

SETTLERS RIDGE, SOUTH WEST ROCKS

F CULTURAL HERITAGE ASSESSMENT



Cultural Heritage Assessment

South West Rocks

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Executive Summary

RPS has been commissioned by SJ CONNELLY CPP PTY LTD to prepare a Cultural Heritage Assessment (CHA) for an area south of South West Rocks. This report has considered the environmental and archaeological context of the study area, developed a predictive model and reported on the results of an archaeological survey of the study area and developed management recommendations for both Aboriginal and European cultural heritage.

SJ CONNELLY CPP PTY LTD has been engaged to plan the subdivision of the land known as Settler's Ridge as a residential estate. The development proposal has been determined by the Department of Planning under delegated authority from the Minister for Planning to be a Major Project under the provisions of Part 3A of the Environmental Planning and Assessment Act 1979. The subdivision thus requires the lodgement of an Environmental Assessment pursuant to State Environmental Planning Policy (Major Development) 2005. The proponent seeks the Minister's approval pursuant to Section 75P of the Environmental Planning and Assessment Act 1979 for a Concept Plan which initially comprised a Concept Plan for 220 Lot residential and 1 x 19 hectare rural Lot subdivision and Biobanking Proposal, Steve Eagleton Drive, South West Rocks. This plan has been modified down to 156 lots.

Aboriginal community consultation was conducted in accordance with Aboriginal Cultural Heritage Consultation Requirements and in accordance with the Part 3A of the Environmental Planning and Assessment Act 1979. The ten stakeholder groups identified in Stage 1 were forwarded letters regarding the project, there were four responding expressions of interest however, there were no responses to the request for comment on that methodology. Kempsey Local Aboriginal Land Council was asked to provide a representative to participate in the study area survey.

A desktop survey of previous research, historic and ethnographic records revealed that while the area around Spencers Creek to the south of the study area has a number of archaeological sites, the study area itself has no Aboriginal sites recorded in it. Additionally, this type of landscape, low hills away from permanent water sources, generally has few recorded sites.

An archaeological survey of the study area was conducted on 30 March 2011 in conjunction with representatives of Kempsey Local Aboriginal Land Council. The survey was undertaken in good weather conditions with a representative portion of each identified landscape unit surveyed.

One site, a scarred tree recorded as RPS SWR 1 was found during that survey. That site has been recorded on the DECCW Aboriginal Heritage Information Management System database in accordance with legislative requirements.

The following recommendations are made with regards Aboriginal cultural heritage:

Recommendation 1

The scarred tree located during this survey (RPS SWR 1) should be afforded protection with a cordoned off area of 10 metres X 10 metres established around it.

Recommendation 2

All relevant SJ CONNELLY CPP PTY LTD staff should be made aware of their statutory obligations for heritage under NSW NPW Act (1974) and the NSW Heritage Act (1977), which may be implemented as a heritage induction.

Recommendation 3

The location of RPS SWR 1 should be included in SJ CONNELLY CPP PTY LTD environmental management framework for the study area, so that all staff are aware that this it will require management.

Recommendation 4

If further Aboriginal site/s are identified in the study area, then all works in the area should cease, the area cordoned off and contact made with DECCW Enviroline 131 555, a suitably qualified archaeologist and the relevant Aboriginal stakeholders, so that it can be adequately assessed and managed.

Recommendation 5

In the event that skeletal remains are identified, work must cease immediately in the vicinity of the remains and the area cordoned off. The proponent will need to contact the NSW Police Coroner to determine if the material is of Aboriginal origin. If determined to be Aboriginal, the proponent, must contact the DECCW Enviroline 131 555, a suitably qualified archaeologist and representatives of the local Aboriginal Community Stakeholders to determine an action plan for the management of the skeletal remains, formulate management recommendations and to ascertain when work can recommence.

The following recommendations are made with regards European cultural heritage:

Recommendation 6

No European heritage items were uncovered during the survey, however if, during the course of clearing work, significant European cultural heritage material is uncovered, work should cease in that vicinity immediately. A significance assessment by a suitably qualified archaeologist adhering to the NSW Heritage Branch significance criteria should be carried out and the NSW Heritage Branch should be notified if significant historical items are identified. Works should only recommence when an appropriate and approved management strategy is instigated.

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I Introduction

RPS has been commissioned by SJ CONNELLY CPP PTY LTD to prepare a Cultural Heritage Assessment (CHA) for an area south of South West Rocks.

