have outstanding national heritage value. Anyone can nominate a place for inclusion on the NHL using a list of criteria and guidelines specifically designed for the purpose. The Australian Heritage Council (AHC) makes recommendations about proposed listings, with the final decision made by the Federal Minister.

**Commonwealth Heritage List (CHL)** - The Commonwealth Heritage List also recognises places with Indigenous, historic or natural heritage values, however this list registers only places that are owned or controlled by the Australian Government. Most often these include places of historical importance connected to defence, communication and other federal government activities. The CHL was established via amendments to the *EPBC Act* which means Commonwealth agencies are obliged to develop management plans for heritage items on their lands, and that prior to any impact on such items, advice must be sought from the Federal Minister.

### **2.1.7 The Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984**

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 can be called upon to provide protection for Indigenous cultural property in a broad sense. It is rarely relevant in the management of cultural heritage items, but does provide the ability to protect places, objects and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'.

## **2.2 Statutory Controls**

Statutory controls concerning Aboriginal heritage items and places follow the guidelines as set out in the documents listed above, being the:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010a).
- *Code of Practice for the Archaeological Investigation of Archaeological Objects* (2010b).
- *Due Diligence Code Of Practice for the Protection of Aboriginal Objects* (2010c).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage* (2011).

Approval for the Project was issued pursuant to Section 111 of the *Environmental Planning and Assessment Act, 1979*, which includes the determination of an environmental assessment for a Part 5 "Activity". The notice of determination letter was issued on 3 November 2016 (Reference No. 22.2016/14) and is reproduced here in Appendix A. As already stated in the project introduction, regardless of the approval process however, the project has been the subject of considerable Council deliberation and public debate and as a result Council were keen to take into consideration community concerns commissioning REMNANT Archaeology to complete a cultural heritage assessment (CHA), even though under Part V of the *EP&A Act* a CHA is required only when an environmental Impact statement is necessary. This current document reports on the Aboriginal CHA commissioned by Council.

General consent conditions relating to Aboriginal cultural heritage include compliance with Part 6 of the *National Parks and Wildlife Act 1974* (see above), and a Cultural Heritage Induction Program for all personnel and contractors involved in on-site construction activities is recommended here (See Section 14). Further, during construction, guidelines are to be provided for inadvertent finds and actions required where human remains are involved – these protocols are also set out in the recommendations presented in this report.

## **2.3 Best Practice Guidelines**

Guidelines of best practice for consultation with the Aboriginal Community and for the investigation and assessment of Aboriginal cultural heritage followed by this assessment are set out in the NSW Department of Environment Climate Change and Water (DECWW, now the Office of Environment and Heritage - OEH) documents listed in Sub-section 2.1.1 and Sub-section 2.2 above.

## **3 DESCRIPTION OF THE STUDY AREA**

### **3.1 Topography And Landforms**

The Lennox Head district contains distinct landform features including prominent rock platforms at the intertidal zone, small sandy beaches, coastal dunes, cliffs and headlands in the east, backed to the west by less spectacular ridges interspersed with low-lying swamps and wetlands (Knuckey 2016). At Lake Ainsworth however, the dominant landforms are less spectacular with the freshwater lake itself dominating the landscape, bordered to the east by sand dunes that provide a barrier to the extensive sandy beaches further east along the intertidal zone (Fig. 4). No basalt platforms occur; these features are more closely associated with the basalt headlands further to the south.



To the immediate west of the lake are ancestral barrier dune systems that indicate the location of the Pleistocene coastline, and beyond the dunes lies a predominantly low landscape, susceptible to inundation and supporting extensive swamps and marshes. These low-lying areas have been extensively drained and cleared since the arrival of Europeans and are now predominantly farmland for various crops and/or pastureland for domestic stock. The prominent basalt ridges that parallel the coastline from Lennox Headland southward do not occur at Lake Ainsworth, having receded to the north west, allowing for the formation of the lowlands mentioned above.



**Figure 4 – The topography and landforms present in the Lake Ainsworth region. Note the inland dunes, remnants of a Pleistocene coastline. Image source: New South Wales Spatial Information Exchange (SIX Maps) website (<https://six.nsw.gov.au>).**

### 3.2 Geology

The Richmond-Tweed region in general is dominated by the dissected caldera of an extinct volcano and its associated geological formations, the central granite plug of which is Mount Warning (Fig. 5). South of the caldera Tertiary basalts of the Lamington Group dominate bordered to the south by the Richmond River Valley and the various drainages that flow into it from the north and northwest that contain Quaternary alluvial deposits along flood plains and river terraces. Where these alluvial sediments came into contact with volcanic rocks during Devonian-Carboniferous times, they became metamorphosed and are known as the Neranleigh-Fernvale Beds and these beds include both metamorphosed and sedimentary rocks including mudstones and siltstones, greywacke, chert and jasper rocks. It is these sedimentary and metamorphosed sedimentary rocks that were most sort after by Aboriginal people from the past for implements, however volcanic rocks, granites and basalts were also targeted and appear to have been the preferred (though not exclusive) raw material for use as ground-edge implements such as axes and grindstones.

The study area lies to the north of the classic headland formations, the northern-most being Lennox Headland at Pat Morton Lookout, rising to 60m above sea level with a geology characterised by Tertiary Lamington Group basalts that are often columnar, jointed and weathered with cobble and boulder remnants, and these weathered boulder remnants are common along portions of Boulder Beach to the south of Lennox Headland in the vicinity of Skennars Head. Beach and dune sands occur in areas of the coast where the headlands, cliffs and rock platforms do not dominate, having resulted from longshore drift, sand deposition through the Holocene to the present day. Remnant (Pleistocene) coastline barrier dunes, similar to those that exist along Pacific Parade today,



occur to the northwest of Lake Ainsworth (See Fig. 4) and alluvial deposits occur in the swampy lower-lying areas in behind (to the west) the lake. Lake Ainsworth, itself a freshwater lake created by run-off from the low-lying swamplands, was originally a marine lagoon linked to the ocean in the vicinity of the Sport and Recreation Centre entrance and anecdotal evidence suggests it may have only been since the arrival of non-Aboriginal people and the deliberate alteration of the coastline at that location, that the marine entrance was blocked (*pers. comm.* Malcolm Milner).

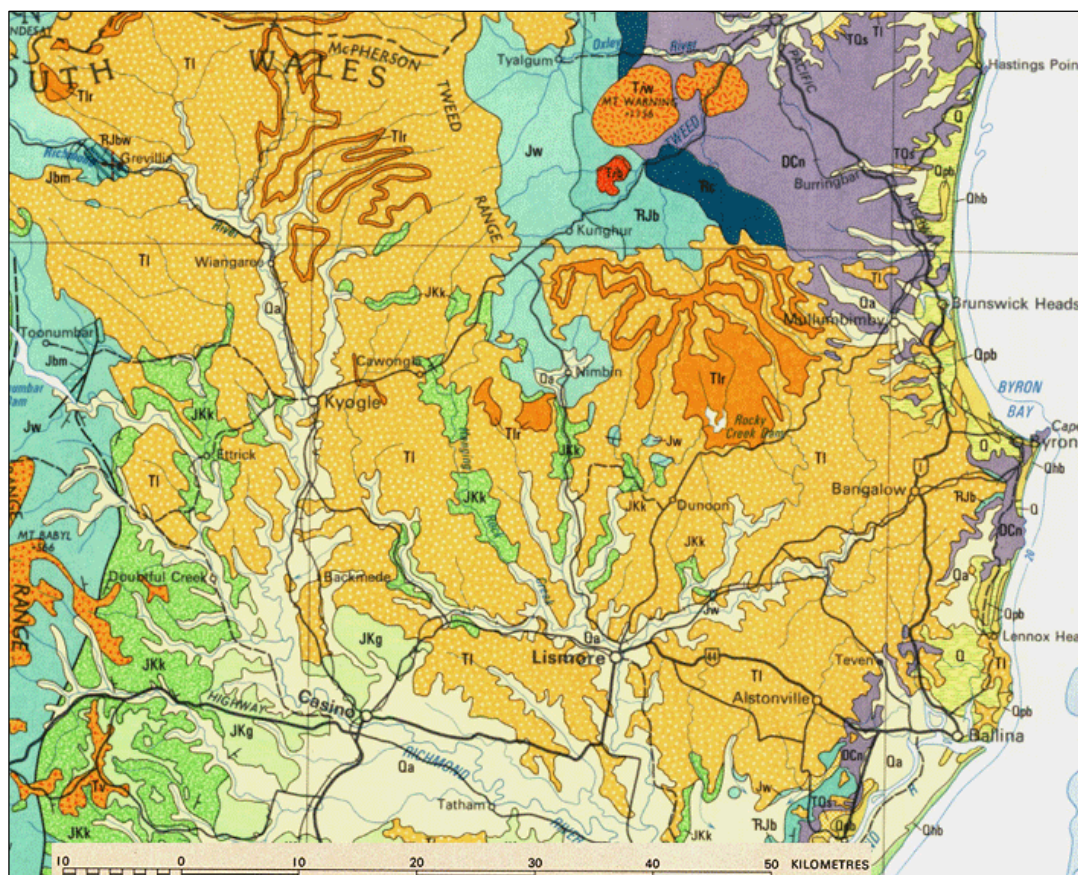


Figure 5 - The geology of northern New South Wales.

### 3.3 Vegetation

The Lennox Head district has been extensively cleared through the recent historical past for pastoral activity (mainly dairy cattle) across the ridges and lowlands, intensive farming (bananas and/or sugar cane for example) along the low-lying areas, and through sand mining along much of the coastal strip (Converge 2012; Fox 2014a; 2014b; 2014c; Knuckey 2016; 2017), and although residential estates and recreational activities predominate along the eastern and southern borders of Lake Ainsworth to this day, farming is still the dominant land use to the west. Extensive clearing of the original vegetation has occurred west of the lake, replaced with cleared pastures of introduced grasses such as Kikuyu (*Pennisetum clandestinum*). Across the district areas of native vegetation have re-grown and small areas of remnant vegetation still occur, represented on the headlands for example by patches of littoral rainforest and along the barrier dunes by remnants of the original Swamp Oak (*Casuarina glauca*) and Paperbark (*Melaleuca spp.*) communities - an individual Coastal Cypress Pine (*Callitris columellaris*) was located along Pacific Parade, two of these trees were recorded on the foreshore of Lake Ainsworth along the Camp Drew Road walking track. Sections of beach vegetation regeneration occur (Converge 2012), however, throughout the environment introduced grasses, weeds and trees proliferate.

Since European settlement and across the district in general the original forests and vegetation communities have been cleared and replaced with introduced pasture grasses suitable for grazing livestock and tree/shrub species used to replicate landscapes from other parts of the world. Where uncontained these introduced species have



out-competed the native species to become uncontrollable weeds most apparent along drainage lines, rivers and creeks. Camphour Laurel (*Cinnamomum camphora*) and Privet (*Ligustrum spp.*) are examples of 'weed' tree and shrub species, whilst Kikuyu (*Pennisetum clandestinum*) and Buffel Grass (*Cenchrus ciliaris*) are common introduced grasses that quickly establish themselves as weeds.



**Figure 6 - Vegetation along Pacific Parade from the Sport and Rec. Centre gate southward. Lake Ainsworth to the right (west).**

### 3.4 Current Land Use

Currently the study area, that is Pacific Parade between the surf club and the entrance to the sport and recreation facility (Fig. 7) and Camp Drew Road from the surf club west to the fenced walking track along the foreshore of the lake (Fig. 8), is used for recreational purposes; Pacific Parade as access to the sports facility and to Seven Mile Beach and the southern foreshore along Camp Drew Road as a picnic area and access to the bush walking track along the southwestern side of the lake.



