

Aboriginal Cultural Heritage Assessment

Proposed Residential Subdivision

Coastal Grove

Survey Street, Lennox Head, NSW

Dominic Steele Consulting Archaeology

September 2006

Report to DM & RD Dossor

Aboriginal Cultural Heritage Assessment Report

Proposed Residential Subdivision, Coastal Grove
1 Survey Street, Lennox Head, NSW
September 2006

Executive Summary

Background to this Report

This report has been prepared for DM and RD Dosser and presents the results of an *Aboriginal Cultural Heritage Assessment Report* that has recently been completed for a parcel of land proposed for future residential subdivision located at No 1 Survey Street in the Northern NSW coastal township of Lennox Head.

In response to a *Preliminary Project Application* (Application Number: 06_0002) lodged for the proposal with the *NSW Department of Planning* (DoP), the *Director-General* of this agency issued *Requirements* (DGR's) that needed to be addressed as part of the *Environmental Assessment* process for the proposed subdivision on May 15 2006.

This report has therefore been prepared in compliance with the *Director-General's* Aboriginal cultural heritage requirements (DGR's Point No 10), and addresses the provisions of the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* document prepared by the *Department of Environment and Conservation* in 2005. These issues are considered in detail in following sections of this report.

Aboriginal Cultural Heritage Assessment Process

The current Aboriginal cultural heritage assessment project commenced with background research being undertaken during May 2006 that reviewed previous Aboriginal archaeological studies completed in the local landscape and the preparation of an evaluation of the principal findings of these investigations relative to the current proposal.

The objectives of this initial research were to provide a base-line context for assessing the documented and/or potential Aboriginal cultural heritage sensitivity of the subject land relative to the proposed residential subdivision, and to inform all stakeholders about Aboriginal cultural heritage issues that may need to be addressed in the future.

A subsequent site survey and assessment of the proposed development area was duly completed in August 2006 in partnership with the *Jali Local Aboriginal Land Council* (JLALC) who represents Aboriginal cultural heritage interests in this area of Ballina Shire. The Land Council have reported on their independent views on this project as appended.

Site Survey Results

The proposed development area at Lennox Head was originally subject to an Aboriginal archaeological and cultural heritage assessment undertaken in 1997 (Piper 1997). This previous study did not result in the location of any Aboriginal sites or objects to occur on the study land, or in the identification of any other 'clear and obvious' areas of potential Aboriginal cultural sensitivity or significance to occur at the place

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It was therefore concluded at this time (in 1997) that there were no Aboriginal cultural heritage constraints to the future development of the study area proceeding as planned. *Jali Local Aboriginal Land Council* endorsed this conclusion as reported for the subject land in the 1997 report (Piper 1997).

The current study was undertaken over the period spanning May to August 2006 with *Jali Land Council* and revealed largely similar results and conclusions to those previously provided by the original 1997 investigations prepared by the *Land Council* and Piper (1997).

Namely, no previously undocumented sites or items of Aboriginal cultural heritage have been located in the time frame spanning 1997 and 2006, and no new areas of Aboriginal archaeological potential sensitivity have been identified during the course of the 2006 consultation process undertaken with the *Jali Local Aboriginal Land Council* as reported in this report.

Outcomes of this Current Assessment

No previously documented and/or unknown Aboriginal cultural heritage sites or *specific* areas of potential cultural heritage sensitivity have been identified to occur on the subject land during the current study undertaken DSCA and the *Jali LALC*.

On this basis (and in consideration of the results of the previous assessment of the site as reported in 1997 again completed with the *Jali Land Council*), it is concluded that there are no apparent Aboriginal archaeological or other cultural heritage constraints to the development proposal proceeding as currently planned.

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1.0 Introduction

1.1 Project Background

SAKE Development Pty Ltd has submitted on behalf of DM and RD Dossor a *Development Proposal* to the *NSW Department of Planning (DoP)* that seeks approval for the residential subdivision of a parcel of former coastal hinterland farming land located at 1 Survey Street, Lennox Head. The *Director-General* of this agency has outlined a number of requirements (DGRs) that must be addressed as part of the *Environmental Assessment* process for the proposal.

Point 10 of the DGRs (Aboriginal Cultural Heritage) stipulates that the proposal needs to address the provisions of the *Department of Environment and Conservation (DEC) Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* prepared by the DEC in 2005.

Dominic Steele Consulting Archaeology (DSCA) has been commissioned to undertake an Aboriginal archaeological heritage impact assessment in collaboration with the *Jali Local Aboriginal Land Council (JLALC)* to inform the planning process, and to ensure that the proposed future subdivision and residential development of the subject land will not have an adverse impact upon any Aboriginal cultural heritage values at the place.

1.2 The Site

The site is located at the eastern end of Survey Street at Lennox Head on the North Coast of NSW and consists of two parcels of land; one that is currently zoned for *Residential Purposes* (that is approximately 10ha in size) and a smaller parcel of 4.71 ha on the northern escarpment that is currently zoned *Environmental Protection*. The real property description for the zoned residential land is Lot 2 in DP 622475 (see **Figures 1, 3 and 4**).

The land is situated in a small valley located behind an elevated bluff and is bisected by a low order watercourse that runs approximately north-south through the property. The local landscape surrounding the watercourse is undulating and rises generally towards ridgelines to the north, east and west. The property also falls to the south where the classification of the watercourse changes from drainage line to creek.

The land has been used for small scale grazing for much of the 20th century and currently retains a small herd of cattle. The site is well watered, largely covered by low grass, and is skirted by relatively recently planted groves of trees.

1.3 Development Proposal

The development proposal for the subject land constitutes a small-scale residential subdivision that has potential for the creation of approximately 45 allotments ranging in size from between 600sqm to up to 3,000 sqm in size.

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As currently planned, the subdivision would involve the implementation of standard civil works that would include the establishment of access roads to the individual lots, open-area parks, needed storm water facilities and associated water, power and sanitation services to each of the proposed blocks (see **Figure 2**).

1.4 Statutory Protection for Aboriginal Heritage

Two pieces of legislation provide automatic statutory protection for Aboriginal heritage and define requirements for its management in New South Wales. These are:

- The *National Parks and Wildlife Act* (1974); &
- The *Environmental Planning and Assessment Act* (1979).

The implications of these statutory controls (specifically the NPW Act) within the context of the current development proposal are outlined below.

1.4.1 National Parks & Wildlife Act

The *National Parks & Wildlife Act* (1974), administered by the *Department of Environment and Conservation* (DEC), provides automatic statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the indigenous occupation of NSW) under *Section 90* of the Act, and for 'Aboriginal Places' (areas of cultural significance to the Aboriginal community) under *Section 84*.

The Act defines an Aboriginal 'object' as:

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

In NSW, it is an offence (without the Minister's consent) to:

damage, deface or destroy Aboriginal sites without the prior consent of the Director-General of the National Parks and Wildlife Service (now the DEC).

The protection provided to Aboriginal objects applies irrespective of the level of their significance (cultural importance) or issues of land tenure. However, areas are only gazetted as Aboriginal Places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was, and/or is, of special significance to Aboriginal culture.

1.4.2 Environmental Planning & Assessment Act

In contrast with the NPW Act, the EP&A Act (as recently amended in 2005) is designed to cater for heritage issues within the context of new development projects.

This act has three main parts with direct relevance to Aboriginal cultural heritage:

- *Part III* governs the preparation of planning instruments;

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- *Part IV* relates to the development assessment process for local government (consent) authorities;
- *Part V* relates to activity approvals by governing (determining) authorities.

The current proposal falls under the recently amended Part 3A of the EP&A Act 1979 (*'Major Development and Infrastructure Proposals - Coastal'*) whereby approval from the Minister for planning is required for projects that are identified to fall under the *State Environmental Planning Policy* (Major projects 2005).¹

1.4.3 Implications

Damage, destruction or removal of any Aboriginal 'places' or 'objects' is only permitted where a Permit or Consent has been issued by the *Director-General* of the DEC according to Sections 87 and 90 of the *NSW National Parks & Wildlife Act 1974* (as amended). NPWS Permits and Consents are only granted where sufficient information is supplied in written form to the Director-General of the DEC from Aboriginal stakeholders, archaeologists and developers that demonstrate accuracy and transparency in the site assessment process and the good faith intended by each of these parties in applying for consent to either move, disturb, or destroy statutorily protected objects.

Section 75U of the EP&A Act (1979) no longer requires the proponent to obtain S87 or S90 Permits however the *Department of Planning* can require these to be sought as a condition of development consent as appropriate.

Best practice advocates that development impact to documented and/or potential sites of Aboriginal cultural heritage sensitivity be avoided where practicable and/or mitigated at the minimum, and that all decisions made for either course of action be made consequent to direct guidance provided by Aboriginal stakeholders.

1.5 Report Objectives

The objectives of the current study have been to provide an Aboriginal archaeological survey and cultural heritage assessment of the subject land according to the following methodology:

Aboriginal Consultation

- To initiate consultation with the *Jali Local Aboriginal Land Council* (JLALC) and to involve JLALC directly in the field survey of the subject land.
- To invite any Aboriginal cultural or historical knowledge about the subject land from the JLALC (as per their previous study in 1997 (and incorporate the Aboriginal cultural

¹ The Planning NSW Website (www.planning.nsw.gov.au) indicates that the Minister of Planning approves major infrastructure or other major projects of State or regional environmental planning significance, in accordance with the EP&A Act 1979. These projects are assessed under either Part 3A of the Act (dealing with major infrastructure projects) or Part 4 (Development Assessment) of the Act.