This report has considered the environmental and archaeological context of the study area, developed a predictive model and reported on the results of an archaeological survey of the study area. Management recommendations have been formulated with consideration of the significance of Aboriginal and European heritage in accordance with the relevant legislation.

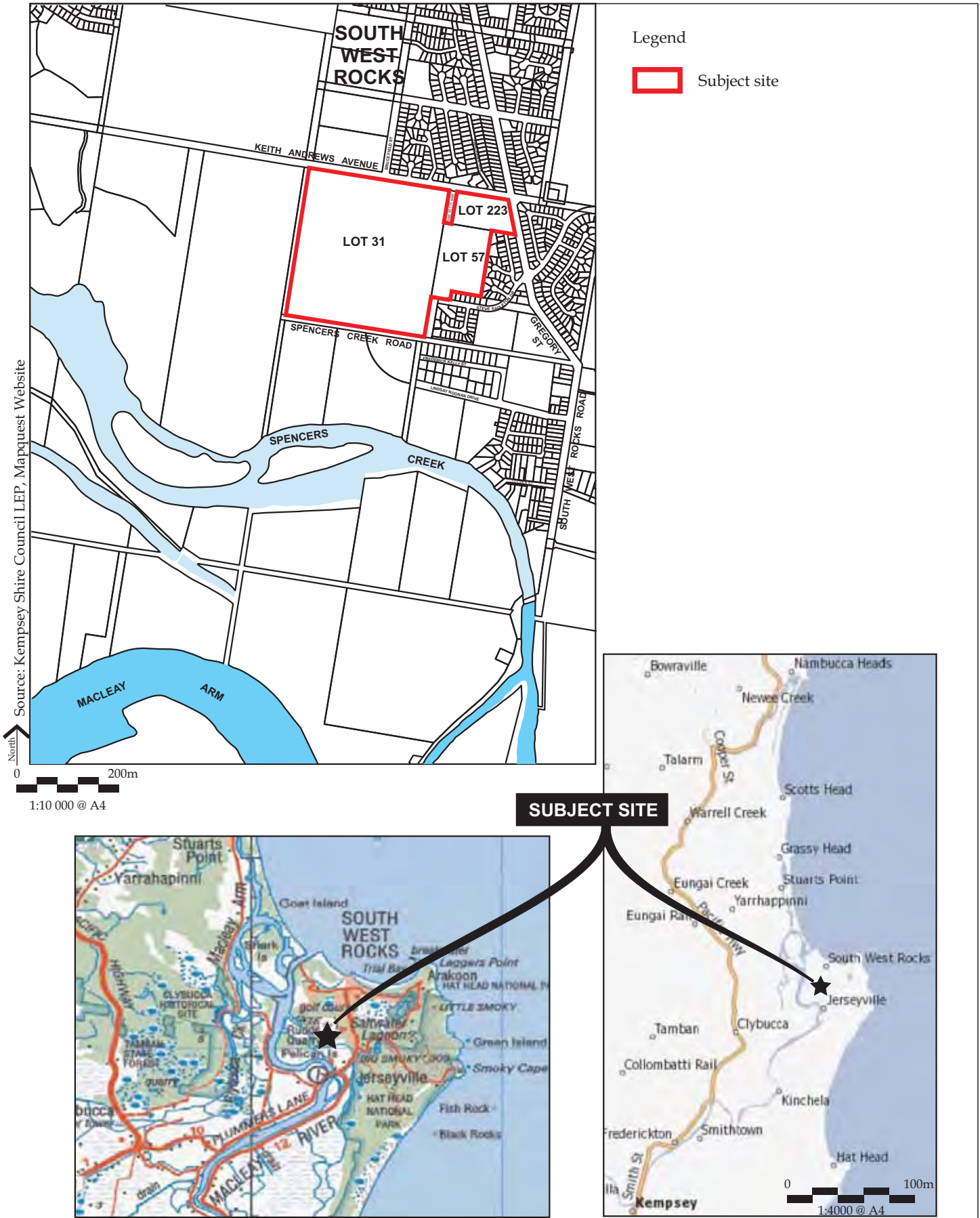
1.1 The Study Area

The site is known as “Settler’s Ridge” and is a part-rural and part-residential zoned area located on Gregory Street and Steve Eagleton Drive, South West Rocks. South West Rocks is a coastal village with a population of 6500 on the mid north coast of NSW. The village is located 40km north-east of Kempsey near the mouth of the Macleay river, and is about 5 ½ hours drive north of Sydney (Figure 1-1).