**Figure 7 – The view of Pacific Parade from the Lennox-Alstonville Surf Life Saving Club. Lake Ainsworth on the left (west).**



**Figure 8 – The view west along Camp Drew Road. Lake Ainsworth is out of shot to the right (north).**

#### **4 COMMUNITY CONSULTATION**

##### **4.1 Initial Stakeholder Research and Aboriginal Community Notification**

Initial research to establish who were the appropriate Aboriginal stakeholders to contact was carried out in accordance with OEH consultation requirements, as set out in their guidelines *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010a)*, the stakeholder request letter is reproduced in Appendix B and was sent out to organizations such as the Office of Environment and Heritage. Once stakeholder information was obtained Remnant Archaeology enlisted the services of Ian Fox & Associates (IFA) to carry out the community consultation process. Telephone contact was made by Remnant Archaeology and IFA to the stakeholders on the list (Appendix C) and a public notice was posted in the local news media – *The Northern Star* (Fig. 9). Project notification letters were also sent to each listed stakeholder inviting them to comment and/or indicate their interest in becoming a registered Aboriginal party (RAP) to the project. A copy of this letter and the responses to it, are provided in Appendix D. Groundwork put in by IFA resulted in seamless consultation with the Jali Local Aboriginal Land Council and the other members of the local Aboriginal Community who registered their interest and a register of stakeholder liaison is reproduced in Appendix E listing dates all notifications were carried out. Registered Aboriginal parties to the project are listed in Table 1.

##### **4.2 Searches of the National Native Title Tribunal Register**

Searches of the National Native Title Tribunal register of Native Title Claims revealed no claim is current within 5km of Lake Ainsworth.



Saturday, May 13, 2017 northernstar.com.au

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Tributes		Notices
<p><b>In Memoriam</b></p> <div>  <p><b>In Loving Memory Moss, Geoffrey Keith (Geoff)</b> 14/8/1939 - 16/5/2016 Remembering you is easy We do it everyday But missing you is the heartache That never goes away. Safely missed Claire &amp; Family</p> </div> <div>  <p><b>KERRY LOUISE WILSON</b> 11/7/1971 - 11/5/1998 31 years ago The day you left us a big part of us went too. But you will never be forgotten Love from Family &amp; Friends</p> </div> <div>  <p><b>In Loving Memory Narelle Patricia Russell</b> Nov 1933 to May 2016 "A beautiful lady, living, warm, gentle, sensitive and kind." The most wonderful loving and devoted Wife, Mom, Mother-in-Law, Nanna, Sister, Aunt, and friend. Forever in our hearts.</p> </div> <div>  <p><b>Rodney Briggs</b> 03/05/1955 - 16/05/1998 We know a smile we'd love to see, a hand we'd love to hold, a voice we long to hear. You are no longer here to share our lives which will always cause us pain But you're forever in our hearts until we meet again. We love &amp; miss you. Lesley, Sarah, Ben, Carina, Beau &amp; Ivy</p> </div>		<p><b>Public Notices</b></p> <p><b>PUBLIC NOTICE</b> <b>Aboriginal Cultural Heritage – Lot 62 DP 755725, Pacific Parade, Lake Ainsworth, Lennox Head</b></p> <p>Members of the Aboriginal Community with cultural knowledge relevant to determining the significance of Aboriginal objects and/or places are invited to register their interest in the process of community consultation for proposed foreshore improvement works along Pacific Parade, Lot 62 DP 755725, Lake Ainsworth, Lennox Head.</p> <p>The proposal includes reconstruction and rehabilitation works along the road east of Lake Ainsworth, the road and foreshore area to the south, upgrade works on the three-way intersection adjacent the Lennox Head/Astonville Surf Lifesaving Club, and upgrade of the car park area between Pacific Parade and Camp Drew Road. The purpose of consultation with the Aboriginal Community is to enable the preparation of an Aboriginal Cultural Heritage Assessment.</p> <p>To register an interest please respond in writing to Graham KNUCKEY at Remnant Archaeology, by email (<a href="mailto:dr_grumpy@remnantas.com.au">dr_grumpy@remnantas.com.au</a>), or by letter to P.O. Box 1787, Armidale, NSW, 2350, within 14 days of the date of this notice. For further information, please contact Graham on 0488 097 916.</p>
<p><b>In Loving Memory of Barry (BJ) Johnston</b></p>  <p>Late of Kyogle - 13th May 2015 Your heart of gold stopped beating Two smiling eyes at rest God broke our hearts to prove He only takes the best. Your memory is a keepsake From which I'll never part. God has you in his keeping I have you in my heart. Auntie - Bev</p>		<p><b>ballina shire council</b></p> <p><b>Scheduled Road Works</b></p> <p>Council has scheduled bridge maintenance and road pavement works which will involve the partial closure of River Street in Ballina between Fishery Creek Road and Brunswick Street between <b>Sunday 21 May and Thursday 25 May 2017</b>.</p> <p>To minimise the disruption to motorists, this work will be completed at night between the hours of <b>7pm and 5am</b>.</p> <p>This work is likely to cause minor traffic disruptions and additional construction noise. Council will endeavour to keep noise to a minimum.</p> <p>Council wishes to thank the community in advance for your patience during the works, and apologises for any inconvenience.</p> <p><b>Enquiries:</b> Stuart Hynes, Maintenance Coordinator, Ph 6686 1459.</p> <p>Customer Service Centre / Chambers 40 Cherry Street, PO Box 450 Ballina NSW 2478 Office Hours 8.15am to 4.30pm Monday to Friday (excluding public holidays)</p> <p>Email <a href="mailto:council@ballina.nsw.gov.au">council@ballina.nsw.gov.au</a> Web <a href="http://ballina.nsw.gov.au">ballina.nsw.gov.au</a> Telephone 02 6686 4444 Facsimile 02 6686 7035 Emergency After Hours 02 6626 6954</p>
<p><b>Bereavement Thanks</b></p> <p><b>BRIAN HAROLD KENT</b> 4/11/1933 - 23/4/2017 Brian's Family would like to thank our relatives and friends for flowers, cards and phone calls. A special thank you to St Michael's Apartments and staff, Dr Grogan and staff, Andrew and staff from Parkview Funerals Casino, and the village caterers and staff from Gateway Lifestyle Casino.</p> <p>Thank you for caring Patricia, Stefan, Samantha and the Kent Family</p> <div>  <p><b>Noel Richard Gregor</b> 20<sup>th</sup> April 1904 - 30<sup>th</sup> March 2017 We would like to express our gratitude to all who have reached out to us as we come to terms with the loss of our much loved Son, Brother, Brother</p> </div>		

Figure 9 – The public notice placed in the Lismore Northern Star (p.29) on Saturday 13 May, 2017.

#### 4.3 The Investigator and RAPs Involved

The site inspection incorporating Pacific Parade from the surf club to the Sport and Recreation Centre front entrance and the lake foreshore along Camp Drew Road (see Figs. 2-3) was completed on 12 July 2017 by Graham Knuckey the archaeologist from Remnant Archaeology, assisted by Ian Fox. Both Remnant Archaeology and Ian Fox & Associates consulted with the local Aboriginal Community and the three registered Aboriginal parties (RAPs) expressed a desire to attend; representatives from each were present on 12 July. Table 1 lists those who attended as part of the cultural heritage site inspection team.

Table 1 – Registered Aboriginal parties and those who attended the initial site inspection.

Registered Aboriginal Party	Contact	Site Inspection Attendee
Aboriginal Cultural Concepts	Lois Cook	Lois Cook
Jali Local Aboriginal Land Council	Mik Smith	Mik Smith
Marcus Ferguson	Marcus Ferguson	Marcus Ferguson
Organisation	Contact	Site Inspection Attendee
Ian Fox & Associates	Ian Fox	Ian Fox <sup>1</sup>
Remnant Archaeology	Graham Knuckey	Graham Knuckey

1. Assisting Remnant's archaeologist

#### 4.4 Community Consultation Register

All interested stakeholders that registered as RAPs to the project, and their representatives that attended the site inspection on 12 July 2017 are listed in Table 1. Copies of the three consultation records; telephone, project notification, and stakeholder liaison, are reproduced in Appendices C, D and E.

#### 4.5 Registered Aboriginal Party Concerns

**Lois Cook** – Lois stated she had camped in the area as a child in the 1960s and that the lake was significant as a ceremonial location; for women along the eastern shore and for men along the western shore. Lois was concerned for the trees in general but the slanting paperbarks in particular that she said were of special significance to local Aboriginal people; she said none should be pruned for any reason and that if they were bad events would occur. She cited the "...tornado that came through the last time they were pruned..." and a tornado was reported in the *Grafton Daily Examiner* on 4 June 2010 (<https://www.dailyexaminer.com.au/news/northern-rivers-lennox-head-tornado-weather/549310/>), but RA has not been unable to establish what activities Council had performed in the Pacific Parade area in June that year.

**Mik Smith** (on behalf of Jali LALC) – Mik Smith's main concern was that at the time of inspection no detailed maps had been provided to allow for a targeted inspection of exactly what portions of land along Pacific Parade and Camp Drew Road would be impacted.

Both Lois Cook and Mik Smith stated a site inspection at low tide in the lake might have been more productive. Both also voiced concern about the impact upon the barrier dune system between Pacific Parade and the beach that has not been mined (the area adjacent to the Sport and Recreation Centre entrance), a dune system that retains potential for Aboriginal cultural heritage objects and/or places, and how the dune will be managed and protected.

### 5 THE HUMAN LANDSCAPE

#### 5.1 An Ethno-Historical Account of Traditional Aboriginal Land Use

Prior to the arrival of Europeans, people of the *Bundjalung-Yugambeh* language chain were the custodians of the northern New South Wales coast from the NSW-Qld border north to the Logan River, and as far south as Grafton on the Clarence River. They have maintained links to their traditional lands since non-Aboriginal settlement and the Ballina-Lennox Head district retains a strong cultural identity with the dialect subgroup known as the *Nyangbul* People, a sub-group of the broader-based *Bundjalung* people. *Nyangbul* is the preferred identity for the RAPs who were consulted for this project and their ancestors spoke their own language dialect whilst maintaining cultural practices in keeping with neighbouring groups, the *Minjungbal* to the north, *Widjabul* to the west, and *Bandjalang* to the south. *Nyangbul* people have a rich tradition of storytelling that includes explanations for the existence of landscape features along the coastline from Ballina to Lennox Head. Many of these coastal features form part of the 'Goanna Dreaming' story and are the basis for understanding the extent and significance for campsite and ceremonial locations between Ballina and Lennox Head (Lois Cook, pers. comm., cited in Fox 2014c: 15). Written accounts of Aboriginal campsites supporting these traditional stories come from early observations of shell middens lining the banks of North Creek that were observed to be more than 500m in length, 15m wide and up to 5m high (Darley 1892; Statham 1892).

Descendants recognise their heritage and continue to express their cultural identity through membership of community organisations such as Jali Local Aboriginal Land Council (Jali LALC). Family connections and oral traditions have ensured traditional beliefs and stories have been passed through successive generations and this has assisted in identifying locations within the landscape today that are of special significance and retain evidence of traditional cultural practices. Three families in particular are recognised as descendants of Jack Cook and his wife, Susan Foster, of Bangalow. Jack Cook is recognised throughout the local Aboriginal Community today as a holder of cultural knowledge for the Lower Richmond area, and who maintained his oral cultural traditions with members of his family (Lois Cook, pers. comm., cited in Fox 2014c: 14-15). Cultural knowledge

passed on by Jack Cook and other Elders of his time, has been passed down through generations of Cook, Anderson, and Ferguson family members.

Documented observations by early European settlers suggests that Aboriginal people moved frequently throughout the landscape, but tended to follow set pathways between locations and chose traditional campsites based on food and resource access, as well as ceremonial and cultural obligations (Steele 1984). Ainsworth (1987: 43) calculated that in 1847 there were between 400-500 Aboriginal people in the groups belonging to both east and west Ballina. Ainsworth also observed traditional Aboriginal daily routines, diet, and social customs including interactions with neighbouring groups (Ainsworth 1987).

## **5.2 Traditional Aboriginal Land Use**

Ainsworth (1987: 43) reports from further south in the Ballina region that in 1847 Aboriginal people were (still) following traditional subsistence patterns, it is clear however, that by the mid-1850s this had begun to change with Ainsworth reporting on a massacre that occurred in the district when in 1853 or '54 a punitive expedition of mounted troopers 'dispersed' a large group of the local Aboriginal population not far from the Ballina township (Ainsworth 1987: 43-44). As much of an influence on the Aboriginal population in the Lennox Head district as any punitive action by mounted police may have had, was the spread of European disease; smallpox in particular which moved rapidly ahead of the actual arrival of non-Aboriginal people. For example, census figures from 1871-1887 indicate a 90% reduction of the Aboriginal population in the Tweed and Brunswick districts to the north of Lennox Head (Fox 2016b).