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views, possible concerns and recommendations provided by the JLALC into the assessment process for the current study.

Background Research

- To undertake background research into the location and nature of any previously recorded Aboriginal archaeological sites or documented areas of Aboriginal historical association that may be present either within the study area or in areas immediately adjacent to the subject land.
- From a review of the known archaeology and Aboriginal history of the local region, to prepare a predictive model describing the potential archaeological sensitivity of the study area and to predict the potential for unrecorded sites to occur within the proposed impact zones at the place.

Site Survey & Assessment

- To undertake an archaeological survey of the study area in partnership with a representative of the JLALC (that follows up from the earlier 1997 study).
- To identify and record any extant sites or areas of archaeological/Aboriginal cultural heritage sensitivity and assess their significance as may be highlighted.
- To provide an assessment of the potential for undetected archaeological evidence to occur within the locations to be impacted by the proposed residential development.

Analysis, Evaluation and Report

- To prepare a report detailing the outcomes of the Aboriginal community consultation; the results of the field survey; and an Aboriginal cultural heritage assessment of the study area that meets the requirements of the NPWS *Aboriginal Cultural Heritage Standards & Guidelines Kit* (NPWS 1997).²
- To address the *Director-General's* Aboriginal cultural heritage requirements (DGR's Point No 10) and the provisions of the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* document prepared by the *Department of Environment and Conservation* in 2005.
- To provide management options and recommendations that present an appropriate framework for the protection of any identified items of Aboriginal cultural heritage that may be located within the study area and/or any in areas of potential cultural heritage sensitivity that may be identified with the *Jali Land Council*.

² Some components of this kit, such as the "Guidelines for Archaeological Survey Reporting" are still in draft form and have not been finalised. Other sections such as the "Standards for Archaeological Practice in Aboriginal Heritage Management" were intended as updatable guides though no supplement has been provided since the original edition in 1997. These documents are assumed therefore to be continuing valid expressions of best archaeological practice according to the NPWS (now Department of Environment & Conservation).

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- To provide advice that guides the management of any documented/undetected archaeological sites or objects that may be identified in the course of future construction works.

1.6 Aboriginal Consultation

Recent changes to Aboriginal cultural heritage management policies introduced by the DEC include a requirement that from 1 January 2005, each new project should extend the opportunity for any Aboriginal individual or group to express an interest in being involved in the assessment process and to have due input in decision making where DEC S87/90 Permits are likely to be required. This process is generally facilitated through public advertisement.

As of August 2006, the Aboriginal community and Aboriginal archaeological consultants are still awaiting finalised guidelines to give precise direction to this process and to establish clear methods of determining the appropriateness of the Aboriginal individuals/stakeholder groups who reply to expressions of interest and the way in which respondents should be involved in Aboriginal archaeological projects.

In the case of this project, it was deemed appropriate to consult directly with JLALC. The rationale for this was that:

1. The proposal to develop the land is not a 'new' project and has been in progress since the mid 1990s (well before the new legislation was instigated).
2. The JALI LALC has been involved in earlier stages of the project. The Land Council is endorsed by Council and the DEC, and has demonstrated in the past a sound commitment to the ongoing protection, conservation and management of Aboriginal cultural heritage sites in the local landscape.
3. The archaeological survey of the subject land undertaken in 1997 (in conjunction with JALI LALC) identified no Aboriginal cultural heritage sites, items or areas of potential significance or sensitivity.
4. It appeared unlikely (based on the previous assessment of the site) that a DEC S87/S90 Permits would be required to permit approval of the proposed development.

1.7 Report Outline

This report presents the following:

- An introduction to the project (**Section 1.0**).
- A brief description of the environmental setting of the subject land that includes a review of its geology, topography, hydrology, vegetation and soils. This section also provides a brief summary of the land use history of the subject land (**Section 2.0**).

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- A summary of the local Aboriginal archaeological context relevant to the project, and a prediction of the types of archaeological evidence that may be present within the subject land (**Section 3.0**).
- The methods employed to survey and record the study area, and the results of the site inspection (**Section 4.0**).
- The results and conclusions that have been developed for the project and an evaluation of Aboriginal archaeological significance and sensitivity relative to the works proposed. This is presented in the form of a *Statement of Heritage Impact* (**Section 5.0**).
- The provision of management recommendations that detail advice on the nature and scope of further Aboriginal archaeological requirements that may potentially be required prior to and/or during the implementation of the proposal (**Section 6.0**).
- References cited in this report (**Section 7.0**).
- Correspondence prepared by the *Jali Local Aboriginal Land Council* (**Appendix 1**).

1.8 Authorship and Acknowledgments

This report has been prepared by Dominic Steele, Dan Tuck and Paul Irish of *Dominic Steele Consulting Archaeology* (DSCA).

DSCA would like to thank the following people for the valuable assistance that they have provided in the course of completing this study.

Mr Artie Ferguson Jali Local Aboriginal Land Council.

Mr Gavin Brown Jali Local Aboriginal Land Council.

Ms Sarah Kelly SAKE Development Pty Ltd.

Mr Ian Watson Site Manager.

1.9 Summary of Conclusions and Recommendations

The current survey did not result in the location any items of Aboriginal cultural heritage or in the identification of any areas of Aboriginal archaeological potential. No items of Aboriginal cultural heritage have previously been registered on the *DEC AHIMS Aboriginal Sites Register* within (or immediately adjacent to) the subject land. Furthermore, the site contains no areas of known Aboriginal historical association or cultural significance based on background research and input from JLALC during the course of the current assessment.

The subject land has been subject to grazing for the best part of century, and consists of undulating to sloping land set about a minor watercourse that drains surrounding built areas. Although surface visibility was limited by pasture grass, the site has been disturbed by grazing

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activity and runoff erosion and no stone artefacts or other evidence of Aboriginal use was found during the course of the survey.

Although it is likely that the general area was used by Aboriginal people making use of the Lennox Head coastline and hinterland, the subject land is unlikely to have been used intensively and there is little likelihood that any remains of occasional or incidental use exist *in situ*, given the grazing history and slope erosion.

Consequently, it is concluded that there are no 'clear and obvious' adverse Aboriginal cultural heritage impacts anticipated from the proposed development as assessed in this report.

In summary it is recommended that:

- I No Aboriginal archaeological constraints have been identified during the completion of this study that would prevent the proposed residential subdivision of the subject land proceeding as planned.
- II No further Aboriginal archaeological work is required to be undertaken prior to the commencement of development works should consent be granted.
- III The site is assessed to have low archaeological potential with the remote possibility to contain (at best) an extremely sparse number of undetected Aboriginal finds that would most likely be present within disturbed contexts.
- IV In the unexpected circumstance that any Aboriginal objects were unearthed during future development works, it is recommended that activities should temporarily cease within the immediate vicinity of the find locality, be relocated to other areas of the site (allowing for a curtilage of at least 50m), and the DEC be contacted to advise on the appropriate course of action to allow the JLALC to record and collect the identified item(s).

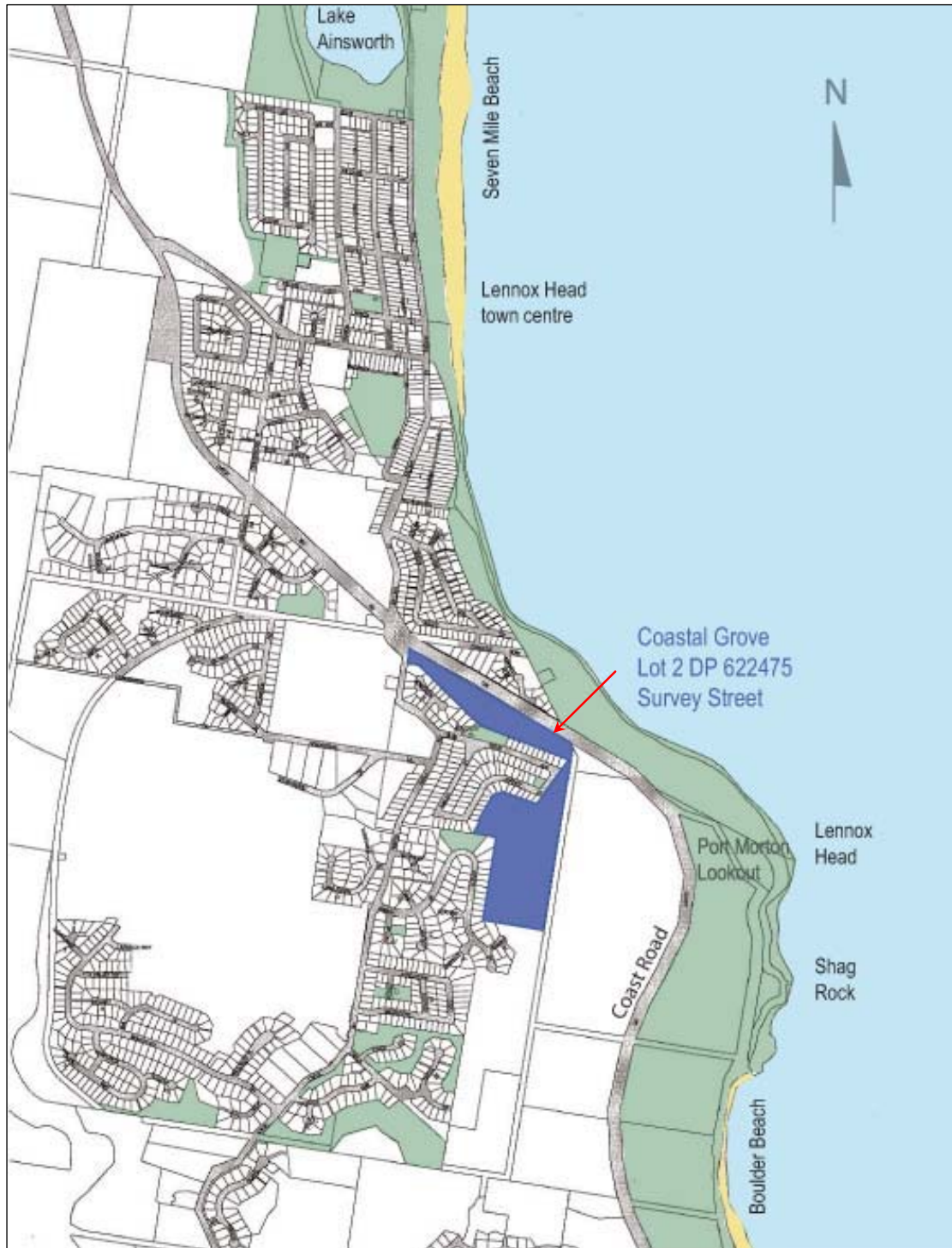
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Figure 1: Plan of the Study Area (Ballina Shire Council 2006)