1.2 Background

SJ CONNELLY CPP PTY LTD has been engaged to plan the subdivision of the land known as Settler’s Ridge as a residential estate. The development proposal has been determined by the Department of Planning under delegated authority from the Minister for Planning to be a Major Project under the provisions of Part 3A of the Environmental Planning and Assessment Act 1979. The subdivision thus requires the lodgement of an Environmental Assessment pursuant to State Environmental Planning Policy (Major Development) 2005. The proponent seeks the Minister’s approval pursuant to Section 75P of the Environmental Planning and Assessment Act 1979 for a Concept Plan which comprises a residential and rural Lot subdivision and Biobanking Proposal, Steve Eagleton Drive, South West Rocks (Figure 1-2). The following is a summary of the key land use elements relevant to this project.

	ha	%
Site area	40.011	100%
Residential lots	9.9	24.7%
Roads	5.3	13.3%
Open space	1.6	4%
Balance rural lot	28.2	58%

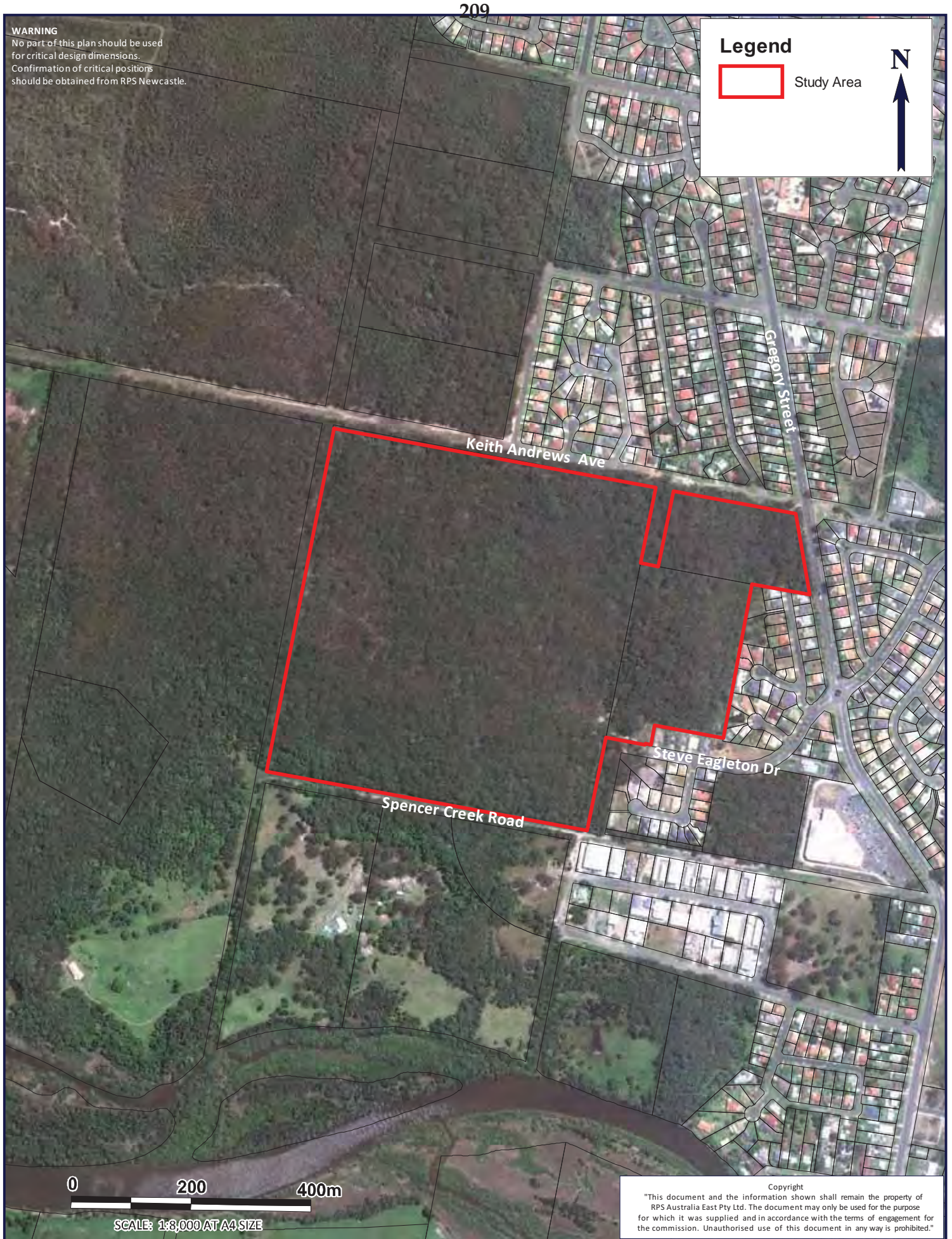


Plan 1.1
SITE
LOCALITY
PLAN

WARNING
No part of this plan should be used
for critical design dimensions.
Confirmation of critical positions
should be obtained from RPS Newcastle.

Legend

 Study Area



TITLE: FIGURE 1-2 STUDY AREA

LOCATION: SOUTH WEST ROCKS

DATUM: (AGD 94)
PROJECTION: MGA ZONE 56

DATE: 23/08/2012
PURPOSE: HERITAGE

LAYOUT REF: J:\JOBS\107K\107050 South West Rocks
J:\10- Drafting\Workspaces
VERSION (PLAN BY): C A4 (NW-AN)

CLIENT:
JOB REF: 107050

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RPS

1.3 Legislative Context

The following provides an overview of legislation that seeks to protect Aboriginal and European cultural heritage. Further details on the relevant legislative Acts are provided in Appendix 1.

1.3.1 National Parks and Wildlife Act (1974, as amended)

The primary state legislation relating to Aboriginal cultural heritage in NSW is the National Parks and Wildlife Act (1974), as amended. The legislation is overseen by the Department of Environment, Climate Change and Water (DECCW), and specifically the Director-General of the DECCW.

The NPW Act provides statutory protection for all Aboriginal relics (not being a handicraft made for sale), with penalties levied for breaches of the Act. Part 6 of this Act is the relevant part concerned with Aboriginal objects and places, with the Section 86 and Section 90 being the most pertinent. In 2010, this Act was substantially amended, particularly with respect to Aboriginal cultural heritage requirements.

1.3.2 Heritage Act 1977