Prior to the impact of European disease however, everyday subsistence included the use of nets during hunting expeditions both for fishing in narrow and shallow waters and in the forests where nets would be strung up between trees in areas where terrestrial game was common and could be driven, by people and dogs, from some distance into the enveloping nets (Ainsworth 1987: 43). Flying foxes were also commonly hunted being easily brought down from their colonies during the day using boomerangs and digging sticks. Seasonal fishing was also popular and every spring Aboriginal people would gather on the beaches to take advantage of the salmon runs along the coast (Ainsworth 1987: 44).

Hall (1983) discusses in some depth the subsistence life styles of the Aboriginal inhabitants of the Ballina district prior to and at the time of European contact. Hall describes the division of labour between the sexes explaining that once married a woman takes on the responsibilities of making the home camp, bags and baskets, although he says men would also weave at different times. Women also hunted for small foods and although Hall does not elaborate on this, it can be assumed that this means the gathering of vegetable foods and the hunting of small mammals and reptiles. Life along the Tweed Coast further north followed a similar pattern of subsistence

## **5.3 Non-Aboriginal Land Use**

The common pattern of non-Aboriginal settlement and land use along the north coast of NSW began in the 1820's with cedar cutters searching the forests for saleable timber and establishing what became known as 'cedar camps' at convenient locations, depending upon where the best communities of cedar were found and these cedar camps began to appear north of Ballina in the mid-1840s (Boileau 2004). By the 1860s cedar was becoming scarce in the coastal districts (Boileau 2004), nevertheless a timber industry grew around the harvesting of other species including a number of eucalypts (Red and Grey gum, Stringybark and Blackbutt, for example), Hoop Pine was particularly favoured (Rae 2016). With the scaling back of the timber industry and the passing of the Robertson Land Acts in the 1860's it became easier for settlers to take up land of their own, and it was from this time that farming began to take over from timber-getting as the main source of activity and income.

### **5.3.1 Farming**

Farming at Lennox Head reflects closely farming activity from further south and in fact many of the landholders in the Ballina district also held property at Lennox Head. In the early 1860's, for example, John Austin Henderson took up land and began dairy farming on North Creek (BSC 2008) and by the 1890's his son Edward was a major landholder in the Lennox Head district as well, holding his father's selection on North Creek and 600 acres (240ha) at Lennox Head upon which he initially grew sugar cane and other intensive crops such as beans for the markets



in Sydney (Wilson 2003: 66). Other farmers grew pineapples (Wilson 2003: 122), but it is unsure if these were grown in marketable numbers.

### 5.3.2 Recreation

Although the army maintained a camp on the eastern shore of Lake Ainsworth during the 1940's (Wilson 2003: 123), where the Sport and Recreation Centre now stands, the lake appears to have been acknowledged more for its value as a recreational venue, than for its value as an exploitable resource, notwithstanding some farmers did take water from it (See Wilson 2003: 122, for example) and indeed, the village of Lennox Head came into being as a vacation destination in the 1920s (BSC 2008). Evidence of the lake's recreational value, at least along its eastern shore can be seen in the fact that as early as 1893 the lake was gazetted as a reserve for public recreation (See Fig. 10 for an insight into the landscape along the eastern shore during the early 20<sup>th</sup> century), and in 1924 it also became a wildlife sanctuary (Anon 1927).

One prominent feature of the lake that no longer exists although common in many early photographs was the diving tower, located to the west of where the beach access for four-wheel drives is now (Wilson 2003: 132). Originally constructed in the 1940s, the tower was rebuilt in the 1960s and later removed completely in the mid-1970s (Malcolm Milner: *pers. comm.*). This diving tower was a source of great delight for many and deep despair for the less adventurous.



**Figure 10 – Pacific Parade in the 1930s; Lake Ainsworth is to the left, the current surf club would later appear behind the right shoulder (southeast) of the photographer here. Image source: Lennox Head Heritage Committee.**





Figure 11 – The diving tower in the lake adjacent the beach access in the 1940s, as mentioned by Peter Taylor (Wilson 2003: 132). The entrance to the (future) sport and recreation centre is north (right). Image source: Lennox Head Heritage Committee.

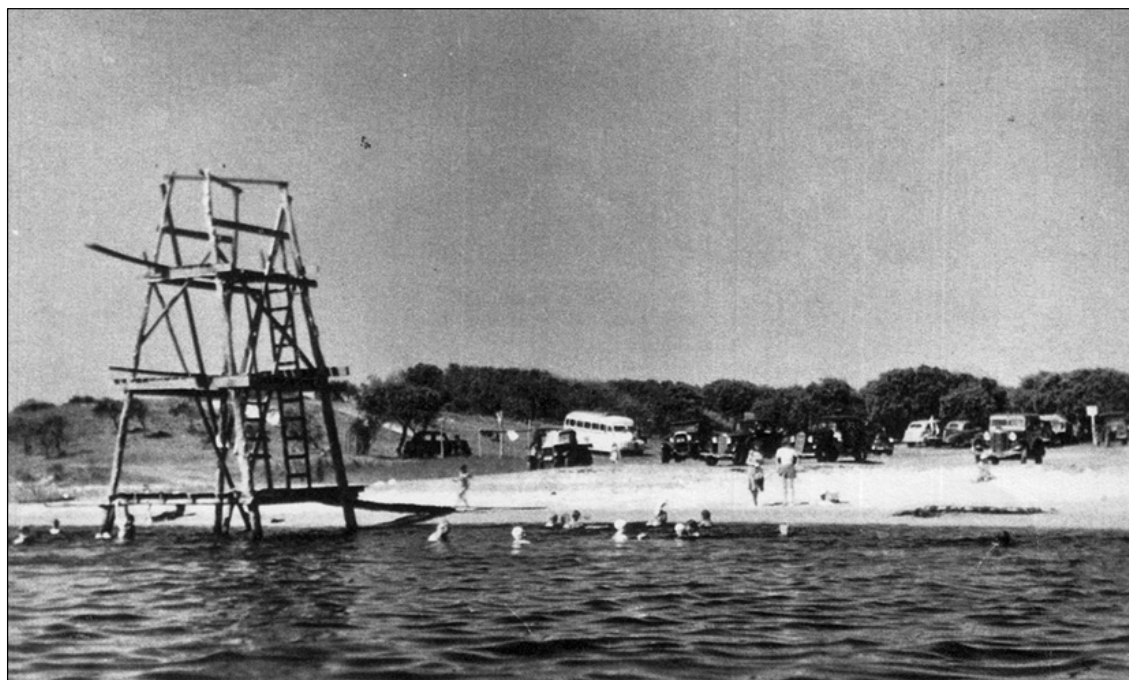


Figure 12 – View toward the southeast from Lake Ainsworth, of the surf beach access. The presence of the diving tower indicates the photograph is from the 1940s at the earliest but more likely from the 1950s. Note the bare barrier dune behind the tower, from which the photograph in Fig. 11 was taken). Image source: Lennox Head Heritage Committee.



**Figure 13 – Another view to the surf beach access also from the lake, this time looking to the northeast and the photograph taken in the late 1960s. The kiosk has been replaced with a toilet block but the electricity poles still exist. The pine tree can still be identified on the northern side of the beach access. Image source: Lennox Head Heritage Committee.**

## 6 THE ARCHAEOLOGICAL LANDSCAPE

### 6.1 Archaeological Research

In the 1960s Isabel McBryde (at the time from the University Of New England in Armidale) carried out archaeological excavations at sites in the Clarence River estuary (McBryde 1982). She worked on extensive shell midden systems, found commonly along all New South Wales north coast rivers. These middens were, understandably, mainly composed of discarded shell refuse yet (although small) assemblages of artefacts, lithic (stone) and bone, and small assemblages of faunal material resulting from food processing were also found in her excavations. In other areas, further south along the Macleay River, for example, middens excavated by Graham Connah (1975; 1976) not only revealed shell, bone and lithic artefacts but also human burial remains (Knuckey 1999).

Based upon the excavations of others and her own research Julia Coleman discussed in detail seasonality and the existence of semi- to permanent villages along the New South Wales north coast (Coleman 1982) mentioning in particular substantial dwellings on the Richmond River that were noted by Henry Rous in 1828 and cited by Lang (1847: in Coleman 1982: 6).

### 6.2 Archaeological Consultancy

In 1986 Godwin (1986) completed an archaeological investigation of the proposed Ballina-Coast Linking Road, the majority of which was along Chickiba Creek up stream of the confluence with North Creek and also to the south of the confluence, south of the racecourse. The survey identified twenty-six sites consisting of stone artefacts and shell scatters, many of which were located on a Pleistocene dune. Along with a discussion of these sites, the author investigated a stone structure in the mangroves adjacent the shell mound known as 'B1' and came to the conclusion the structure was not prehistoric in origin but that it did maintain significance to the current Aboriginal Community.

As a continuation of the investigation into the dune system and the middens within it reported by Godwin (1986), Sullivan (1980) and Stockton (1974), Smith (1989) carried out an appraisal of the damage that had occurred to the dune system in archaeological terms and found in an area of the dune system approximately 1km x 600m significant impact to a depth of 50cm had occurred through earthworks relating to the North Creek residential estate development. The frequency of cultural material present was calculated at 5-10 shell fragments per 1m<sup>2</sup>

and for artefacts a frequency of from 1 artefact per 50m<sup>2</sup> minimum to 1 artefact per 3m<sup>2</sup>. The author's conclusion was that archaeological potential at the dune site was low and this was the direct result of the (non-cultural, non-natural) disturbance that had occurred. Other were also commissioned to investigation disturbance, real and potential, in the region, as the result of pending and/or potential development, see for example Hughes (1991).

At Lennox Head proper Collins (1992) carried out an archaeological investigation on Henderson Lane, west of the headland during which she located no Aboriginal objects or sites. Subsequent to Collins' work Piper undertook surveys along Skennars Head Road (Piper 1994) at Skennars Head and Survey Street in Lennox Head between Henderson Lane and Pat Morton Lookout (Piper 1997) and likewise did not locate any Aboriginal objects or sites. Three years later however, whilst carrying out a survey along North Creek Road at Lennox Head Piper (1999) located a shell midden of predominantly oyster shell covering approximately 700m<sup>2</sup>.

In the mid-2000s Davies carried out an archaeological assessment of the proposed route for the cycle way project and did not locate any Aboriginal objects or sites (Davies 2005), whereas in 2006 she undertook a cultural heritage assessment along the Coast Road at Skennars Head and identified eighteen Aboriginal cultural heritage 'places', within a Pleistocene dune system (Davies 2006). The investigator considered the fragmented shell remains identified were components of a continuous shell scatter and she concluded that sub-surface material was most likely present within the Pleistocene dune. As a result she classified the entire dune as a Potential Archaeological Deposit (PAD). In 2009 in the Angel Beach area during an assessment of pathways options, the same investigator recorded along with the ubiquitous shell, numerous stone artefacts (Davies 2009).

Everick Heritage Consultants (2009) carried out a cultural heritage assessment for the Ballina Waste Reclamation and Augmentation Program (BRWRAP) pipeline route for Ballina Shire Council. This study included the Shared Path West - Section 3 study area from Sandstone Crescent to Skennars Head Road (Fox 2014c). The report emphasised the importance of the dunes and North Creek culturally, but did not locate any Aboriginal items or record any archaeological sites.

Converge (2012) completed a cultural heritage impact assessment as part of the preliminary planning for the Ballina Shared Pathways project, and the field team located ten sites of Aboriginal heritage interest and six of non-Aboriginal (historical) heritage interest. Three of the Aboriginal sites were shell middens/scatters, one an artefact scatter with four artefacts present and the rest were intangible sites, locations in the landscape that held spiritual/ceremonial significance.

Subsequent to the Converge (2012) report Ian Fox & Associates (2014a; 2014b; 2014c) was commissioned by Ballina Shire Council to carry out a cultural heritage assessment of the finalised pathway route through Lennox Head terminating at the intersection of Skennars Head and Headlands Drive. All three reports on the pathway route found there to be no tangible evidence of Aboriginal sites within the pathway corridor, however the reports highlight the importance of the intangible aspects of the landscape through which the pathway travels as described by the Aboriginal members of the IFA field team.