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Figure 3: Air Photo of Lennox Headland & Surrounds (c2002)



Figure 4: Air Photo of the Study Area (c2002)



2.0 Environmental and Historical Context

2.1 Environment & Archaeological Patterning

Ongoing archaeological research in NSW demonstrates that the original (pre-European contact) environment strongly influenced not only the availability of resources to Aboriginal people in the past, but also largely determines what types of archaeological sites are likely to be located when a given parcel of land is inspected to assess potential Aboriginal heritage sensitivity.

The distribution and availability of resources such as drinking water, plant and animal foods, raw materials of stone, wood and vegetable fibre used for tool production and maintenance are all influenced by the nature of soils, the composition of vegetation cover and climatic characteristics of a given region. The location of different site-types (such as open campsites, shell middens, scarred trees, axe grinding grooves and rock engravings etc) that may occur in the landscape are therefore influenced by factors such as these, along with a range of other associated features which are specific to different land-systems and bedrock geologies.

Furthermore, the nature and extent to which a given landscape has been subject to impacts as a result of post-Contact land-use practices will also define what types of Aboriginal archaeological evidence is likely to survive.

Documenting the environmental context of a study region is therefore an integral procedure necessary for understanding potential past Aboriginal land-use practices and/or predicting archaeological site distribution patterns.

The information outlined below is considered to be relevant to the assessment of archaeological potential, site visibility, and likely levels of disturbance within the context of the current study.

2.2 Geology, Topography, Hydrology, Vegetation and Soils

The survey area consists of an envelope of land in a narrow valley in Lennox Head. An encircling ridge that rises to the north, east, and west forms the valley. The main feature of the valley is a narrow, low-order watercourse, which runs approximately north-south and functions as a drainage line for surrounding developed areas. This feature forms a creek line at the southern end of the property where it picks up runoff from two small springs and opens to a coastal wetland that fronts the northern end of the narrow coastal plain behind Boulder Beach.

The majority of the site has been cleared of vegetation for grazing purposes and is dominated by dense pasture grass cover. The exception is a stand of littoral rainforest species (0.2ha) dominated by Tuckeroo (*Cupaniopsis anacardodes*) in the southeast corner of the study area (Environmental protection Zone), and new stands of vegetation around the margins of the site.

It is probable that the entire site was vegetated with littoral and sub-tropical rainforest prior to selection and clearance by European settlers in the 19th century. The study area is located on

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the eastern extent of what has been referred to as the *Big Scrub* - a belt of sub-tropical rainforest extending from Lismore to the vicinity of Byron Bay. The pre-clearing vegetation regime is therefore likely to have featured sub-tropical and littoral rainforest tree species, with an under-storey of vines, palms and lilies (Piper 1997:9).

The 1:250,000 scale ("Murwillumbah") geology map of the area indicates the site is underlain by weathered volcanic rocks of the Tertiary Lismore Basalt, described as bedded basalt flows with layers of volcanic ash, agglomerate and sedimentary rocks. Geotechnical test pitting recently conducted by Coffey Partners (2006b) indicate the following generalised soil profile:

- **Topsoil** - 0.1 to 0.4m thick. Generally comprising red-brown and grey gravelly silt clay of high plasticity, (typical unit thickness observed was 0.2m).
- **Residual Soil** - 0.7 to >3m. Orange-brown and grey, thick gravelly clay, with high plasticity. Contains fine to coarse grained gravels - extent of gravel depends on the topographic location on site.
- **Bedrock** - Highly weathered red- brown and grey-brown basalt. Low to medium strength, highly to slightly fractured. Matrix includes fine to cobble size particles.

Exposures at various locations across the site indicate an upper soil profile is characterised by an A-horizon of grey-brown clayey loam overlying a B-horizon of moderately stiff red-orange clay with inclusions of rounded granite cobbles and boulders (see **Figure 5**).

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Figure 5: Soil Profile in an Eroded Drainage Line on the Western Side of the Study Area (view SW)



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2.3 Aboriginal History

People, Settlement & Movement

The Aboriginal people of the Lower Richmond were part of a large linguistic group generally referred to as the *Bundjalung*. The Bundjalung are believed to have occupied the area between the Clarence and Logan Rivers extending west to around Tenterfield (Crowley 1978; Calley 1959, Longhurst 1980; Heron 1993).³ See **Figure 6**.

The Bundjalung

The *Bundjalung* nation was composed of around 20 dialectic groups, organised along patrilineal and patrilocal lines, and comprising interlinked family groups, who occupied distinct areas within *Bundjalung* territory (Sharpe 1985:112). The Ballina Shire is located largely within the territory of the *Arakwal* people who occupied an area extending from Byron Bay south to Ballina and inland to Woodburn, Coraki and Lismore (Tindale 1974; Crowley 1978).

The functional units within each dialectic grouping are generally referred to as clans - small extended family groupings. Land is understood to have belonged to each clan group according to boundaries established in mythology (Creamer 1984). In the post contact period, clans, and groups of clans, were often referred to as *tribes* or *hordes* by early white settlers and observers. The clan territory of a distinct *Ballina Horde* extended is understood to have extended from the Richmond River through to Lennox Head and west to the line of the *Big Scrub* (Ainsworth 1922: 28-31).

The Ballina Horde

Early sources suggest that the *Ballina Horde* remained within a defined territory in small family groups which combined *en masse* at times of abundant food resources. An early Ballina resident, J. Ainsworth (1922), is one of the main sources for information in the post-contact period and recorded that:

The tribe usually camped in divisions at different places excepting during oyster season, when they assembled unitedly at Chikiaba, on North Creek where the large oyster banks on the foreshores to this day mark the old feeding ground.

Prehistoric and post-contact populations on the NSW North Coast have been assessed as relatively high, reflecting both the wide variety and high productivity of coastal ecologies. Densities on the coastal plain have been estimated at one person per 0.4-2.6 square kilometre.

Ainsworth (1922) recorded that even well into the post-contact period local Aboriginal populations were high. In 1847 there were between 400 & 500 in the 'native tribes' belonging to East and West Ballina, giving an approximate population density for the immediate resource rich Ballina area of between six and seven people per square mile, or one person

³ Also Badjelang, Budulung Buggul, Bandjalang, Bandjalong, Bunjellung, Bundela, & Bundel.

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per 0.2 square kilometre (Belshaw 1978: 72; Pierce 1971). The Ballina area is therefore believed to have been one of the most highly populated areas on the North Coast.

Movement & Contact

Contact between local clans such as the *Ballina Horde* and more distant groups took place for the purpose of exchange, inter-marriage, armed conflict and at times of seasonally abundant food supply.

Tribal movement across and beyond tribal boundaries in northern NSW and southeast Queensland has been documented by Petrie (1904) and Bundock (1898). Mary Bundock recorded the Aborigines from the Richmond River attending bunya nut feasts in southeast Queensland - a gathering that occurred every four years and promoted both trade and inter-group kinship across a vast area of Australia's East Coast.

Prehistoric Economy

Ainsworth (1922) recorded the economy of the Ballina horde as primarily:

... fish and oyster and the varied products of the chase

He described the spearing of salmon on the beaches and 'netting of estuarine fish by means of a tow row' - a finely meshed net attached to a stick of bamboo bent in the shape of a bow (Ainsworth 1922: 28- 31). He is not specific about which estuarine fish were caught by this method, although an excavation of a North Creek shell midden did indicate the presence of flathead and bream (Bailey 1975: 55).

Ainsworth places an emphasis on the consumption of oysters to the exclusion of other estuarine species, coastal rock platform species, and the beach dwelling pipi, all of which are recorded in North Coast shell middens. (Bailey 1975; Campbell 1982; Hughes 1991). Modern researchers do support Ainsworth's assessment as to the prominence of oyster in the diet of the *Ballina horde* as rock oyster generally comprises the greatest proportion of estuarine shellfish represented in regional Aboriginal shell middens (Hughes 1991).

The role of terrestrial foods in Ainsworth's account includes '*pademelons, wallabies, bandicoots, iguanas etc.*' He emphasizes that flying foxes were a prolific source of food supply, and that they were easily brought down with the boomerang and 'pademelon stick'.

Vegetable foods are given less importance in his recollections, though he did refer to yam obtainable in the scrubs and a 'bread' derived from nuts which grew on the coastal headlands. Whether Ainsworth's recollections hold true is uncertain. There was definite contemporary recorder bias towards hunting activity in the 19th century and vegetable remains rarely survive on archaeological sites in any other form than stone tool residue.