Historical archaeological relics, buildings, structures, archaeological deposits and features are protected under the Heritage Act 1977 (as amended 1999) and may be identified on the State Heritage Register (SHR) or by an active Interim Heritage Order. Certain types of historic Aboriginal sites may be listed on the SHR or subject to an active Interim Heritage Order; in such cases they would be protected under the Heritage Act 1977 and may require approvals or excavation permits from the NSW Heritage Branch.

1.3.3 Environmental Planning & Assessment Act 1979 (EP&A ACT)

This Act regulates a system of environmental planning and assessment for NSW. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage and specifically Aboriginal heritage. Assessment documents prepared to meet the requirements of the EP&A Act including: Review of Environmental Factors (REF), Environmental Impact Statements (EIS) and Environmental Impact Assessments (EIA), should address Aboriginal heritage, and planning documents such as Local Environment Plans (LEP) and Regional Environmental Plans (REP) typically contain provisions for Aboriginal heritage where relevant.

1.4 Authorship and Acknowledgements

This report was prepared by Laraine Nelson, Archaeologist with assistance from Graduate Archaeologists Anna Nardis and Ali Byrne and was reviewed by Darrell Rigby, Archaeology Manager.

1.5 Abbreviations and Terms

Abbreviation	Description
ACH Consultation Requirements	Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010) were released by DECCW on the 12 April, 2010.
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
BP	Before present (as in years before present)
cal. years BP	Calibrated years before present, indicates a radiocarbon date has been calibrated using the dendochronology curves, making the date more accurate than an uncalibrated date
DECCW	Department of Environment, Climate Change and Water
GIS	Geographic Information System
LEP	Local Environment Plan
LGA	Local Government Area
PAD	Potential Archaeological Deposit
PEA	Preliminary Environmental Assessment
REP	Regional Environment Plan
REF	Review of Environmental Factors
Tba	To be advised

2 Aboriginal Consultation

A declared Part 3A project under s.75B of the EP&A Act does not require an Aboriginal Heritage Impact Permit (AHIP) from DECCW because Part 6 NPW Act offences related to those provisions do not apply. However, proponents are required to follow the 2005 (draft) Part 3A EP&A Guidelines for Aboriginal cultural heritage impact assessment and community consultation (as amended from time to time) when seeking approvals under the Part 3A process. The guidelines were developed by DECCW and the NSW Department of Planning and detail the assessment and consultation requirements that need to be followed for Aboriginal cultural heritage under the Part 3A process (DECCW Fact Sheet 5).