Knuckey (2016) completed the Ballina pathways project begun by Ian Fox & Associates, with the survey of the Ballina Shared Path East - a non-vehicular path parallel to The Coast Road between Skennars Head and Pat Morton Lookout on Lennox Headland. Knuckey's survey located two artefacts; one a piece that appears to have been struck once only and identified by the consultant as an assayed piece, the other a multiple platform core. Both artefacts were located together in a disturbed context and both were of an unidentified igneous raw material.

oOo

Regardless of the broad nature of the information above it is clear the information provided supports the hypothesis that Aboriginal people following traditional lifestyles made extensive use of the dune systems present in the Ballina-Lennox Head district. Despite wide-ranging impacts from farming, urban and infrastructure development Aboriginal resource gathering and feasting areas are still evident around Chickiba and North Creeks and there is potential for similar areas to exist in the dune systems to the east and northwest of Lake Ainsworth. Ridgelines appear to have been used to traverse the area between camp and feasting grounds and ceremonial sites such as the earthen ring at Lennox Head. The traditional knowledge currently held by the RAPs to this project also recognises cultural connections to shoreline landscape features through ceremonial sites and stories



involving those features. Stories associated with women's sites on the eastern shore of Lake Ainsworth and men's sites on the western shore are examples of this traditional knowledge.

### **6.3 Database and Register Searches**

#### **6.3.1 The Aboriginal Heritage Information Management System (AHIMS)**

A search of the OEH Aboriginal Heritage Management System (AHIMS) database carried out during an earlier investigation (Knuckey 2016) indicates that 68 sites have been registered within a 3km radius of Lennox Head. Earlier reports indicate that with a 4km radius of Lennox Head this number increases substantially to >100 sites (Fox 2014a; 2014b; 2014c). A register search for this project revealed there is 16 registered Aboriginal sites within 2km of Lake Ainsworth (See Table 2), specifically the beach access point on Pacific Parade south of the Sport and Recreation Centre entrance.

The AHIMS register is not an accurate record of what exists in the landscape; rather it is a record of the sites that have been found in areas where development has been proposed and/or has gone ahead. As such areas that have not been earmarked for any form of development attention and that may contain Aboriginal objects and/or sites, will not be recognised in the AHIMS database and are therefore 'invisible' until ground surveys are carried out. Nevertheless, and keeping this caveat in mind, the register still provides an overview of site types that might be expected throughout the area in question. The sites listed in the AHIMS search carried out for this assessment are found in Table 2 and mapped in Figure 14. The AHIMS search results appear in Appendix F.

#### **6.3.2 National Native Title Tribunal Register**

Two Native Title claims are currently active in the Ballina Shire however neither of them encompasses the study area at Lake Ainsworth. The Byron Bay *Bundjalung* People #3 Native Title claim (NC2001/008) contains the area of the north coast between Brunswick Heads and Snapper Rocks to the south, whilst the *Widjabul-Wia-bal* People have a Native Title claim (NC2013/005) over the area to the west of the Byron Bay *Bundjalung* People, the Blackwall Range being (roughly) the eastern boundary of the claim. Regardless, the local Aboriginal Land Council (Jali LALC) and representative families for the area were contacted, consulted and involved in the assessment, as reported here.

#### **6.3.3 Local Government Environmental Plans**

No sites of Aboriginal heritage significance are listed in Schedule 5 of the *Ballina Shire Council Local Environment Plan 2012 (BSC LEP 2012)* or shown on the BSC Heritage Map series. Interestingly the Lennox Head Bora Ring, located off Gibbons Street south of Barrett Drive in Lennox Head, is not listed in Schedule 5 nor is it indicated on the Heritage Map (Sheet HER 005D).

#### **6.3.4 Other Database Searches**

A search of the NSW Heritage Register revealed one Aboriginal Place and again, the bora ring is not listed. A search was also carried out of the Australian Heritage Database that incorporates listings from the *Register of the National Estate* (RNE), the *National Heritage List* (NHL), and the *Commonwealth Heritage List* (CHL). All sites of Aboriginal and environmental importance/significance found on these lists are shown in Table 3.

**Table 2 - Sites registered on the Aboriginal Heritage Information Management System (AHIMS) database within a 2km radius.**

	AHIMS Site Number	Site Name	Co-ordinates (GDA94)		Feature Description
			Easting	Northing	
1	04-4-0092	Barrett 6	557564	6815439	Open site, artefact
2	04-5-0009	Lennox Head Public School	557403	6813909	Open site, artefact
3	04-5-0018	Lennox Head	558203	6814689	Burials
4	04-5-0029	Lennox Head near Gibbon St (NPWS Lennox Head Bora Ring)	557653	6815039	Artefact, shell midden, ceremonial ring
5	04-5-0030	Lake Ainsworth	557953	6815359	Open site, artefact
6	04-5-0031	Lennox Head	557963	6815139	Open site, artefact
7	04-5-0048	Lennox Head	557423	6814089	Artefact, shell midden
8	04-5-0049	Lennox Head	556573	6816309	Artefact, shell midden
9	04-5-0094	Lennox Head Dune (Croftag Pty Ltd Aboriginal Site-Site 3)	556903	6815309	Open camp site; burials
10	04-5-0105	Barrett 4	557513	6818519	Artefact, open camp site
11	04-5-0106	Barrett 3	557473	6815389	Shelter, shell midden, artefacts
12	04-5-0107	Barrett 5	557503	6815109	Shelter, shell midden, artefacts
13	04-5-0108	Barrett 2	557453	6815419	Open site, artefact
14	04-5-0143	Site 1; Fern St	557403	6814764	Open camp site, artefact
15	04-5-0167	AF-1	556203	6815609	Artefact
16	04-5-0305	Seven Mile Beach Fishing Traps	558100	6814119	Aboriginal resource location

**Table 3 – Places of Aboriginal and natural significance listed in the online heritage databases.**

Database	Environmental	Aboriginal	Location
NSW Heritage Register		East Ballina-Angels Beach Aboriginal Place	East Ballina-Angels Beach
	Ballina Nature Reserve		Two and a half km southwest of Lennox Head township
Australian Heritage Database		Indigenous Place	No information available other than it was registered on the RNE in 1978
	Lennox Head Littoral Rainforest		Two km south of Lennox Head township comprising SEPP 26 areas 37-38, 38a



Figure 14 - Aerial map indicating the location of each AHIMS registered site in relation to Lake Ainsworth in the centre of the shot. The dotted line indicates the 2km radius around the lake; north is up. Image source: Google Earth Pro 2017.



## 7 REGIONAL CHARACTER

A clear landform profile is possible for the landscape Pacific Parade/Camp Drew Road, Lake Ainsworth, as set out in Section 3 where the landforms present, and the topography, geology and vegetation of the area were discussed. Further, review of the cultural heritage site registers available provides a general archaeological base that can be applied to that landscape profile, allowing a picture of traditional Aboriginal presence prior to and at the time of European contact, to be constructed. From the landscape profile, the background ethnographic information available in the literature (briefly discussed in Section 5 - The Human Landscape), and the review of both the archaeological literature (Section 6 – The Archaeological Landscape) and the cultural heritage database listings of archaeological sites currently recorded, predictions about the types of sites most likely to be found along both roadways can be made. With this information in hand a predictive model of Aboriginal occupation and land use in the past can be constructed. Site types found in the surrounding environment and the landscapes they were found in, adhere to the following character traits:

- Shell middens are common in the dune systems of both Holocene (close to the current coastline) and Pleistocene (further inland) age (See Fig. 4). These middens can be substantial landscape features of considerable height and have been recorded in some cases to be kilometres long (Connah 1975; 1976).
- Low-density artefact scatters were found most readily in association with shell middens but also along ridgelines and/or headlands, particularly where strategic views of the surrounding landscape were/are apparent. Areas of exposure such as along stock pads, vehicular tracks and along drainages where water scouring is apparent in these landscapes were of interest.
- Campsites; locations that reveal more than one activity in one place (indicators of occupation rather than transitory, one-stop locations) were found in association with middens.
- Hearth sites - campfires - are most often found in association with campsites.
- Burials have been found in association with middens (Connah 1975; 1976; Knuckey 1999) and potential for them exists across the dune systems.
- Culturally modified trees, carved or scarred are not common.
- Ceremonial features such as rings occur in flat, low-lying areas most commonly constructed of packed earth - stone rings/arrangements are not common.

## 8 PREDICTIONS

Based upon the regional character model built in Section 7, it becomes possible to assess the landforms and other landscape features of the study area at Lake Ainsworth (Section 3) with a view to formulating a predictive model for the potential occurrence of archaeological sites along Pacific Parade and the southern section of Camp Drew Road. Table 4 indicates the potential for each landform type in the study area to possess archaeological items and/or places.

The predictive model suggests that:

- Shell middens of Holocene age will occur in the dune systems along the coastal strip and of Pleistocene age further inland. Higher density middens will likely occur further away from the intertidal zone.
- Artefact scatters and/or campsites are most likely to occur in the dune systems (regardless of the age of those systems) in association with shell middens.
- Artefact scatters may also occur on the ridgelines that are in close proximity to semi- and/or permanent fresh water, but not along minor tributaries that drain into these creeks. Areas of erosion, vehicular tracks and cattle pads are of particular interest.
- Low-density artefact scatters may occur within any landscape but particularly in areas of erosion and weathering such as vehicular tracks, cattle pads, fence lines and gateways. Potential is greatest across the ridges and within the dune systems.
- Isolated artefacts are likely to occur within any landscape but particularly in areas of erosion and weathering such as vehicular tracks, cattle pads, fence lines and gateways. Potential is low-to-moderate along Pacific Parade and the southern section of Camp Drew Road.

- Burials are likely to be associated with middens located in either Holocene or Pleistocene dune systems.
- Hearths will be associated with campsites and middens and as such potential for these sites exists across the dune systems present.
- Stone arrangements are unlikely to occur, however, there is potential for arrangements constructed of earth, in particular bora rings, may be found in the low-lying flatter areas associated with the lake.

**Table 4 - The archaeological potential along Pacific Parade and Camp Drew Road (south).**

Landform <sup>1</sup>	Archaeological Potential		
	Low	Moderate	High
Beach (yellow)	✓	-	-
Dune System (orange)	-	-	✓
Lakes and Creeks (blue)	✓	✓	
Lowland (brown)	✓	✓	
Slopes-Ridges (green)		✓	✓
Swamp (Teal)	✓		

1. Colour from Fig. 4 in parentheses

## 9 FIELDWORK

### 9.1 Survey Method

A linear pedestrian survey of Pacific Parade from the Sport and Recreation Centre gate south to the intersection with Camp Drew Road at the surf club was completed on Wednesday 12 July, 2017, with a field team that included three representatives from the local Aboriginal Community (Mrs Lois Cook, Mr Mik Smith and Mr Marcus Ferguson - see Section 4 for further details), the Remnant Archaeology archaeologist (Graham Knuckey) and Ian Fox (Ian Fox & Associates) assisting the archaeologist with logistical support. Any object considered by the team to require closer inspection and/or needed to be recorded alerted the archaeologist and all such objects were mapped using hand-held GPS, photographed and where possible basic attributes measured on each. All information gathered was recorded in a field book, and at the end of the day all GPS co-ordinates and photographs were downloaded to a laptop computer for storage and later reference.

### 9.2 Potential Constraints

Areas and landscapes of interest during archaeological survey/inspection are subject to natural (weather or animal/insect activity) and non-natural (for example, human agency) modification. The latter (human agency) can be sub-divided into Aboriginal (which includes both traditional and contemporary activity) and non-Aboriginal activity. Both these subdivisions are of interest, the former for its cultural heritage value and the later for its impact upon the former. Non-Aboriginal human agency includes farming, mining, infrastructure construction, and urban development. These activities contribute directly to, or have a direct influence upon the two main natural constraints affecting archaeological field survey/inspection; ground surface visibility (GSV) and ground integrity (GI). The subject land along the eastern foreshore of Lake Ainsworth (Pacific Parade) and along the southern foreshore of the lake along Camp Drew Road are examples of rural, semi-rural, and urban recreational development that has resulted in a modified and disturbed landscape.

### 9.2.1 Ground Surface Visibility

Estimations of ground surface visibility (GSV) are essential in allowing some determination of how much of the ground surface can be seen (and thus inspected for archaeological and/or cultural remains). The most common constraints to GSV include vegetation cover, both growing (grasses after rain) and dead (humus cover in a forest environment), however concrete, road-fill gravel and bitumen are also inhibitors to GSV. The definition of GSV used here has been adapted from (Hnatiuk *et al.* 2009: 87) and is scaled as a percentage of total coverage, (Table 5). Ground surface visibility was categorised on average as fair (26-50%) along both Pacific Parade and Camp Drew Road.