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2.4 European History

Land Ownership

The subject site consists now of one consolidated lot which was previously defined as three separate lots, namely Lot 8 DP237480 (Lot 8) & Portion 56 (Portion 56) Parish Ballina (which became Lot 1 DP 587685 (Lot 1)) and Lot 61 DP242183 (Lot 61). Lot 8 and Lot 61 were Crown Land until 1911, and Portion 56 was Crown Land until 1902. Each lot was granted to *The Commercial Banking Company of Sydney Limited*, and passed on to Edward Henderson, a farmer, in the same year. In 1972, Lot 8 and Portion 56 became Lot 1, and in 1982 Lot 1 and Lot 62 became the current lot (Lot 2 DP622475).

Until 1972, all three lots had very similar ownership; Edward Henderson (farmer) until 1954, then Joseph Henderson (farmer), Edward Henderson (picture operator) and Laura Henderson (spinster) until 1962. From 1962 to 1972, all three lots were owned by Jack Easter (farmer). In 1972, Lot 61 passed over to Cyril Skimmings, an accountant, who owned that lot until 1979. Michael and Wendy Mazzer, bought Lot 61 in 1979, and owned it until 1982.

In 1972, Lot 8 and Portion 56 became Lot 1, and Lot 1 was owned by Stanley Dorbon (clerk), until 1979. In 1979 Lot 1 became owned by John Gunn, a panel beater, and Alana Gunn. In 1981, Ruth and David Dossor bought Lot 1.

In 1982 all three lots became Lot 2 DP622475, which was owned by David and Ruth Dossor and Michael and Wendy Mazzer. Later in 1982, David and Ruth Dossor became the sole owners, and have remained the site owners until today.

Landuse

European land use within the subject land has included vegetation clearance (possibly of littoral and sub-tropical rainforest) and cattle grazing. The latter has occurred on the site in association with dairying for a considerable time. The subject site was formerly part of the extensive farmlands of local 19th century pioneer family the Hayters (Ian Watson pers. comm. 22/7/06).

The watercourse creekline that transverses the site is essentially a drainage line that has been amplified by the effects of runoff (via a council stormwater drain) from surrounding, more elevated developed areas. Much of the surrounding area was developed from the 1980s and several stormwater lines run directly into the property.

On the basis of topography, the likely former vegetation regime prior to clearing, and known land use, it is not expected that extensive or significant Aboriginal archaeological remains exist within the study area. It is further anticipated that those artefacts that may have been deposited incidentally by Aboriginal people are unlikely to be in situ and have likely been impacted upon or destroyed by clearing (possibly repeated), erosion and localised earthworks/disturbance.

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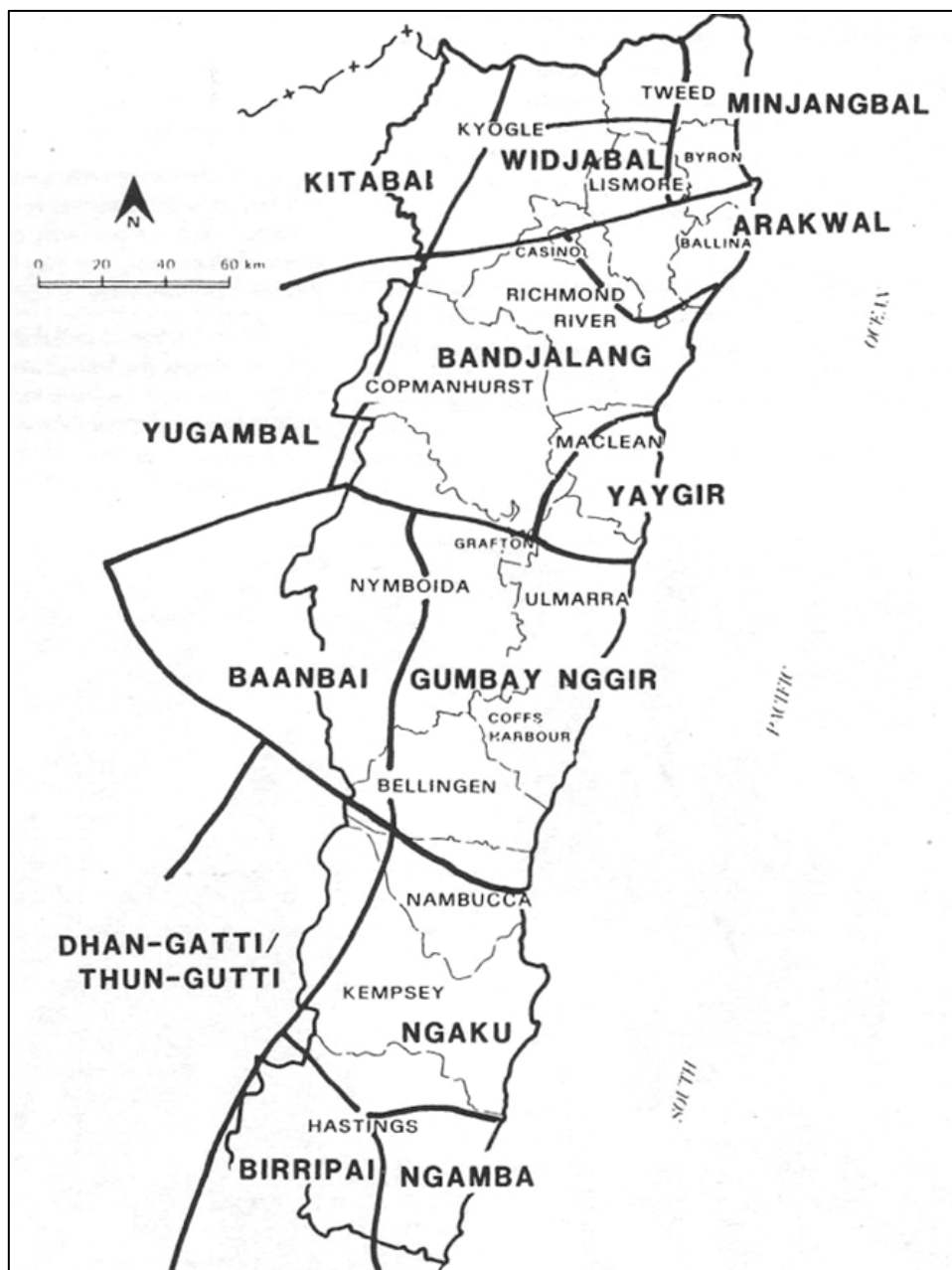


Figure 6: Aboriginal Tribes of the North Coast Shown in Relation to the Various Districts (Based on Tindale – NSW NPWS, 1989: 6)

3.0 Archaeological Overview

3.1 Regional Archaeological Context

Aboriginal populations are known to have inhabited the coastal areas of northern New South Wales and southern Queensland for over 20,000 years. Archaeological excavations conducted on North Stradbroke Island off the southern coast of Queensland have revealed occupation dates of 22,000 years BP. At this time, sea level was much lower and the island would have been a coastal promontory (Neal and Stock 1986).

Melting of the continental ice sheets during the Post Glacial Marine Transgression created a rise in sea level that occurred over several thousand years. In the northern NSW and southern QLD region, sea levels are reputed to have risen several kilometres, creating Moreton Bay and associated islands and covering an 8km wide strip of low lying land off Cape Byron.

It is generally believed that the sea reached its present level approximately 6-7000 years BP and has not fluctuated more than a few metres since that time. The start of the current period of equilibrium is often referred to as the Holocene stillstand.

Not surprisingly, the majority of Aboriginal sites documented in the northern NSW coastal region – like most Aboriginal sites on the south east coast – date to within the period when the sea reached its present level. It is likely that a considerable number of earlier Pleistocene coastal sites once existed within the region but such sites are likely to have been submerged by the rising waters of the Holocene marine transgression.

Rising Seal Levels & Changing Lifestyles

During the marine transgression, coastal Aboriginal populations were forced to adjust to the changing landscape and are believed to have been pushed inland as the sea rose (Hall 1990; Hall and Hiscock 1988). At around 6000 years BP, coastal populations left the smaller and newly-created islands that rose above the submerged landscape and adjusted to life near to the present coastal strip. Through time, regionally isolated settlement-subsistence systems and associated socio-political entities are believed to have developed (McNiven 1991).

By about 2,500 years BP, it appears that populations began returning to the small coastal islands and a more intensive exploitation of coastal resources commenced. Evidence from coastal midden sites excavated in northern New South Wales generally show a particular focus on coastal shellfish gathering practises at this time as well as changes to the Aboriginal stone toolkit including the incorporation of microliths (small tools) such as backed blades; eloueras; and edge-ground axes (McCarthy 1976). Beach foreshore archaeological sites have generally reflected this more recent phase of occupation, while estuarine sites often demonstrate greater antiquity. Beach foredune sites typically feature narrow bands of pipi shell or surface scatters of pipi and a few stone artefacts. Pipi middens at South Ballina and at Broadwater have been dated to 260 BP and 200 BP. (McBryde 1982: 77).

As mentioned previously, historical accounts describe the North Coast as having supported one of the most concentrated prehistoric post-contact Aboriginal populations in Australia, with

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densities in resource rich areas such as Ballina approaching one person per 0.2 square kilometres (Ainsworth 1922, Pierce 1971). In foothill areas however, which lacked the broad subsistence base available on the coast, populations are generally believed to have been smaller, at around one person per 5 square kilometres (Pierce 1971). Beyond the coast and adjacent foothills, it has been suggested that the rugged mountainous areas were only very sparsely populated or visited only infrequently, and that pockets of rainforest may have been uninhabited or inhabited only irregularly (Calley 1959; Belshaw 1978).