The more recent [Aboriginal Cultural Heritage Consultation Requirements](#) (ACHCR) 2010 have been followed for this project. This comprises a four stage Aboriginal consultation process with specific requirements and timeframes for each stage. The four stages are:

- Stage 1 – Notification of project proposal and registration of interest
- Stage 2 – Presentation of information about the proposed project
- Stage 3 – Gathering information about cultural significance
- Stage 4 – Review of draft cultural heritage assessment report

Stage 1 – for this project identified ten groups. There were no responses to the newspaper advertisement.

Stage 2 – each of the ten groups were sent a letter outlining the project and study area and asked to respond if they wished to be consulted. A copy of the DECCW response letter listing those ten groups can be found at Appendix 2. Four groups responded positively and were forwarded the methodology for the archaeological survey and asked for comment.

Group	Contact Person
Pandanus People Incorporated	Terry Flanagan/ Aunty Shirley Doyle
Kempsey Local Aboriginal Land Council	Jo-Anne Kelly
Dunghutti Elders	Mary-Lou Bucks
Nulla Nulla Boongutti Aboriginal Corporation	Mervyn Cohen

Stage 3 – there were no responses to the request for comment on methodology and cultural significance.

Stage 4 – will be completed following review of this report by the three groups who expressed an interest.

To ensure participation by the Aboriginal community in the survey Jo-Anne Kelly CEO, Kempsey LALC was contacted and advised that an archaeological survey was to be conducted and asked if a sites officer could be made available. Owen Gregory (Greg) Blair and Craig Smith, sites officers, Kempsey LALC attended the survey undertaken on 30 March 2011.

Those parties that expressed an interest in the study area will be forwarded copies of the Draft report for comment.

A consultation log can be found at Appendix 2.

3 Environmental Context

An understanding of environmental context is important for the predictive modelling of Aboriginal sites, as well as, for their interpretation. The local environment provided natural resources for Aboriginal people, such as, stone (for manufacturing stone tools), food and medicines, wood and bark (for implements such as shields, spears, canoes, bowls, shelters, amongst others), as well as, areas for camping and other activities. The nature of Aboriginal occupation and resource procurement is related to the local environment and it therefore needs to be considered as part of the cultural heritage assessment process.

3.1 Geology and Soils

Aboriginal people often made stone tools using siliceous, metamorphic or igneous rocks and therefore understanding the local geology can provide important information regarding resources in a study area. The nature of stone exploitation by Aboriginal people depends on the characteristics of the source, for example whether it outcrops on the surface (a primary source), or whether it occurs as gravels (a secondary source) (Doelman, Torrence et al. 2008).

The geology of the study area comprises the Triassic granite and adamellite rocks in addition to dyke material exposed across the landscape. A small north-west portion of the study area is comprised of late Carboniferous early Permian sediments, known as the Kempsey Beds, with interbedded lithic sandstone, mudstone, pebbly sandstone and minor conglomerate (Eddie 2000:58-59). A number of these rock types would have been suitable raw materials for manufacturing stone tools.

The Big Smoky Variant B, Korogoro and O'Connors soil landscapes are present within the study area.

The Big Smoky Variant B is a residual variant that occurs on rises and low hills and generally comprises four dominant soil materials (bsb1, bsb2, bsb3 and bsb4). Topsoil (A¹ horizon) in this landscape where present, comprises dark loamy sand, commonly 2-5mm thick and brownish black in colour. Massive pale sandy loam (A horizon) underlies the A¹ horizon which is between 50 and 1000mm thick and brown to yellowish brown in colour. The B horizon comprises brown massive sandy clay that is 10 to 20mm thick, reddish to yellowish brown. B² horizon is structured bright clay that is 50 to 100mm thick and is reddish brown to orange in colour. The variant of the Big Smoky soil landscapes have deep soils in the South West Rocks village area where seasonal water logging can occur (Eddie 2000:58-59).