**Table 5 - Ground surface visibility. Based on Table 19 of Hnatiuk, Thackway and Walker (2009: 87).**

Description (coverage)	%	Designation
Any number of plants covering $\frac{3}{4}$ of the area (75-100%)	0-25	Poor
Any number of plants covering $\frac{1}{2}$ to $\frac{3}{4}$ of the area (50-75%)	26-50	Fair
Any number of plants covering $\frac{1}{4}$ to $\frac{1}{2}$ of the area (25-50%)	51-75	Moderate
Any number of plants covering $\frac{1}{4}$ of the area (25%)	76-95	Good
Few individual plants with little cover, to completely bare ground (0-5%)	96-100	Excellent

### 9.2.2 Ground Integrity

Assessing ground integrity (GI) provides an opportunity to determine whether or not the subject land has been modified by natural, non-natural and/or human (non-Aboriginal) means, and to what degree. Natural vectors can be subtle, wind and rain across many years, or they can be abrupt, flood and fire. Human vectors can also be subtle, in particular through the activity of domestic livestock. Livestock can; however, be a more serious impact upon GI when high stocking rates and low rainfall combine to degrade the landscape more rapidly. More blatant human vectors include urban development, mining, exploration and infrastructure construction.

Archaeologically, determinations of GI are necessary to establish the degree of archaeological integrity - is the archaeological material observed in the same location as where it was originally left? Or have events through time changed that location? If evidence supporting the latter is strong then integrity is reduced and any lessening of archaeological integrity lessens the power of all subsequent investigation, observation and interpretation.

Removal of archaeological significance (or integrity) does not, however, equate with removal and/or destruction of the archaeological record itself. Further, removal of integrity does not remove Aboriginal cultural significance, and for Aboriginal people if archaeological material is present (regardless of its level of integrity) it can be as important.

Ground integrity is determined here using a percentage scale, 0% meaning context (integrity) is gone - 100% is equal to excellent preservation of the landscape (Table 6). Ground surface integrity was categorised on average as fair (26-50%) along both Pacific Parade and Camp Drew Road.

**Table 6 – Ground integrity, based on non-natural, non-Aboriginal vectors of impact. Hnatiuk, Thackway and Walker (2009: 87)**

Description	Percent	Designation
Landscape totally disturbed showing 100% modification, with no remnant vegetation present	0-25	Poor
Landscape heavily disturbed 75-100% modification, may contain (minimal) remnant vegetation	26-50	Low
Landscape disturbed, 50-75% modification present, may contain 25-50% remnant vegetation	51-75	Moderate
Landscape displaying low disturbance; includes to 25% modification. Remnant common	76-95	Good
Landscape dominated by remnant canopy and ground cover ( $\leq 5\%$ modification)	96-100	Excellent

### 9.3 Outcomes

Areas of erosion and weathering present the best opportunity for ground surface visibility (GSV) but reduce the integrity (GI) of the landscape. Therefore it is in areas where ground disturbance is highest, along vehicular tracks, animal pads and along creeks and other (including man-made) drainages that GSV is highest. However, when an artefact/artefacts is/are found in these areas the integrity of where the artefact(s) has/have been found will be compromised. It is up to the archaeologist to determine to what degree GI at that location has been affected.

#### 9.3.1 Ground Surface Visibility and Integrity

Ground surface visibility along both Pacific Parade and Camp Drew Road peaked at 25%, meaning that GSV was poor (0-25%). The poor visibility was most often attributed to vegetation and humus cover on the ground surface but non-natural cover (bitumen and concrete) were also a contributing factor.

#### 9.3.2 Archaeological Finds

No Aboriginal objects or places were located during the inspection of Pacific Parade and the southern section of Camp Drew Road. A small shell scatter (Fig. 15) was located along the eastern verge of Pacific Parade (557881E 6816005N - GDA94), 50m south of the entrance to the Sport an Recreation Centre and 50m north of the beach access with the toilet block (Fig. 17). The shells were identified as not having originated from an Aboriginal midden given there was still colour present; that is, they were too young to have been the result of traditional Aboriginal activity.

**Figure 15 – Oyster shell found along Pacific Parade.**

**NOTE –** At an earlier date an axe had been located and stored in the vicinity of the toilet block (*pers. comm.* Ian Fox), but after considerable searching by members of the field team the item was not re-located.

#### 9.3.3 Intangible Evidence

Cultural significance has been associated with the paperbark trees and their growth pattern (the acute angle of growth to the west) found along the eastern verge of Pacific





Parade (Fig. 16). The trees have been linked to women's sites along the eastern shore of the lake and it is believed any modification/alteration of those trees will lead to significant environmental/climatic events.

**Figure 16 – The paperbarks (*Melaleuca* sp.) growing along the eastern verge of Pacific Parade. Camera direction is north, the lake is to the left (west).**

## 10 DISCUSSION

### 10.1 Areas of High Potential

Although no artefacts were located during the inspections reported here, and although levels of historic disturbance have been random and varied as a result of mining, military and recreational activity, the archaeological record of other areas along the north coast where the same landforms and environments are found (See the discussion in Sections 6-7 and the resulting predictive model in Section 8) suggests the potential for objects and/or places to exist within the barrier dune complex at Lake Ainsworth is still high. Further, as discussed in Sub-section 4.5 (RAP Concerns) the cultural significance of the lake is still high regardless of the presence/absence of tangible (archaeological) evidence.

Of the six landform types identified in the vicinity of the eastern and southern foreshores of Lake Ainsworth, the dune systems and slopes/ridges retain the highest potential for the presence of Aboriginal objects and or sites. However, although it is possible to identify the landforms themselves as holding potential for the presence of cultural heritage (CH) resources, actually locating CH within these landforms on the ground (at the 'local level') depends entirely upon constraints to GSV (visibility) and GI (integrity) and these constraints make finding CH difficult.

Given the constraints to GSV and GI present during the current survey and the fact that no objects or site of interest were found, it became difficult to identify areas of high probability at the local level which means that CH potential (areas of high probability) can only be identified at the landform level and with no finer detail or precision than that.

**Figure 17 – The location of the shells along Pacific Parade.**



## 10.2 Areas of High Disturbance

Areas of highest disturbance occur at walking tracks and picnic areas along the southern foreshore (Camp Drew Road) and along the beach access tracks, vehicular tracks and the bitumen road that provides access to the Sport and Recreation Centre. Direct impact upon shell material was identifiable at the location of the shell material found (Fig. 16) but the significance of the impact is low given the shells are not of any great age and probably were deposited within the last few years. Natural disturbance along the eastern foreshore is apparent in a dramatic fashion when current lake levels are compared to those seen in photographs from the last 50 years (Compare for example Figs. 11-13 with Fig. 18).



**Figure 18 – The eastern foreshore of Lake Ainsworth has disappeared with water at some places lapping at the roadway. Camera direction is north from the surf club.**

## 11 ASSESSING SIGNIFICANCE

Assessing cultural significance means defining why a place is culturally important (OEH 2011) and to whom. Aboriginal items and places possess value in the wider community in different ways and for different reasons. What is paramount in assessing Aboriginal items and places is that the Aboriginal Community is involved and central to the process. The New South Wales Office of Environment and Heritage (OEH) acknowledge this role stating that Aboriginal people are the primary source of information about their culture, they must have an active role in its assessment and they must have control over how their cultural knowledge is used (OEH 2011). The non-Aboriginal community and in particular the scientific (archaeological) community, may look at the value of Aboriginal objects and places in a different way, and archaeologists may use differing value criteria to assess that value. In both cases the primary document of reference is the *Burra Charter* (Marquis-Kyle and Walker 2004: 103) which defines cultural significance as the:

*...aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the **place** itself, its **fabric, setting, use, associations, meanings, records, related places and related objects**. Places may have a range of meanings for individuals or groups.*

The *Burra Charter* and the NSW Heritage Branch (NSWHO 2001) use four principal values to assess cultural significance (social, historic, scientific and aesthetic) and in consultation with the registered Aboriginal parties (RAPs) to the current project these values have been applied in assessing the cultural significance of Pacific Parade and the southern section of Camp Drew Road study areas to the local Aboriginal Community. The OEH elaborates upon these four principle values suggesting that any significance assessment should also take into account criteria such as research potential, representativeness, rarity and educational potential (OEH 2011: 10).

The four principal values are as follows:

1. **Historic Value (Heritage Branch Criterion A)** - This refers to associations with a person, event or activity that is of importance to the Aboriginal community. In common with places of cultural value, locations of historical value will not necessarily possess physical evidence of that person/event/activity. "They may have 'shared' historic values with other (non-Aboriginal) communities" (OEH 2011: 9).
2. **Aesthetic Value (Heritage Branch Criterion C)** - How a place looks and 'feels' can also be significant, especially (and most often) when associated with social/cultural value. The aesthetics of a place considers "...form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use..." (OEH 2011: 9).
3. **Social-Cultural Value (Heritage Branch Criterion D)** - The associations and attachments a place has for Aboriginal people including both traditional links to country and links arising from contemporary community identity. "Social or cultural value can only be identified through consultation with Aboriginal people" (OEH 2011: 8).
4. **Scientific Value (Heritage Branch Criterion E)** - Scientific value comes from the fact a place or item or landscape can provide further information to current understanding and knowledge. The degree of significance depends upon the degree of rarity or representativeness the item or place or landscape, possesses.

The OEH criteria are explained thus:

- o **Research potential** - Refers to the potential of a place to contribute to an understanding of the area, or region, or state natural and/or cultural history.
- o **Representativeness** - Builds on the Charter concept by assessing how much variability exists both inside and outside the subject area, what is already conserved and how much connectivity exists.
- o **Rarity** - Also builds on the Charter concept of rarity by assessing whether or not a place demonstrates a distinctive way of life, custom, process, land-use, function or design no longer in use.
- o **Educational Potential** - Assessing whether or not a place contains teaching sites or sites that might have teaching potential.

### 11.1 Cultural and Scientific Value Assessment

As required by OEH the core values listed above (both from the Charter and OEH's add-ons) will be used to grade the cultural significance to Aboriginal people of the current study area using a low, moderate or high ranking. The above-mentioned values will also be used to grade the scientific significance of Pacific Parade and Camp Drew Road (south) using the same ranking system - research potential, representativeness, rarity and educational potential will be targeted here. What follows in Tables 7 and 8 is an assessment of the study area overall, for its value to Aboriginal people culturally and also for its scientific value to the wider non-Aboriginal community. It must be noted that Aboriginal people also recognise the scientific value of their heritage, but that scientific investigation must always be tempered by cultural obligations.

### 11.2 Site Assessment and Statement of Significance

At this point, having assessed the Pacific Parade/Camp Drew Road study area overall and with all the regional character and predictive modelling data at hand, an assessment of sites found becomes possible. However, no sites were located during the site inspection. It is still possible to assess the cultural (non-tangible) importance of the location to Aboriginal people (See Sub-sections 4.5, 5.1-5.2) and it is appropriate (given the discussion in Sections 7-8) to assess the potential for tangible objects and/or sites to be present within the barrier dune systems.

A review of Sub-sections 4.5, 5.1, 5.2, and Sections 7-8 indicates it is the landscape that is of most significance. The tangible evidence (physical remains) of Aboriginal occupation before and after European contact is scant, nevertheless, a lack of such evidence does not diminish the cultural importance of the landscape to the Aboriginal Community; the *Nyangbul* People.