Prehistoric Patterning

Models of possible patterns of settlement and movement in the region vary considerably. McBryde (1974) suggests that clan groups moved between the coast and foothills of the coastal ranges on a seasonal basis (see also Flood 1982; Poiner 1976). A second model suggests that movement of coastal people was not frequent, and that semi-sedentary groups moved longitudinally within the coastal plain rather than to the upper rivers (Coleman 1982). Godwin (1990) argues that neither model is well supported by the archaeological evidence and that local conditions dictated exploitation strategies on the north coast of NSW.

Trade & Exchange

There is evidence for contact and exchange of goods between the Aborigines of the Tweed, Richmond and Clarence Valleys. Axes made of greywacke from the Clarence gravels were recovered in the Richmond and Tweed districts and an axe recovered at Station Creek in the Yuraygir National Park had been fashioned from stone from northwest of Kyogle (Binns and McBryde 1972). Other axes found in the Richmond Valley were made of basaltic materials from the Mount Warning volcanic complex near the NSW - Queensland border. Several early sources refer to extensive post-contact movement of people between Richmond and Tweed for initiation ceremonies, fights and corroborees (Steele 1984).

In addition to this north-south movement, there is also direct evidence for east-west movement along the major river valleys. McBryde recovered pipi (*Donax deltoides*) shells from within her excavation at Seelands west of Grafton on the Clarence River (McBryde 1974). Pipi shells have also been reportedly found in the Nullum State Forest west of Mullumbimby (18 km from the coastline), and this ubiquitous bi-valve has also been recorded within rockshelters bordering the Brunswick Valley 15 kilometres distant to the coast (Collins 1993).

Evidence for widespread movement of Aborigines, on both an individual and group basis, provides important data when considering models of prehistoric settlement pattern and landuse. The evidence suggests that geographical access routes both along the coastal plain and through the hinterland areas (via the major waterways) were frequently used and it is likely that archaeological sites will be concentrated along such routes (Collins 1993).

3.2 Local Aboriginal Archaeological Context

Background research into archaeological investigations previously completed within the region surrounding the study area was undertaken prior to the commencement of the current heritage survey and assessment program. Sources accessed included the *AHIMS Aboriginal*

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Sites Register, the *AHIMS Catalogue of Archaeological Reports*, and other secondary sources. AHIMS (Aboriginal Heritage Information Management System) is a database managed by the DEC that lists recorded Aboriginal sites and places of significance in NSW; the catalogue of reports lists archaeological reports held in the DEC library.

The majority of Aboriginal sites that have been located, recorded and registered within the *DEC AHIMS Aboriginal Sites Register* have been identified through archaeological investigations carried out within commercial contracting frameworks dealing with specific localities subject to modern development. As a consequence, the nature and results of archaeological site surveys frequently vary according to topographic and environmental factors, constraints such as ground surface visibility, and impacts from previous landscape disturbance.

Generally, sites have survived in greater numbers in areas *least affected* by urban and suburban development. Therefore, the number and distribution of sites *known* to occur in the region are unlikely to reflect an accurate picture of Aboriginal occupation. Rather, the recorded site distribution is more likely to reflect European land-use history and the nature of impact upon the archaeological resource from development.

3.2.1 AHIMS Register Search

For the purposes of this report, a request for listed sites was lodged with the DEC AHIMS Register for a 10km x 10km area centred on the subject land⁴. This search returned records for 70 Aboriginal sites as described in **Table 1**.

• Table 1: Results of AHIMS Register Search (June 2005)	
SITE TYPE	NUMBER (%)
Open Camp Site	24 (34%)
Midden	21 (30%)
No Site Type ⁵	14 (20%)
Open Camp Site/Midden	4 (6%)
Shelter with midden	2 (3%)
Open Camp Site/Burial	1 (3%)
Bora/Ceremonial & Midden	1 (3%)
Burial/s	1 (3%)

⁴ Search of 5 June 2006 within Zone 56 of coordinates 549000 to 559000E; 6808000 to 6818000N.

⁵ Search printout does not list type of site. Note: none of these sites were located within close proximity of the subject land (<2km) and were therefore not further investigated.

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Isolated find	1 (3%)
Possible Quarry	1 (3%)
Total	70 (100%)

As previously noted by Collins (1996), most the sites in this area are associated with sandy contexts such as dunes and swamp/creek margins. Not surprisingly then, few of the Aboriginal sites recorded within the search area are located in close proximity to the subject land.

On the basis of the register search, only 6 sites appear to be located within 1km of the subject land. However closer inspection reveals that three of these (#4-5-0017, #4-5-0052 and #4-5-0054) have incorrect grid coordinates and are in fact located several kilometres further west on North Creek, and site #4-5-0160 is described as a "possible quarry site" and may therefore not be an Aboriginal site at all. Site #4-5-0048 is described as an "open-shore midden" suggesting a coastal location whereas its coordinates place it on a hillslope 1km back from the shore and 1km northwest of the subject land. It is therefore possible that the recording of this site is incorrect. Similarly midden site #4-5-0009 is described as being recorded during the construction of Lennox Head Public School on Byron Street which indicate that both its easting and northern are incorrect by almost exactly 1km, placing the site 2km north of the study site.

On the basis of available site data, there do not appear to be any previously recorded Aboriginal sites within close proximity of the subject land. As described below, this is despite several previous archaeological investigations having been in this area.

3.2.2 Previous Archaeological Studies in the Local Area

The earliest recording of sites appears to have taken place in 1968-1969. The Sims report of 1968 indicates the presence of shelf middens in beach foredunes north of Lake Ainsworth. An open campsite (#4-5-0031) recorded by Oakes in 1969 may have been one previously referred to in the 1968 report. The site contained pebble tools, large flakes and flaked pieces on the foreshore adjacent to Pacific Parade.

Many of the early studies were of a general nature and included:

- **Isabel McBryde** (1974) recorded a burial site in beach foredunes near Lennox Head (#4-5-0018).
- **J.A. Starling** (1974) recorded a midden and open campsite (#4-5-0029) adjacent to the Lennox Head Bora Ground, and an open campsite in foredunes near Lake Ainsworth (#4-5-0030).
- **G.N. Bailey** (1975) recorded four shell middens in the Lennox Head area (#4-5-0048 at Newrybar Swamp; #4-5-0049 at Lennox Head; #4-5-0052 & #4-5-0054 at North Creek).

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Since the aforementioned studies were undertaken in the 1970s, virtually all subsequent Aboriginal archaeological assessments in the Lennox Head area have been related to development planning and *Environmental Impact Assessments*. Some of the most pertinent to the current study are:

- **Bonhomme** (1988) study included the Newrybar Swamp wetlands to the west and north-west of the township. Three sites were recorded, the largest of which was subsequently investigated by **Cane and Nicholson** (1989). They found the site was a shell midden containing predominately pipi (*Donax deftoides*) and stone artefacts. Stone material consisted of thirty one artefacts fashioned from chalcedony materials. A sub-surface test excavation by auguring recorded additional numbers of stone artefacts consisting of flaked pieces and un-retouched flakes on petrified wood and chalcedony. Two sites (#4-5-0068 and #4-5-0069) to the southwest of #4-5-0070 indicated the presence of major archaeological sites in the Newrybar wetlands. The recorded sites featured considerable numbers of stone artefacts including flaked pieces, cores, microliths, modified pebbles and flakes. Both sites appeared to contain in situ sub-surface materials. These sites are c 4.5km north-west of the study area.
- **Navin** (1991) and **Navin & McConchie** (1991) conducted studies in relation to the Ballina-Lennox Head Sewerage Augmentation Scheme and investigated an open camp site/burial site (#4-5-0094) first recorded by Mary Dallas in 1991. The site consisted of a sparse surface scatter of shell and an *in situ* burial. The location of the site is 2.5km northwest of the study area.
- **Collins** (1992a) surveyed a 28.5ha area at Hendersons Lane, about 500m west of the subject land in a similar upland/hilly context. As part of a former rainforest area, Collins predicted that past use would have been of low intensity by Aboriginal people living along North Creek accessing forest resources. No Aboriginal cultural remains were located during the survey which, despite low surface visibility, was consistent with the interpretation of use of this area.
- **Collins** (1992b) investigated a sand mass (including the Bora Ground in Lennox Head) and a proposed housing sub-division. Four sites were recorded and the Bora Ground and its immediate area (including the previously recorded midden) were investigated (#4-5-0029). The four sites listed above featured a total of 154 stone artefacts at surface level including 33 flakes, 19 flaked pieces, 6 cores, 65 debitage fragments and 3 amorphous stones. (ibid 16). These sites were further investigated by **Collins** (1993) who undertook test excavations in the area revealing low densities of artefact and midden material. Interestingly, this contradicted earlier assumptions that the Bora Ground was a major focus of Aboriginal occupation.
- **Piper** (1994) conducted an investigation of several areas north and south of Skenners Head Road 2km south of the present study area in the lower foothills west of the Coastal Plain in a topographic setting very similar to the present study area. He found no evidence of Aboriginal sites.
- **Piper** (1997a) surveyed a roughly 10ha area at Fern Street, about 1.5km northwest of the subject land, recording a surface scatter of 6 stone artefacts which were recommended for collection under a NPW Act S90 permit.
- **Piper** (1999) conducted an archaeological investigation of 41 hectares of land west of North Creek Road, some 1.5km southwest of the subject land, in a coastal upland area broadly similar to the subject land. As with Collins (1992a), Piper notes the lack of sites which have been recorded within former rainforest "big scrub" areas in and

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around Lennox Head. The survey resulted in the recording of two (one possible) middens sites along the foreshore of North Creek but nothing in the uplands area which would formerly have been rainforest.