The aeolian/barrier Korogoro and O'Connors soil landscapes are located at the west and far south of the study site. Four dominant soil materials have been identified in the Aeolian soil landscape of Korogoro (kr1, kr2, kr3 and kr4). Topsoil is generally loose dark loamy sand which overlays a loose bleached sand (A² horizon). Massive brown loamy sand (B horizon) overlays loose orange sands that occur at the C horizon. The Korogoro

soil landscape is characterised by sandy soils with high erodibility, high permeability, very low available water holding capacity and low fertility. This landscape has been associated with a number of limitations, including rapid drainage, groundwater pollution hazard, severe wind erosion hazard, non-cohesive soils and very low moisture availability (Eddie 2000:183-184).

The O'Connors soil landscape has three dominant soil materials (oc1, oc2 and oc3). Topsoil is generally comprised of loose dark loamy sand which is underlined with loose white sand (B horizon). The C horizon is characterised by massive brown sand. This landscape is characterised by Pleistocene transgressive coastal dunes overlying bedrock on headlands. The sandy soils with high erodibility, high permeability and soil acidification hazard are characteristics of the O'Connors soil landscape, along with very low water available water holding capacity and low fertility (Eddie 2000:185-186).

The study area also contains a disturbed area along or in close proximity to its northern and western boundaries. Disturbances to this landscape unit are such that its properties no longer represent a naturally occurring soil landscape, the original soil having been removed, greatly disturbed or buried. The disturbed terrain in the study site is noted to consist of unconsolidated sandy or gravelly materials.

3.2 Topography and Hydrology

The study area is drained by tributaries of the Macleay River, including Spencers Creek located south of the study area and Saltwater Creek, north east of the study area. The topography consists of low transgressive Pleistocene dunes located in areas of less than ten metres above sea level and slopes of less than five percent. The relief is extremely low, being typically less than three metres, but may range from one to nine metres (Topographic Mapsheet South West Rocks 95363S).

3.3 Climate

Approximately 18,000 years ago, climatic conditions began to alter which affected the movement and behaviour of past populations within their environs. During this time, notably at the start of the Holocene (more than 11,000 years ago), the melting of the ice sheets in the Northern Hemisphere and Antarctica caused the sea levels to rise, with a corresponding increase in rainfall and temperature. The change in climatic conditions reached its peak about 6,000 years ago (Short 2000:19-21). Up until 1,500 years ago, temperatures decreased slightly and then stabilised about 1,000 years ago, which is similar to the temperatures currently experienced. Consequently, the climate of the study area for the past 1,000 years would probably have been much the same as present day, providing a year round habitable environment.

The study area has a warm and wet subtropical climate. The warmest month on average is February with a mean maximum temperature of 26.9°C and the coldest month on average is July with a mean maximum temperature of 18.7°C. The wettest month is March and the driest month is September. South West Rocks experiences a mean of

137.4 rain days annually, with the most occurring in March and the least occurring in July. The study area has high thunderstorm activity, which mainly occurs during the period from September to March, with October and November being the months where the risk of a severe thunderstorm is increased due to a relatively high frequency of unstable atmospheric conditions which favour frequent and strong thunderstorm development (Bureau of Meteorology 2011).

3.4 Flora and Fauna

The study area is dominated by Coastal Floodplain Wetlands. These vegetation communities were so ideally suited to agricultural industry that they were extensively drained and cleared very early on during European settlement, leaving only fragments of unrepresentative re-growth of the original vegetation. Indicative species of the Coastal Floodplains Wetlands include trees such as Rough-barked Apple, Broad-leaved Apple, Cabbage Gum, Flooded Gum, Swamp Mahogany, Sydney Blue Gum, Forest Red Gum, Cabbage Palm and Prickly-leaved Ti-tree. Individual rainforest plants were also probably scattered throughout the more open floodplain areas and individual remnant trees such as the Morton Bay Fig can still be seen around areas of the Macleay River. A variety of grasses, reeds and sedges also populate the area (Keith 2006:226-227).

The forested wetland vegetation communities provide rich habitat for many types of animals, plentiful supply of water and dense understorey vegetation encourages a range of mammals such as kangaroos, wallabies, possums, gliders, rats and mice, a variety of lizards and snakes and birds, particularly water birds. The bones of these animals have been recovered from Aboriginal sites in the Sydney region suggesting that they were sources of food (Attenbrow 2002:70-76), although the hides, bones and teeth of some of the larger mammals may have been used for Aboriginal clothing, ornamentation, or other implements.