**Table 7 - An assessment of value to Aboriginal people of the Pacific Parade/Camp Drew Road study area.**

Value Criterion	Description	Significance
Historic	Oral history and documented European record of post-contact campsites.	Moderate
Aesthetic	Contains topographical features linked to stories and cultural beliefs	High
Social/Cultural	Oral history and recognition of intangible cultural heritage. Significant women's story attached to eastern foreshore and the paperbark trees, while men's story associated with western foreshore. Both linked to ceremonial are at Lennox Head Bora Ring.	High
Scientific	Potential for physical evidence of campsites and cultural practices	Moderate
Research Potential	Possibility of cultural objects despite disturbance through military/mining/recreation activity and infrastructure development	Moderate-High
Representativeness	Barrier dunes in association with a freshwater lake is not common. Freshwater representativeness more a non-Aboriginal phenomenon given anecdotal evidence the lake was originally salt	Moderate
Rarity	Landforms not uncommon, uniqueness attached to the stories relating to the lake	Moderate-High
Educational Potential	Extensive observational opportunity of the surrounding landscape	Moderate

**Table 8 - An assessment of scientific value across the Pacific Parade/Camp Drew Road study area.**

Value Criterion	Description	Significance
Historic	Of historical significance to both the Aboriginal and non-Aboriginal Community as a place of recreation from earliest settlement to the former and a camp ground, ceremonial area and food resource up until the recent past to the latter.	Moderate-High
Aesthetic	An aesthetically pleasing environment possessing views of the lake and countryside to the west, with spectacular coastal beaches to the east over the barrier dunes.	Moderate
Social/Cultural	Since European arrival the Lennox Head-Lake Ainsworth district has contributed considerably to the social/recreational and cultural fabric of the Ballina region through oral histories, past newspaper articles and photographs	Moderate-High
Scientific	Potential for undiscovered post contact <i>in-situ</i> cultural sites and pre-contact midden sites in the adjacent dune systems	Moderate-High
Research Potential	Physical evidence of pre- and post-contact Aboriginal occupation, further investigation of non-Aboriginal stone structures (e.g. dry stone walls)	Moderate
Representativeness	Barrier dunes in association with a freshwater lake is not common. Freshwater representativeness more a non-Aboriginal phenomenon given anecdotal evidence the lake was originally salt	Moderate
Rarity	Landforms not uncommon, uniqueness attached to the stories relating to the lake	Moderate
Educational Potential	Possibility of undiscovered cultural sites further informing the archaeological record	Moderate

Intangible evidence is strong across and around the lake and is recognised through natural features and landmarks despite the European activity and infrastructure development that have reduced the frequency of tangible evidence. Although the proposed upgrades show only moderate scientific value, the lake environment overall retains high cultural, historic, and aesthetic value to the *Nyangbul* People.



## **12 ASSESSING IMPACT**

### **12.1 The Proposed Development**

Ballina Shire Council is proposing improvement works along Pacific Parade and Camp Drew Road along the eastern and southern shores (respectively) of Lake Ainsworth at Lennox Head (Figs. 1-2). The project has for some time been the subject of considerable Council deliberation and public debate, attracting significant public interest both for and against and as a result of this interest Council is keen to take into consideration concerns expressed by members of the community, resulting in the Aboriginal cultural heritage assessment (CHA) reported here in this document

The proposed works will include improvements in two areas along Pacific Parade and Camp Drew Road (Fig. 2-3), and the reconstruction of the intersection between the two thoroughfares:

- Pacific Parade (Eastern Road) - Rehabilitating the road by profiling the existing pavement and constructing a footpath and landscaping the area of public reserve along to the over-bank area of the eastern shore of Lake Ainsworth.
- Camp Drew Road (Southern Road) and Foreshore Area - Reconstruction of the existing road way and formalising the adjoining car parking bays between Pacific Parade and Camp Drew Road. These works are along the over-bank area of public reserve along the southern shore of Lake Ainsworth. It includes bank stabilisation, improvement of the open spaces for passive recreation and potential pedestrian linkages between existing isolated open spaces.
- Reconstruction of the three-way intersection between Pacific Parade and Camp Drew Road adjacent to the Lennox Head/Alstonville Surf Life Saving Club. The new intersection will be a two-way intersection incorporating a turn facility and will be the termination point for Pacific Parade (open to emergency vehicle and maintenance service vehicles only).

### **12.2 The Assessment of Potential Impacts**

#### **12.2.1 Harm to Aboriginal Objects or Sites**

As a result of the current site survey and inspection carried out on 12 July 2017 and reported here, no harm will occur to Aboriginal objects and/or site, simply because no sites were located. There is, however, potential for objects and/or places to still exist within the barrier dune system located between Pacific Parade and Seven Mile Beach. This means, therefore, that while there is potential for Aboriginal cultural heritage (CH) resources to exist there remains potential for impacts on that CH material as a result of the proposed upgrade works.

#### **12.2.2 RAP Responses To Potential Harm**

As stated in Sub-section 4.5, RAP concerns centred around the cultural significance of the paperbark trees along Pacific Parade and that they should not be altered in any way (Lois Cook), and that the Land Council were concerned about a lack of detailed mapping being available at the time of the inspection and that as a result only the bitumen road and its verges were inspected (Mik Smith). Both RAPs commented that an inspection during low tide on the lake might have been more productive and that the barrier dune system along the eastern verge of Pacific Parade (between the road and Seven Mile Beach) should in no way be impacted by upgrade works.

#### **12.2.3 Potential Impacts**

Therefore, based on a surface assessment of both Pacific Parade and the southern section of Camp Drew Road (completed on 12 July 2017 during which no Aboriginal objects or sites were found), and based upon personal consultation with all three RAP representatives participating in the field investigation (Lois Cook, Mik Smith and Marcus Ferguson), the proposed road upgrades will not impact any known physical evidence of cultural heritage. There remains however, potential for cultural heritage material to exist within the Pacific Parade barrier dune system and a low-medium possibility for unexposed subsurface material to occur during upgrade works across all three work zones (as defined in Sub-section 12.1).

## 13 AVOIDING AND MINIMISING HARM

### 13.1 Guiding Principles for Heritage Site Management

The NSW OEH aims at ensuring impacts to Aboriginal objects and places are avoided or reduced and that where possible Aboriginal sites should be conserved. Three OEH policies promote this aim:

1. Impacts to significant Aboriginal objects and places should always be avoided wherever possible.
2. Where impacts to Aboriginal objects and places cannot be avoided the proponent or AHIP applicant is required to develop (or amend) proposals so as to reduce the extent and severity of impacts to significant Aboriginal objects and places through the use of reasonable and feasible measures. Any measures proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.
3. Once all avoidance, minimalisation and mitigation options have been adequately explored OEH may also consider the appropriateness of any proposed actions having potential Aboriginal cultural heritage benefit. Any actions proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.

The guiding principle is therefore that wherever possible avoidance should be the primary management option but that if avoidance is not feasible measures must be taken to mitigate against impacts to Aboriginal items and/or places. If mitigation is adopted the nature of that mitigation is based on the significance assessment, both cultural (as defined by the Aboriginal community) and scientific, applied to the Aboriginal items and/or sites in question.

### 13.2 Proposed Preservation Strategies

#### 13.2.1 Avoidance

The proposed location of upgrade works as it currently stands is in close proximity to the barrier dune system parallel to the Pacific Parade work zone. This dune system has potential to contain Aboriginal cultural heritage material even though none was located on the dune surface closest to Pacific Parade during the site inspection. Avoidance of the dune system is attainable and barrier fencing should be employed to establish the work zone perimeter. The paperbark trees are located within close proximity to the eastern verge of Pacific Parade and will need to be marked with high visibility barrier mesh/fencing during upgrade works.

## 14 RECOMMENDATIONS

Subsequent to the consideration of:

- o The relevant legislative requirements (set out in Section 2),
- o The results of the current cultural heritage assessment process,
- o The concerns and interests of the Aboriginal Community, represented by the RAPs, and,
- o The proposed impacts of the upgrade works.

It has been found that:

- o The proposed upgrade works will occur in a landscape that is of high cultural importance to the Aboriginal Community.
- o The occurrence of tangible Aboriginal objects and/or sites within the study areas along Pacific Parade and Camp Drew Road (south) is zero; the shells found (See Figs. 15, 17) are not cultural.
- o The proposed upgrade works will have a direct impact upon the cultural landscape, however, potential physical impact upon particular landforms (the barrier dune along Pacific Parade) and individual sites (the paperbark trees along Pacific Parade) can be avoided.

As a result of these findings it is recommended that:

1. No further archaeological investigation is required along the sections of Pacific Parade and Camp Drew Road designated for upgrade works.
2. The barrier dune and paperbark trees along Pacific Parade can be avoided.

3. Monitoring by representatives of the RAPs should take place during initial ground disturbance activity along the eastern verge of Pacific Parade.
4. It is recommended here that Council staff and contractors who have not previously (or recently) participated in Ballina Shire Council CH Induction Programs be required to do so. The CH induction program should be developed in collaboration with the local Aboriginal Community and should include a maintained record, including timing, of all personnel and contractors involved for the duration of the project.

In conjunction with induction training developed in collaboration with the local Aboriginal Community, Council is encouraged to include a program of cultural awareness. A cultural awareness program would provide an opportunity for explanation of the cultural significance to Aboriginal people of the Lake Ainsworth area and strengthen the relationships Council is seeking to build.

5. It is recommended that Ballina Shire Council maintain consultation with the RAPs. Ongoing consultation should be for the duration of the upgrade works.
6. It is recommended a Stop Work Procedure (SWP) is to be installed in recognition of the potential for discovery of unexpected or incidental finds. Note that any works that may reveal or disturb cultural heritage objects or sites will require an AHIP from OEH in order for the find(s) to be mitigated (if avoidance is not an option). The SWP procedure is outlined in Table 9 and has been adapted from earlier reports completed in the region (Fox 2014a; 2014b; 2014c; Knuckey 2016).

Council must ensure every on-site contractor/worker is provided with a copy of the SWP process and that all on-site workers are made aware if/when the SWP is brought into action.

Should the work being undertaken include the use of large earth working equipment (large-scale excavators, for example), it may be possible in some instances to isolate the cultural object and continue working without further disturbance. Advice from a heritage consultant or cultural monitors (if present) should be sought, but a nominal buffer of up to 5m may be required, with high-visibility barrier fencing/mesh surrounding the find location.

**Table 9 - The proposed stop work procedure (SWP).**

<b>STOP WORK</b>	Immediately, upon becoming aware of a potential cultural heritage object or archaeological resource
<b>CONTACT</b>	A qualified cultural heritage professional as soon as possible
<b>NOTIFY</b>	<p>The Ballina Shire Council's Heritage (or Senior Project) Officer, Jali LALC, the RAPs (if they are not already present), and advise OEH as soon as practicable.</p> <p>If bones or potential human remains are discovered, Police must be notified immediately. Police must provide written notification to proceed. If human remains are identified as Aboriginal, OEH will provide written notification of required actions.</p>
<b>ASSESS</b>	<p>The cultural heritage professional in conjunction with OEH and the registered Aboriginal parties should assess the significance of the resource and recommend a course of action e.g.:</p> <p>Protect and avoid; or</p> <p>Investigate, in accordance with the Code of Practice for Archaeological Investigations; or</p> <p>Develop management strategies to inform an AHIP to regulate the unavoidable harm to Aboriginal objects</p>
<b>ACTION</b>	Identification of a previously unrecorded cultural heritage object will require registration as an Aboriginal site on the OEH AHIMS database. Registration is required as soon as practicable
<b>APPLY</b>	To OEH for an AHIP if necessary
<b>RECOMMENCE</b>	Only when OEH has approved a course of action and/or provided conditions of approval for an AHIP

7. In the event that skeletal remains are uncovered, work must cease immediately in the area surrounding the find and the area cordoned off. The NSW Police Department is to be contacted and no further action taken until written advice is received from the Police allowing work to recommence. If the remains are determined to be of Aboriginal origin, the Office of Environment and Heritage must be notified along with the RAPs to the project and the Jali Local Aboriginal Land Council. A plan of management for the preservation of the remains must be put in place prior to works recommencing and it must be developed in consultation with the RAPs.



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**APPENDIX A NOTICE OF DETERMINATION (FIRST PAGE)**

enquiries refer

**Peter Drew**

in reply please quote

**Pt V Register No: 22.2016/14**



Ballina Shire Council  
PO Box 450  
BALLINA NSW 2478

**NOTICE TO APPLICANT OF DETERMINATION OF AN  
ENVIRONMENTAL ASSESSMENT FOR A PART V "ACTIVITY"**  
(Issued pursuant to Section 111 of the Environmental Planning and Assessment Act 1979)

**Part V Register No:** 22.2016/14

**Project File Reference:** PF 022.2016.00000014.001

**Applicant:** Ballina Shire Council

**Subject Land:** Lot 7002 DP 1052251, Lot 62 DP 755725, Lot 2 DP 1115145, Lot 3 DP 1115145, Ross Street LENNOX HEAD, No. 6 Ross Street LENNOX HEAD, Pacific Parade LENNOX HEAD

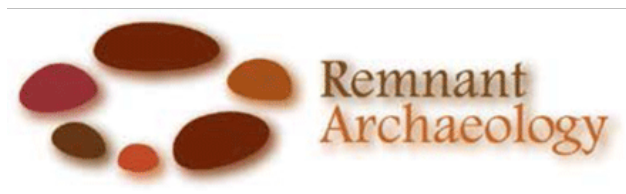
**Activity Proposal:** Rehabilitation Works along the Eastern Section of Lake Ainsworth Comprising Tree Removal, Closure and Removal of Existing Vehicle Access and Parking Areas, Construction of Footpath (3m Wide), Weed Management, Revegetation and Foreshore Restoration Works.