A number of Aboriginal archaeological studies have therefore taken place in the Lennox Head area over the last 40 years, resulting in the recording of a number of Aboriginal sites. However a clear trend emerges from a review of these reports which is of direct relevance to the current study. Although multiple surveys have been undertaken in a variety of topographic/environmental zones (wetlands, coast, hillslopes etc) sites have been recorded in all contexts except elevated non-sand based areas representing former rainforest such as the subject land. **Figure 7** shows surveys conducted within the Ballina Shire to 2005.

3.2.3 Previous Survey of the Study Area

Adrian Piper conducted the field survey of the current study area on 19 July 1997; and again with Artie Ferguson, (*Jaii Local Aboriginal Land Council* - Heritage Officer) on 29 July 1997. The results of the survey were stated as follows:

No Aboriginal sites or cultural materials were found in the survey of proposed Lot 6 or proposed Lots 1, 2, 3, 4 and 5 located between Lot 6 and Survey Street, Lennox Head. The Jaii Land Council attaches no significance to the subject land nor find that proposed rezoning to 2(a) (Living Area) will destructively impact upon Aboriginal sites.

A review of published and unpublished reports did not find that any sites were referred to in the study area. Furthermore it was noted that surveys of upland areas ie. the area of the coastal parts of the former 'Big Scrub', have found little evidence of Aboriginal occupation (Piper 1997b: 19).

3.3 Modelling Regional Aboriginal Archaeological Patterns

The upper north-east region of New South Wales has been the subject of various regional anthropological investigations with research driven works based largely on ethnographic information. These include studies by:

- Sullivan (1964) who conducted an investigation of the material culture of Aboriginal populations along the Richmond and Tweed Rivers based on ethnographic data during the early stages of European settlement.
- Mitchell (1978) who conducted a detailed examination of the economy and lifestyles of Aboriginal populations along the Richmond River.

Since these early investigations, little systematic scientific archaeological research has been undertaken across north-eastern New South Wales. The reason for this is that the majority of archaeological investigations have occurred as components of Environmental Impacts Studies (EISs) and have focused on specific development sites rather than broad regional synthesis.

No specific Aboriginal heritage studies that cover the Ballina Shire have been undertaken to date. One of the few semi-regional studies (Collins 1991) completed for the Byron Shire to the north of Lennox Head provides useful information that can be used to model Aboriginal

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archaeological patterning within the current study area. A predictive model generated from the results of this work stated that:

- Occupation sites are generally located on relatively flat gradients on well-drained areas with a preference for sandy soils or soft sediments;
- Sites tend to be located near water sources in ecotonal areas where exploitable resources are varied;
- Site distribution patterns tend to reflect degree of reliance on different resource zones: in coastal areas sites reduce in frequency and size from east to west; &
- Site locations reflect patterns in of movement: sites located away from the immediate coast are generally situated on flat sections of ridges that provided access to other areas.

A subsequent study (Collins 1992c) synthesised the above information and suggested that the types of Aboriginal archaeological sites identified within each region can be broken down as follows:

- *Coastline Zone*: middens, open camp sites, stone resource sites (beaches), burials and natural mythological sites;
- *Coastal Lowland Zone*: middens, open camp sites, burials, post-contact camp sites, Bora sites, stone arrangements and scarred tree;
- *Coastal Ridge Zone*: middens and open camp sites / isolated finds;
- *Undulating Volcanic Plateau Zone*: open camp sites, rockshelters, burials and stone arrangements, and;
- *Mountain Ridges and Valleys Zone*: rockshelters, open camp sites and natural mythological sites.

Coastal Lowland Zone

According to Collins (1992c), site distribution in northern New South Wales shows a marked concentration along the estuarine reaches of coastal rivers and along the eastern margin of the coastal lowlands. Essentially, the Coastal Lowland Zone presents a well-watered area where a wide range of foods and other materials could be procured within easy travelling distance. Within such areas of resource diversity, proximity to fresh water was been found to be the single most important factor in site location.

The types of sites which have been previously recorded in the Coastal Lowland Zone include middens, open campsites, burials, post-contact campsites, Bora sites and stone arrangements. On the north coast, midden sites are concentrated along the estuarine reaches of the larger rivers and archaeological investigations and ethnographic accounts show that exploitation of these estuaries was commonly associated with the exploitation of terrestrial environments. Open campsites recorded in the Coastal Lowland Zone generally occur further inland than midden sites, and are often found close to coastal ridge systems.

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Coastal Ridge Zone

Collins states that given the proximity of the Coastal Ridges to the Coastal Lowlands, it is likely that considerable overlap of zone use occurred and outlined a predictive model concerning location and relative density of Aboriginal sites in the Coastal Ridge Zone based on various surveys that have been conducted on sand ridges at Skinners Shoot; on Krasnozern ridges at Ewingsdale, The Saddle and Andersons Hill; and on podsollic ridges supporting wet sclerophyll forest at North Ocean Shores. The predictive model can be summarised as follows:

- A relatively high concentration of archaeological sites including middens and open campsites exists for inland sand ridges. These sites may be in a stratified context and are likely to be located either along ridgelines or on lower slopes close to fresh water sources;
- Site densities along coastal krasnozern ridges, (which once supported rainforest) appear to be lower than on ridges supporting wet sclerophyll forest. It is likely that sites on these ridges will consist of small surface scatters of stone artefacts or isolated artefacts located either on lower slopes close to rainforest margins or along the spines of ridges which may have been used as transit routes;
- It is possible that larger open campsites may be located on lower slopes adjacent to wetlands;
- Sites on the rain-forested ridges are likely to be located on flat sections of the ridgelines, and;
- Further sites comprising scatters of stone artefacts associated with midden shell will be located on flat sections along the spines of the podzolic soil ridges.

3.4 Site Prediction

On the basis of the above environmental and archaeological contextual information, it is possible to predict the types of Aboriginal site, which may possibly occur within the current subject land, and to give an indication of the likelihood of their occurrence. These comprise the following:

- **Artefact scatters** (also known as open campsites) are likely to be most common on level, well drained ground adjacent to freshwater sources and wetlands or along crests of spurs and ridgelines. More and larger sites will tend to be located on spurs or ridgelines which afford continuous and effective access through and across the surrounding landscape. Open Artefact Scatters may occur almost anywhere that Aborigines have travelled in the past and may be associated with hunting or gathering activities, domestic camps, or the manufacture and maintenance of stone tools. The density of artefacts represented in these scatters can vary dramatically and may relate to transient or short stay camps, or base camps of long term or repeated

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occupation. If present within the subject land, such sites are likely to be of low density and integrity and are unlikely to retain considerable archaeological potential.

- **Isolated artefacts** occur without any associated evidence for prehistoric activity or occupation. Isolated finds can occur anywhere in the landscape and may represent the random loss, deliberate discard or abandonment of artefacts, or the remains of dispersed artefact scatters. *Manuports* are items consisting of raw materials of stone that do not naturally occur within the soil profiles of a given region. Transported onto a site by Aboriginal people from sources elsewhere, these items will have subsequently been discarded before use as flaked or ground stone tools. There is some chance that isolated artefacts may occur within the study area although they are likely to be extremely difficult to detect.

In summary, based on predictive modelling there are unlikely to be significant deposits containing Aboriginal artefacts within the study area as formerly rain-forested coastal ridges are generally characterised by a paucity of Aboriginal cultural material. Those relics that may exist within the study area are likely to be restricted to limited stone artefact scatters and isolated artefacts - most of which are likely to have been impacted by lengthy grazing activity and erosion.

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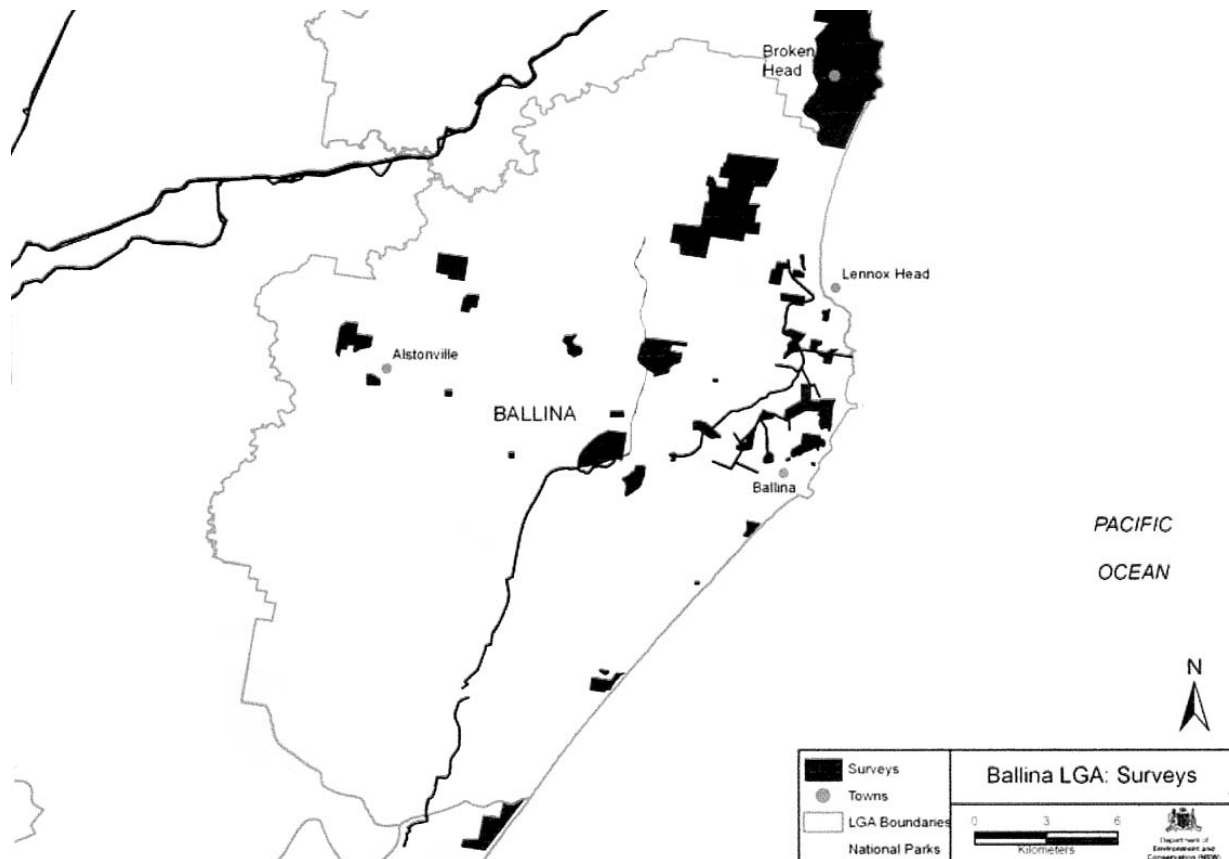