4 European Heritage Context

4.1.1 Kempsey

The first recorded European contact with the region was under the auspices of Captain A.C. Innes, a commander at Port Macquarie, who sent a cedar cutting party to the Macleay River in 1827 (Carey 1993). The first land grant in the area was to Samuel Onions (1835) with 802 acres on the Macleay River. He subsequently sold it to Enoch Rudder. The Kempsey area initially flourished as a centre for logging and sawmilling with large reserves of Australian red cedar exploited until the 1920s, by which time the resource was effectively exhausted. Dairying was also a major industry in the Macleay valley until the 1960s (Carey 1993).

4.1.2 South West Rocks

The first recorded sighting of the area was in 1770 when Captain James Cook named Smoky Cape following an observation of smoke from a fire (Carey 1993). South West Rocks, located on Trial Bay is approximately 5.5 kilometres north-west of Smokey Cape. Trial Bay was named after the brig Trial wrecked there in 1816 after being stolen by convicts attempting to escape to south-east Asia (Carey 1993). When Captain Thomas Whyte found the wreck in 1817 there was no trace of the convicts and it was assumed they had all perished (Henderson 1851). The wrecking of the Trial was followed by a number of shipping mishaps including the sinking of the Woolloomooloo in 1864 when it foundered with the loss of 3 lives (Massie 1846) and more recently in 1972 the loss of two car ferries and a Sydney showboat (Kempsey Shire Council 2011).

[Kempsey Shire Council](#)

Between 1877 and 1886 the Trial Bay prison was built to house 'good conduct' prisoners with an intention that they would provide cheap labour to help with the construction of a 1.6 km breakwater around the bay (Massie 1846). The project was not completed and the prison closed in 1903. In 1915 the prison was re-opened to house German internees during World War I with the prison finally closed in 1917. Moveable parts of the building were auctioned off in 1922 (Carey 1993).

The township of South West Rocks was established in 1896 (Carey 1993). Success of the town was based on a newly constructed entrance of the Macleay River to the sea with the Pilot's Station built in 1902 (Carey 1993). While the establishment of the pilot station at South West Rocks in 1902 provided a focus for government contracts, followed by a post office in 1903 and school in 1909, the permanent population remained very small until the 1920s. Early tourism was also a factor in the towns' growth with the town beaches a popular recreation area for residents of the surrounding Macleay Valley (Carey 1993).

By 1916 the village included a hotel, two general stores, three boarding houses and two refreshment shops. The north coast rail line had reached Kempsey in 1917 providing for more convenient and regular connections with the major population centres of the state (Carey 1993). By 1930 the town boasted a bakery, a police station was built in 1924 and a school of arts was established in 1927 (Carey 1993). The name of the town is a result

of the pilot officer instructing vessels to anchor in Trial Bay to the south-west of the rocks. Today the township of South West Rocks is predominantly a tourist destination.

During the course of the survey of the study area Greg Blair, Sites Officer, Kempsey LALC related that the present day Rocks Shopping Centre to the east of the study area was previously the location of an abattoir. He also related that the study area was cleared for farming some time previously. This recollection is supported by the presence now of cleared lands to the south and west of the study area.

4.2 Historic Registers

Historic registers are used to record items of significance at the National, State and Local government level. There are items registered at the National, State and Local government level within the South West Rocks area.

4.2.1 National Heritage Database

The Australian Heritage Database incorporates: the National Heritage List; the Register of the National Estate and the Commonwealth Heritage List.

The National Heritage List is now the lead statutory document for the protection of heritage places considered to have national importance. This list comprises Indigenous, natural and historic places that are of outstanding national heritage significance to Australia. Listed places are protected under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). There are no items within South West Rocks on the National Heritage List.

Prior to this the Register of the National Estate was the primary document. While the Register of the National Estate still exists it is now frozen and from 2012 will no longer have statutory status. The Minister is required to considering the Register when making some decisions under the EPBC Act. The Register of the National Estate includes five heritage sites within the South West Rocks area

The Commonwealth Heritage List comprises natural, Aboriginal and historic heritage places owned or controlled by the Commonwealth. Places on this list are also protected under the EPBC Act. One item in the South West Rocks area is on the Commonwealth Heritage List.