**Determination:** The proposed activity has been determined by Ballina Shire Council on 27 October 2016 by way of the grant of approval subject to the following ameliorative/mitigation measures being implemented to reduce any likely environmental impact:

 (initial)  
Assessment Officer

40 cherry street, po box 450, ballina nsw 2478  
t 02 6686 4444 • f 02 6686 7035 • e council@ballina.nsw.gov.au • w ballina.nsw.gov.au



**APPENDIX B     STAKEHOLDER REQUEST LETTER**

PO Box 1787

Armidale, New South Wales. 2350

M – 0488 097 916

E – dr\_grumpy@remnantas.com.au

ABN – 99 092 565 110

Thursday 11 May 2017

Name  
Number and Street  
Suburb/Town,  
STATE. Postcode

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT – LOT 62 DP 755725,****PACIFIC PARADE, LAKE AINSWORTH, LENNOX HEAD, 2478, BALLINA SHIRE LGA, NEW SOUTH WALES**

Dear Sir/Madam,

Remnant Archaeology is writing on behalf of Ballina Shire Council in regards to carrying out an Aboriginal Cultural Heritage Assessment within Lot 62 DP 755725 on Pacific Parade at Lake Ainsworth (Fig. 1) as part of preliminary works in preparation for the proposed upgrade, rehabilitation and improvement of sections of Pacific Parade and the car park immediately south of Lake Ainsworth. The proposed works will include improvements in three areas along Pacific Parade (Fig. 1) including:

- *Eastern Road* - Rehabilitating the road by profiling the existing pavement and constructing a footpath and landscaping the area of public reserve along to the over-bank area of the eastern shore of Lake Ainsworth.
- *Intersection* - Reconstruction of the three-way Intersection between Pacific Parade, the eastern road and the southern road adjacent to the Lennox Head/Alstonville Surf Life Saving Club. The new intersection will be a two-way intersection incorporating a turn facility and will be the termination point of the existing eastern road (open to emergency vehicle and maintenance service vehicles only).
- *Southern Road and Foreshore Area* - Reconstruction of the existing road way and formalising the adjoining car parking bays between Pacific Parade and Camp Drew Road. These works are along the over-bank area of public reserve along the southern shore of Lake Ainsworth. It includes bank stabilisation, improvement of the open spaces for passive recreation and potential pedestrian linkages between existing isolated open spaces.

**REMANT** Archaeology

PO Box 1787, Armidale, New South Wales. 2350

M – 0488 097 916

E – dr\_grumpy@remnantas.com.au

ABN – 99 092 565 110

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Ballina Shire Council would like to include as stakeholders those people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in this area and this letter is the formal request for information regarding potential Aboriginal Owners/Custodians regarding Lot 62 DP 755725 – Pacific Parade, Lake Ainsworth, Lennox Head, New South Wales. 2478. Any information regarding Aboriginal owners/custodians in the area will only be used during community consultation regarding the site. This letter for:

A public notice regarding the proposal will appear in the *Northern Star* on Saturday 13 May 2017 and for your information a copy is reproduced below (Fig. 2).



Figure 1 – Lake Ainsworth and the areas within Lot 62 (DP 755725) that are earmarked for upgrade and re-development. North is up, no scale has been provided. Image source: Ballina Shire Council.

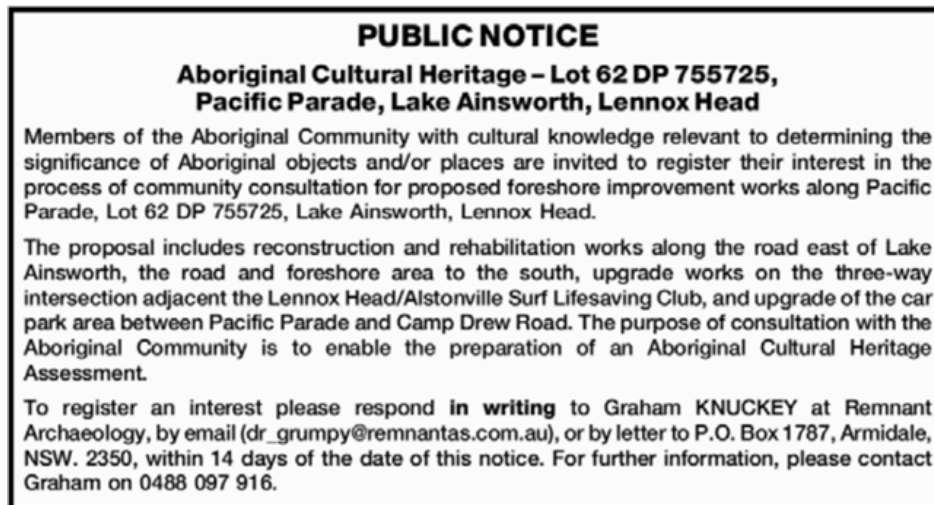


Figure 2 – A copy of the public notice to appear in the Northern Star on 13 May 2017.

Please address any return correspondence to Remnant Archaeology as per letterhead address.

Yours Sincerely



Graham KNUCKEY PhD

Archaeologist – REMNANT Archaeology





## APPENDIX D COMMUNITY CONSULTATION – PROJECT NOTIFICATION LETTER



PO Box 1787  
Armidale, New South Wales. 2350  
M – 0488 097 916  
E – dr\_grumpy@remnantas.com.au  
ABN – 99 092 565 110

Tuesday 20 June 2017

Name  
Number and Street  
Suburb/Town, STATE. Postcode

**ABORIGINAL CULTURAL HERITAGE ASSESSMENT OF FORESHORE IMPROVEMENT WORKS,  
LOT 62 DP 755725, PACIFIC PARADE AT LAKE AINSWORTH, LENNOX HEAD, 2478, BALLINA SHIRE, NSW**

### Registration Of Interested Aboriginal Parties

Ballina Shire Council (BSC) is proposing to undertake improvements at Pacific Parade along the eastern and southern shores of Lake Ainsworth (Fig. 1). The proposed works will include improvements in three areas along Pacific Parade (Fig. 2) including rehabilitation works on the eastern section of Pacific Parade, the reconstruction of a three-way intersection between Pacific Parade and the southern road adjacent to the Lennox Head/Aistonville SLSC, rehabilitation of the southern road and foreshore area, and formalisation of the car park. These works were described in the stakeholder notification letter circulated in late May 2017 that invited Aboriginal stakeholders with a cultural connection to the work zones described to indicate an interest in becoming registered Aboriginal parties (RAPs) to the project. Your organization is one of three stakeholders that responded to the notification letter and all three are listed in Table 1.

This current letter outlines the proposed cultural heritage assessment methodology including field survey methodology, research methodology if objects and/or places of Aboriginal cultural heritage significance are located, and health and safety considerations in the field.

### Field Work Times and Availability

One day has been set aside for the field component of this cultural heritage assessment, a date for that field survey has not yet been finalised. Please respond to this letter by supplying the availability of one field officer to accompany the archaeologist.

Team members will need to provide their own transport to and from site and their own personal protective equipment (PPE). See the discussion of what this includes below. A first aid kit will be provided and each team member will need to bring his or her own water, lunch and morning tea.

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REMANT Archaeology  
PO Box 1787, Armidale, New South Wales. 2350

M – 0488 097 916  
E – dr\_grumpy@remnantas.com.au

ABN – 99 092 565 110

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Stakeholder	Contact Person
Aboriginal Cultural Concepts	Lois Cook
Jali Local Aboriginal Land Council	Michael Smith
Marcus Ferguson	Marcus Ferguson

### Field Work Methodology

Remnant Archaeology (RA) proposes using archaeological field survey for the cultural heritage assessment program of the foreshore improvement works along the eastern and southern shores of Lake Ainsworth (See Figs. 1-2). With the assistance of representatives from the local Aboriginal Community (the RAP representatives) Remnant will assess the potential for Aboriginal cultural and archaeological objects and/or places to be found on the surface of the ground within the boundaries of the areas of interest shown in Figure 2. After the field survey and depending upon what is found, a sub-surface test-pitting exploration program may become necessary. Field survey method and test-pitting method are described below.

#### Survey

On-foot (pedestrian) surveys will be carried out with three main objectives:

1. To carry out a ground surface archaeological survey to determine the presence/absence of archaeological material across the study areas.
2. To confirm what is already known from background Aboriginal Heritage Information management System (AHIMS) site register searches.
3. To allow the RAPs the opportunity to identify areas of concern known to them.

Field survey will be randomised and will be governed by the boundaries of the work zone involved and given the relatively small area involved it is assumed work zone coverage will be maximised. The survey will be done as follows; the archaeologist walks an imaginary line (transect) as guided by his hand-held GPS unit whilst members of the field team line up on either side and walk along inspecting the ground surface in front and to the sides as they go. When the archaeologist reaches the end of the transect he selects another line adjacent to the one just walked and the process is repeated. This continues with each transect until the study areas have been inspected to the satisfaction of the field team. The archaeologist stops at various points to record information in his field book, information about land surface modification, ground surface visibility, stone raw materials present, soil types, vegetation, for example. Items and/or places of interest found by members of the field team are flagged (using stake flags) for the archaeologist to record, map and measure. The archaeologist collects the flags as he goes - no flags or flagging tape is left in the study areas. All information is recorded in a field book.

#### Test Pitting (if required)

Depending upon what is found during the ground surface surveys, it may become necessary to carry out sub-surface test pitting. **IF** required, a test-pitting program can be completed without an Aboriginal heritage impact permit (AHIP) in place, as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects In New South Wales*.

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At each location chosen a 50x50cm square is set up using a string line and then dug (using trowel and brush) to a depth where the team members are satisfied no archaeological items will be discovered. This depth coincides with the base of the first soil layer (the A horizon) and is usually between 100-500mm deep. The A horizon is dug out in layers called 'spits' or excavation units and each bucketful of soil is weighed before it is run through a 5mm sieve. Artefacts found during excavation are photographed where they were found, mapped in the pit, removed, measured, photographed again, bagged, labelled and returned to the pit. Artefacts found on the sieve are measured and photographed, bagged, labelled and returned to the pit. If possible the depth they came from is recorded. During the test-pitting process the archaeologist fills out paperwork for each excavation unit and completes the relevant documentation when artefacts are found.

## Research Methodology

### Aims

The aim of any archaeological study (research) is to try to find information that will answer questions about how Aboriginal people in the past moved through the landscape and how they used the landscape – in other words, how did Aboriginal people in the past interact with their environment? Answering questions about the past may also lead to increased knowledge of current Aboriginal use of the landscape and the connection of current-day Aboriginal people to sites in the district.

Questions of relevance here may include;

1. Have artefacts found remained *in situ* (that is, where they were originally placed or dropped), or have they been moved away from their original location by farming, urban development, erosion?
2. Would a detailed analysis (subject to the agreement of the RAPs):
  - Assist in identifying the uses Aboriginal people from the past gave these objects?
  - Highlight the tool-making technologies used by the local people?
  - Provide information about the range of raw materials used to make tools?
  - Provide information about the range of food resources used by the local people?

### Analysis

A spatial analysis of artefact location, (where across the land surface artefacts are found and how that position might relate to the position of other artefacts found), across the study area will be carried out. If agreed to by the RAPs and if at all possible, more detailed analysis of the artefacts themselves may be requested in order to attempt to answer the questions presented above.

## Artefact Management

During field survey no artefacts will be recovered until the appropriate Office of Environment and Heritage (OEH) protocols have been satisfied. Artefacts found will be recorded then left at their find spot, recovery and/or removal of artefacts can only be addressed within the conditions of an Aboriginal Heritage Impact Permit (AHIP). **IF** a test-pitting program is required all artefacts recovered will be dealt with in the following manner.