Figure 7: Ballina LGA - Aboriginal Cultural Heritage Surveys (NSW DEC 2005 - App. 1)

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4.0 Site Inspection & Recording

4.1 Methods

4.1.1 Site Survey and Recording

The investigations reported here have involved an archaeological field survey, recording and assessment of the proposed *Coastal Grove* residential subdivision.

Generally, recording concentrated on topography (whether sites, features or areas of potential archaeological sensitivity were located on slopes or flats etc), context, vegetation, ground exposures, the nature of ground visibility and the presence and extent of disturbance. Locations pertinent to the assessment of Aboriginal archaeological potential were recorded in a field note book, photographed using a Canon Powershot A70 digital camera (and scale bar) and plotted on air photos, sketch plans or topographic maps.

4.1.2 Assessment of Archaeological Potential

Frequently used criteria to define areas of *Potential Archaeological Deposit* (PAD) include landform, aspect, topography and level of site disturbance/integrity have been employed in this study. Within the context of the current project, areas of PAD are generally considered to be associated with open areas which have undergone minimal surface disturbance and which retain original topsoil.

The study area consisted largely of disturbed sloping land and therefore had few attributes that recommended it (or areas within it) as an area of archaeological potential.

4.2 Field Survey

Field survey was undertaken on Saturday 22 July 2006 in cloudy and wet weather by Dan Tuck (DSCA archaeologist), Artie Ferguson (JLALC) and Ian Watson (property manager). The following observations were made.

Environment

- The survey area consists of a parcel of land in a narrow valley in the Lennox Head hinterland. An encircling ridge that rises to the north, east, and west forms the valley.
- Site access is via a gated track off Survey Street in the north-western corner of the study area.
- The main feature of the valley is a narrow, low-order watercourse, which runs approximately north-south and functions as a drainage line for surrounding developed areas.
- This feature forms a creekline at the southern end of the property where it picks up runoff from two small springs (approximately 10m in diameter) and opens to a coastal wetland (on the Coast Road) that fronts the northern end of the narrow coastal plain

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behind Boulder Beach. The springs occur on moderately sloping land on the eastern side of the creek and such springs are believed to be relatively common in the area.

- Due to the creekline, the springs, and stormwater runoff from surrounding properties the floor of the valley becomes boggy after rain.
- The majority of the site has been cleared of vegetation for grazing purposes and is dominated by dense pasture grass cover. The exception is a stand of littoral rainforest in the southeast corner of the study area (*Environmental Protection Zone*).
- Stands of vegetation exist around the southern margin of the site and about the eastern and western ridgelines.
- Exposures at various locations across the site demonstrate an upper soil profile characterised by an A-horizon of grey-brown clayey loam overlying a B-horizon of moderately stiff red-orange clay with inclusions of rounded granite cobbles and boulders.

Cultural Heritage

- No objects of Aboriginal origin were recorded during the course of the survey.
- Stone at surface level consisted of rounded to sub-angular granite boulders and rocks that were eroding out of the natural stratigraphy - generally in the areas subject to runoff erosion and in two linear scars resultant of past geotechnical work on the eastern side of the valley.
- No exposures of sandstone or other material suitable for the creation of rock art or use for grinding axe head heads were observed.
- The site had been cleared for grazing and no mature trees suitable for construction of canoes, coolamons, &c were observed.
- While springs were sometimes a focus of Aboriginal activity (being a source of fresh water and locations in which terrestrial game gathered during dry periods), the land about the two adjacent springs in the southeast corner of the study area is sloping, boggy and disturbed by grazing activity, and is unlikely to retain significant evidence of past site use by Aboriginal people (see **Figures 8 to 12**).

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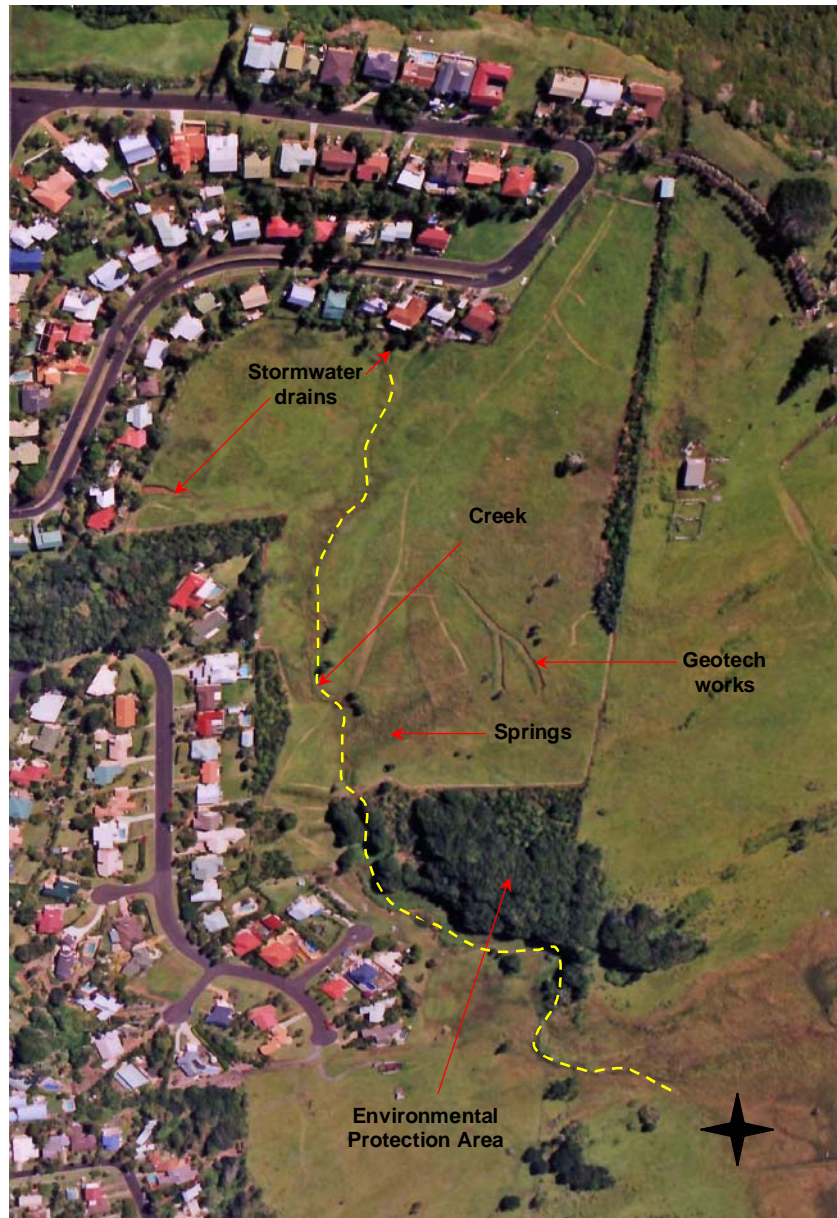


Figure 8: Aerial Image of the Study Area (Provided by Ian Watson)

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Figure 9: View across the site from the end of Survey Street (View SSE)

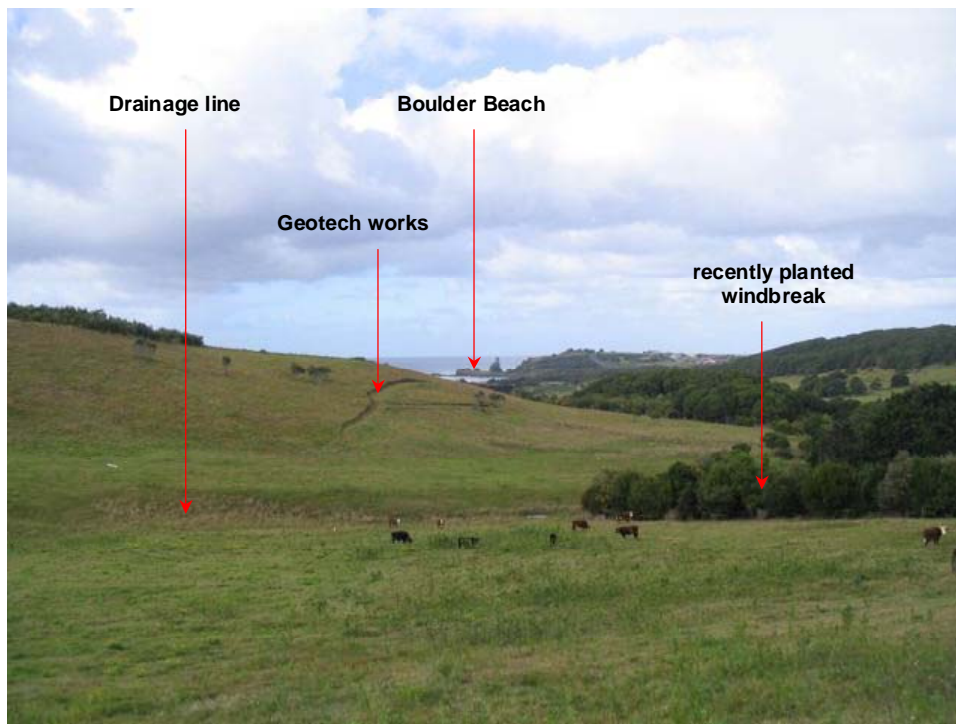


Figure 10: View across the site from near eroded drainage line (View SE)

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Figure 11: View across the site from the SE corner of the property (View NW)

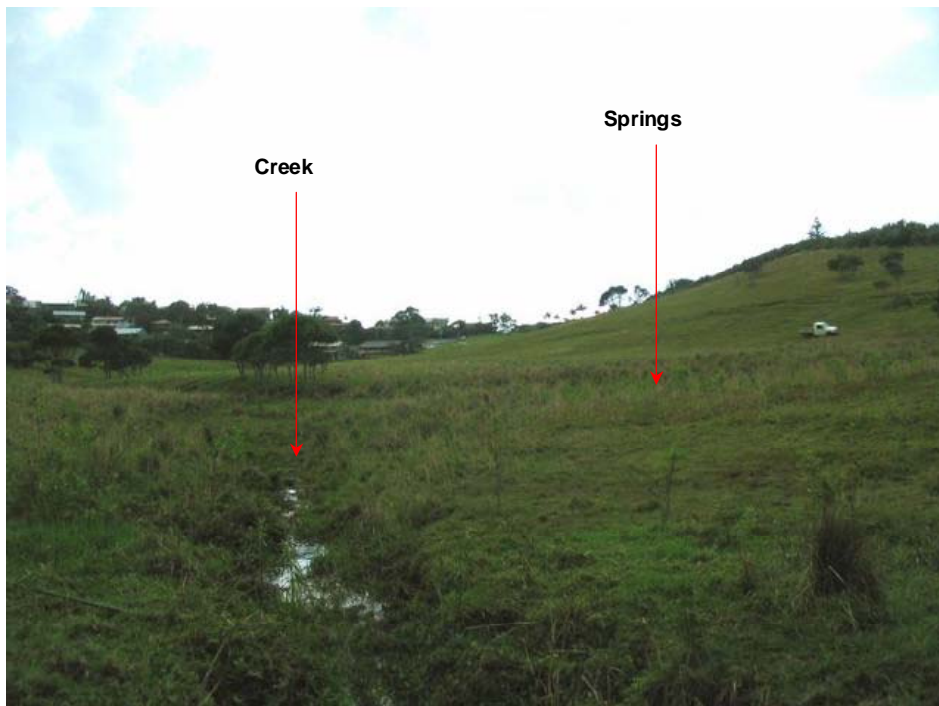


Figure 12: View north along the drainage/creekline (view N)

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4.3 Results of the Site Inspection

4.3.1 Survey Outcomes & Effective Survey Coverage

The current survey did not result in the location of any items of Aboriginal cultural heritage, or in the identification of any areas considered to retain any Aboriginal archaeological potential. Specifically no open campsites or isolated finds, and no trees of sufficient age to contain scars of Aboriginal cultural origin were located.

The subject land has been disturbed in the past by clearance of original timber and associated heightened natural erosion, stormwater runoff, and many years of grazing activity. The latter has effectively churned up much of the boggy, clay loam topsoil.

The following data summarises the nature of ground visibility, archaeological sampling and estimates of effective survey coverage based on the current study. These provide a basis for the discussion and assessment of the results that are presented in the following sections of this report.

Portion of Survey	% Exposed	% Visibility in Exposed Areas	Sites Recorded
Hillslope	5%.	50-100%	None
Paddock	2%	50%	None

4.3.2 Conclusions

Effective survey coverage for the current study was found to be generally low as a result of the limited archaeological visibility conditions present across much of the subject land due to the nature of the existing grass cover present on the site. Despite this however, the observations of landform, erosional processes, soil type and extent of historical disturbance recorded during the site inspection, suggest that Aboriginal cultural heritage sites or areas of potential sensitivity are unlikely to exist within the study area.

Historical and archaeological background material reviewed for the current assessment suggest that the Lennox Head area was most likely utilised extensively by Aboriginal people in the past and it is likely that the study area may have been traversed by Aboriginal people moving between resource rich coastal and forested hinterland zones. The subject land specifically is however unlikely to have been used intensively and there is little likelihood that significant *in situ* remains demonstrating past Aboriginal use will be present on the site, given the nature of the terrain and the history of land clearance, erosion and disturbance.

5.0 Heritage Impact Assessment

5.1 Impact of the Current Proposal

In its current form, the proposed *Coastal Grove* residential subdivision is unlikely to impact on any items of Aboriginal cultural heritage or any areas with high Aboriginal archaeological potential or sensitivity. The survey undertaken for the current project and a previous survey undertaken in 1997, both conclude that it is highly unlikely that any *in situ* evidence of Aboriginal occupation is present within the subject land.

5.2 Evaluation

On the basis of the above considerations, it is concluded that the proposed *Coastal Grove* subdivision is unlikely to have an adverse impact upon the Aboriginal cultural heritage values of the land concerned and should proceed as proposed, contingent upon the implementation of the actions and advice that are recommended in **Section 6.0**.

6.0 Management Recommendations

6.1 Basis for Recommendations

The following recommendations are based upon the legal requirements and automatic statutory protection provided to Aboriginal 'objects' and 'places' under the terms of the *National Parks and Wildlife Act of 1974*, where it is;

an offence to knowingly damage, deface or destroy Aboriginal sites or relics without the prior consent of the Director General of the National Parks and Wildlife Service,

in conjunction with:

the results of the archaeological investigations for the project which are documented in this report that address the *NSW Department of Planning Director-General's Requirements* for the *Environmental Assessment* process for the proposed subdivision (DGR's Point No 10).

and;

the views and recommendations provided by the *Jali Local Aboriginal Land Council* as outlined within the appended correspondence.

6.2 Recommendations

It is recommended that:

- I No Aboriginal archaeological constraints have been identified during the completion of this study that would prevent the proposed residential subdivision of the subject land proceeding as planned.
- II No further Aboriginal archaeological work is required to be undertaken prior to the commencement of development works should consent be granted.
- III The site is assessed to have low archaeological potential with the remote possibility to contain (at best) an extremely sparse number of undetected Aboriginal finds that would most likely be present within disturbed contexts.
- IV In the unexpected circumstance that any Aboriginal objects were unearthed during future development works, it is recommended that activities should temporarily cease within the immediate vicinity of the find locality, be relocated to other areas of the site (allowing for a curtilage of at least 50m), and the DEC be contacted to advise on the appropriate course of action to allow the JLALC to record and collect the identified item(s).
- V Should Development Consent be granted, site contractors should be briefed prior to the commencement of future works about their statutory responsibilities and obligations concerning Aboriginal cultural heritage according the NPWS Act (1974).

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- VI A copy of this report should be forwarded to:

Jali Local Aboriginal Land Council

PO Box 24

Wardell, NSW, 2477

- VII Two copies of this report should be sent to:

The Manager

Northern Aboriginal Cultural Heritage Unit

NSW Department of Environment & Conservation

PO Box 914

Coffs Harbour, NSW, 2450

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7.0

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Appendix 1:

Aboriginal Community Correspondence

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JALI Local Aboriginal Land Council

Cabbage Tree Island

P.O. Box 24

WARDELL NSW 2477

Phone: (02) 66834413 Fax: (02) 66834679

Dominic Steele
Consulting Archaeology
33 England Avenue
Marrickville, NSW 2205

31st July 2006

Dear Domonic,

Thank you for your archeological report pertaining to the proposed residential subdivision at Coastal Grove, Survey street, Lennox Head.

The NSW Aboriginal Land Council has designated Local Aboriginal Land Council boundaries based on traditional parish boundaries. Jali Local Aboriginal Land Council is the incorporated body responsible for Aboriginal issues within the survey area.

There is a fundamental concern within the Aboriginal community regarding the level of residential development generally within the Ballina Shire.

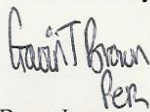
It is the role of Jali LALC to minimize the risk damage or destruction to heritage sites within our boundaries.

The Jali Local Aboriginal Land Council concurs with your findings and recommendations contained in the report.

We also acknowledge the engagement of our cultural and heritage sites officer Mr Artie Ferguson and our earlier involvement in this project in the mid 1990's.

I am contactable on the listed number should you require further correspondence.

Yours Sincerely



Barry Jameson
Appointed Administrator
Jali LALC