- Artefacts will be recorded using standard OEH site recording forms.
- Artefacts from each excavation spit within each square will be placed in a sealed plastic bag.
- Each bag is labelled with relevant information, and a similar label will be in the bag.
- All artefacts will be stored in a hard plastic container.

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- Excavation ends when enough information to satisfy OEH requirements has been recovered.
- When all required information has been gathered, all artefacts will be reburied on-site.

If reburial on-site is not possible, for whatever reason, (a large number of items to be processed is one possible example), materials will be temporarily stored at Remnant Archaeology's office in Armidale in a secured and locked cabinet. Within 7 days of recording being completed the artefacts will be reburied in their test pits and the locations noted for future reference. If reburial is not possible all materials will be subject to a care agreement for their future protection and this care agreement will be a condition of the AHIP. Site cards will be submitted to OEH and all findings are included in the report.

### Field Work Health and Safety

#### 1. How to maintain a safe working environment in the field

- Work with due care and consideration for your surroundings, yourself and other people.
- Bring to the attention of your team members any potential hazards identified.
- Comply with all safety requirements of your team, the landowner, the mining company.
- Remain in constant eye contact with other team members.
- In thick vegetation ensure you remain in constant hearing of other team members.
- Drink plenty of water - see heat stress section below.
- Let your team know if you are feeling unwell.
- Do not attempt physical activity you feel is beyond you or makes you feel uncomfortable.
- You always have access to a first aid kit if required.
- Only work within the area described at the beginning of the day.
- Do not commence fieldwork if you are hung over or under the influence of drugs.
- Do not commence work if you have a medical condition that may be affected by physical exercise or heat and would put your health in danger.

#### 2. Suitable clothing (Personal Protective Equipment or PPE) must be worn:

- A long-sleeved shirt - cotton preferred but not essential. High-vis colours to ensure visibility in the field and when working in the vicinity of heavy machinery. If no hi-vis shirt available, a hi-vis vest can be worn over an ordinary work shirt.
- Long trousers - may also be hi-vis but not essential.
- Sturdy, fully enclosed walking boots - can be steel-capped but not essential for the work.
- Broad-rimmed hat.
- Other items of PPE you may wish to consider include: gloves, earplugs, sunglasses, protective glasses, gators (extra leg protection), and sunscreen.

#### 3. Heat Stress

It is essential to be able to recognise the early signs of heat stress and to be able to promptly address them. Heat stress has a mortality rate up to 80% if prompt treatment is not immediately administered. Factors that may increase the risk of heat stress include:

- Some prescribed medicines including antihistamines, heart tablets and tranquilisers.
- Lack of acclimatisation - especially high risk within the first two days in the field.

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- Age - younger than 10 years of age and older than 45 years of age increases the risk.
- Poor physical fitness and obesity.
- Drug and/or alcohol abuse.
- Bacterial or viral infections and the drugs used to control them, diabetes, malnutrition, and lack of sleep.

There are three stages of heat stress to keep a lookout for:

- 1) Heat Cramps – Painful and at times severe cramps of the larger muscles used during the workday. Symptoms may include: muscle cramps, tiredness, weakness, prone to fainting, nausea/vomiting, dizziness, moist, cool skin.
- 2) Heat Exhaustion – The body's heat control system goes into overdrive. Symptoms may include: headache, unquenchable thirst, muscle and stomach cramps, profuse perspiration, pale, cool and clammy skin, weakness/fatigue, nausea, shortness of breath, rapid pulse, confusion, irritability.
- 3) Heat Stroke – A serious condition that can cause brain and/or kidney damage, or death. Symptoms include: headaches, nausea/vomiting, visual disturbance and/or mental confusion, aggression, seizures and/or loss of consciousness, body temperature above 40°C, rapid pulse, hot/dry, flushed skin, cardiac arrest

Factors that help prevent heat stress:

- Drink at least 3-6 glasses of water (500-1000ml) per working hour.
- Wear loose-fitting, full-length porous clothing, a broad-brimmed hat and sunglasses.
- Work in the cool of the day. Alternatively, avoid working in the hottest part of the day.
- Drink even when not thirsty.
- Salt tablets should not be used as a mineral replacement or to treat muscle cramps.
- Be aware of the symptoms of heat stress before commencing fieldwork.
- Ensure a source of clean, cool water is always on hand.
- Have frequent rest periods in cooler, shaded areas.
- Do not drink alcohol or soft drinks as fluid replacements.
- Act promptly if symptoms appear.
- Place sufferer in a vehicle with cool drinking water and with air-conditioning on.

### Personnel

The field survey work will be a collaborative effort between Graham Knuckey (Remnant Archaeology) and the stakeholders from the Aboriginal Community who are registered for the project - the registered Aboriginal parties (RAPs) as listed in Table 1. It will be the responsibility of the RAPs to select their representative to participate in any fieldwork. IF test-pitting becomes necessary it will be carried out as described above and will also be subject to further discussions between the RAPs, Remnant Archaeology and the Proponent before any excavations can begin.

### Logistics

The fieldwork set out in this notification letter is subject to a number of possible restrictions and the most obvious will be weather conditions. Fieldwork will not be carried out during inclement weather.

With regard to field survey, constraints may include:

- The level of expertise of the RAP representatives - Remnant recommends experienced field officers be selected as RAP representatives but also understands this decision is up to each RAP body and Remnant will support those decisions wherever possible.
- Issues relating to difficult topography and/or vehicle-landowner access.

With regard to test pit excavation (IF required), constraints may include:

6

- o Site preparation – the amount of time required to prepare the land surface for excavation.
- o Soil profile and density at each location - the degree of excavation difficulty.
- o Excavation depth - this will vary between trenches and test pits.
- o The frequency of objects/places located – the more found, the more time will be required.

Taking into consideration the potential constraints and the size of the study area involved, it is predicted one day will be required for the field survey, with a minimum of eight hours work time in the day. These eight hours do not include travel time to and from the work site. No predictions concerning time required for test-pitting can be calculated until it has been decided that test-pitting is required and secondly to what degree test-pitting will be carried out.

RAP representatives will be responsible for their own transport, personal protective equipment, drinking water, morning tea and lunches.

o0o

Remnant Archaeology has been engaged by Ballina Council to undertake the assessment and provide findings to OEH, which will include the views of Registered Aboriginal Parties (RAPs), for review and approval before work on the proposed project can proceed. A public notice regarding the proposal was placed in the Northern Star on Saturday 13 May 2017 and a stakeholder notification letter was circulated on 29 May 2017. In addition to Jali LALC, there have been 2 respondents, as listed in Table 1.

Yours Sincerely,



Graham KNUCKEY PhD

Archaeologist – Remnant Archaeology

7

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## 49

1701 LENNOX HEAD lake ainsworth cha FINAL 20171102.docx  
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# APPENDIX F AHIMS SEARCH RESULTS

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



Your Ref/PO Number : 1701 LENNOX HEAD  
Client Service ID : 297566

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
04-5-0305	Seven Mile Beach Fishing Traps	GDA	56	558100	6814119	Open site	Valid	Aboriginal Resource and Gathering : 1		
	<b>Contact</b>									
04-5-0095	Ballina N.R. Middens;	Recorders	Jali Local Aboriginal Land Council							
	<b>Contact</b>									
04-5-0167	AF-1	AGD	56	555000	6813800	Open site	Valid	Shell : -, Artefact : -	Midden	
	<b>Contact</b>									
04-5-0049	Lennox Head;	Recorders	L Turvey							
	<b>Contact</b>									
04-5-0094	Lennox Head Dune (Croftag Pty Ltd Aboriginal Site - Site 3)	AGD	56	556100	6815420	Open site	Valid	Artefact : 68		
	<b>Contact</b>									
04-5-0049	Lennox Head;	Recorders	Mr Adrian Piper							
	<b>Contact</b>									
04-5-0094	Lennox Head Dune (Croftag Pty Ltd Aboriginal Site - Site 3)	AGD	56	556470	6816120	Open site	Valid	Shell : -, Artefact : -	Midden	1957
	<b>Contact</b>									
04-5-0094	Lennox Head Dune (Croftag Pty Ltd Aboriginal Site - Site 3)	Recorders	Graeme Bailey							
	<b>Contact</b>									
04-5-0094	Lennox Head Dune (Croftag Pty Ltd Aboriginal Site - Site 3)	AGD	56	556800	6815120	Open site	Valid	Artefact : -, Burial : -	Burial/s, Open Camp Site	
	<b>Contact</b>									
04-5-0009	Lennox Head Public School Lennox Head	Recorders	Mary Dallas Consulting Archaeologists, Kerry Navin							
	<b>Contact</b>									
04-5-0143	Site 1, Fern St;	AGD	56	557300	6813720	Open site	Valid	Artefact : -	Open Camp Site	48,51,540,699, 700,1209,1237, 1254,1926,203 7,2182
	<b>Contact</b>									
04-5-0048	Lennox Head;	Recorders	Unknown Author							
	<b>Contact</b>									
04-5-0108	Barrett 2;	AGD	56	557300	6814575	Open site	Valid	Artefact : -	Open Camp Site	
	<b>Contact</b>									
04-5-0106	Barrett 3;	Recorders	Mr Adrian Piper							
	<b>Contact</b>									
04-5-0107	Barrett 5;	AGD	56	557320	6813900	Open site	Valid	Shell : -, Artefact : -	Midden	1957
	<b>Contact</b>									
04-5-0105	Barrett 4;	AGD	Graeme Bailey							
	<b>Contact</b>									
04-5-0106	Barrett 3;	AGD	56	557350	6815230	Open site	Valid	Artefact : -	Open Camp Site	
	<b>Contact</b>									
04-5-0107	Barrett 5;	Recorders	Ms Jacqueline Collins							
	<b>Contact</b>									
04-5-0105	Barrett 4;	AGD	56	557370	6815200	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<b>Contact</b>									
04-5-0092	BARRETT 6	Recorders	Ms Jacqueline Collins							
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	AGD	56	557400	6814920	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	Recorders	Ms Jacqueline Collins							
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	AGD	56	557460	6815250	Open site	Valid	Artefact : -	Open Camp Site	
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	Recorders	Ms Jacqueline Collins							
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	AGD	56	557550	6814850	Open site	Valid	Shell : -, Artefact : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial, Midden	206,473
	<b>Contact</b>									
04-5-0029	Lennox Head near Gibbons Street (NPWS Lennox Head Bora Ring)	Recorders	J A Stirling, R A Buchan, Alexandra Kelly							
	<b>Contact</b>									

Report generated by AHIMS Web Service on 23/08/2017 for Graham Knuckey for the following area at Datum : GDA, Zone : 56, Eastings : 555888 - 559894, Northings : 6813964 - 6817941 with a Buffer of 1000 meters. Additional Info : Aboriginal heritage assessment. Number of Aboriginal sites and Aboriginal objects found is 20

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.

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



Your Ref/PO Number : 1701 LENNOX HEAD  
Client Service ID : 297566

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
04-5-0030	Lake Ainsworth; Contact	AGD Recorders	56 JA Starling	557850	6815170	Open site	Valid	Artefact :-	Open Camp Site	
04-5-0031	Lennox Head Contact	AGD Recorders	56 Unknown Author	557860	6814950	Open site	Valid	Artefact :-	Open Camp Site	
04-5-0052	Lennox Head; Contact	AGD Recorders	56 Graeme Bailey	558000	6813200	Open site	Valid	Shell :- Artefact :-	Midden	1957
04-5-0018	Lennox Head; Contact	AGD Recorders	56 Isabel McBryde	558100	6814500	Open site	Valid	Burial :-	Burial/s	
04-5-0054	Lennox Head; Contact	AGD Recorders	56 Graeme Bailey	558500	6813000	Open site	Valid	Shell :- Artefact :-	Midden	1957,100530
04-5-0017	North Creek Contact	AGD Recorders	56 JA Starling	558600	6812900	Open site	Not a Site	Artefact :-	Open Camp Site	100530

Report generated by AHIMS Web Service on 23/08/2017 for Graham Knuckey for the following area at Datum :GDA, Zone : 56, Eastings : 555888 - 559894, Northings : 6813964 - 6817941 with a Buffer of 1000 meters. Additional Info : Aboriginal heritage assessment. Number of Aboriginal sites and Aboriginal objects found is 20

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.