Table 4-1 Items listed on the National Heritage Database

Name of Item	Address	Heritage Listing
Arakoon State Recreation Area	Carri Street, South West Rocks	Register of National Estate
Boatman's Cottage No.2 Pilot Station Group	5 Ocean Drive, South West Rocks	Register of National Estate
Smoky Cape Lighthouse	Lighthouse Road, South West Rocks	Commonwealth Heritage List

Name of Item	Address	Heritage Listing
Smoky Cape Lighthouse (Commonwealth)	Lighthouse Road, South West Rocks	Register of National Estate
Smoky Cape Lighthouse Group	Lighthouse Road, South West Rocks	Register of National Estate
Trial Bay Gaol	Cardwell Street, South West Rocks	Register of National Estate

4.2.2 The NSW Heritage Inventory

The NSW Heritage Inventory lists items at the NSW (State) level and/or at the local level. Items of State significance are registered by the NSW Heritage Council under the NSW Heritage Act. Those items are listed on the State Heritage Register as being under an Interim Heritage Order or protected under section 136 of the NSW Heritage Act.

The Inventory also includes some heritage places of heritage significance within a local government area. These places are listed by local council under their Local Environment Plans (LEP) and additionally may be included on the NSW Heritage Inventory database.

There are three items listed at State Significance level within the South West Rocks area.

Table 4-2 Items listed on the NSW Heritage Inventory

Name of Item	Address	Level of Significance
South West Rock Pilot Station Complex	5 Ocean Drive, South West Rocks	State
Smoky Cape Lighthouse Group	South West Rocks	State
Trial Bay Gaol, Breakwater and Environs	Cardwell Street Arakoon	State
Trial Bay Gaol and German graves	The Ruins Way	Local Government
Pacific Guest House	21-23 Livingstone Street, South West Rocks	Local Government

4.2.3 Local Government Heritage Registers

Items of significance at the local government level are included in the local government Environmental Plan (LEP) as Heritage Schedules. These are a list of European and some Aboriginal items which have been listed with council as having heritage value. A search of the Kempsey LEP Schedule 1 Environmental Heritage has indicated that there are eight items listed in the South West Rocks area.

Table 4-3 Items listed in the Kempsey Local Environmental Plan

Name of Item	Address	Heritage Listing
School of Arts	1 Gregory Street, South West Rocks	LEP
Pacific Guest House	21-23 Livingstone Street, South West Rocks	LEP
Entrance Gates	Livingstone Street, South West Rocks	LEP
Three Residences	27-31 Memorial Drive, South West Rocks	LEP
Monument Stones	Memorial Avenue, South West Rocks	LEP
Pilot Station Group	3-9 Ocean Drive, South West Rocks	LEP
Flagstaff	Ocean Drive, South West Rocks	LEP
Monument	Point Briner Horseshoe Reserve, South West Rocks	LEP

4.2.4 Historic Archaeological Potential

A search of the Commonwealth, State and Local heritage registers has identified a number of significant European heritage sites within the wider South West Rocks area. There are no European heritage sites registered within the study area.

An assessment of the types of registered European heritage sites indicates that the most common and likely site type is linked to South West Rocks strong connection to its maritime and tourism heritage. The study area is inland and away from waterways and would appear to have no readily identifiable link with those activities.

While not recorded in the list of heritage items, the other site type that may be present within the study area relates to early agriculture. The South West Rocks area as part of the Macleay River valley was an important farming area and the study area may have been used in that capacity.

5 Aboriginal Heritage Context

5.1 Historical Overview

5.1.1 Historic Records of Aboriginal Occupation

It is important to acknowledge that early historical documents were produced for a number of reasons and may contain inaccuracies and/or bias in their reporting of events or other aspects of Aboriginal culture. Nonetheless, some historical documents provide important information and insights into local Aboriginal customs and material culture at the time of European settlement and occupation of region.

The following provides a regional overview of historical record of the Aboriginal people, known as the Dunghutti, of the region.

5.1.2 Historic record of the Dunghutti people

Linguistic evidence indicates that Ngaku, a dialect of the Dunghutti language, was traditionally spoken in the lower Macleay district (Eades 1979:250-1). As with other parts of Australia, the Dunghutti operated within a series of nested social groupings. The hearth group, comprising a man, his wife or wives and their children, formed the basic socioeconomic unit and several hearth groups would often co-operate, forming highly flexible 'bands' which would gather and then disperse as conditions demanded (Godwin 1990:97). During the course of everyday life, residential bands were usually made up of "small parties of eight to ten men, with their women and children, for the greater convenience of hunting etc, and these detached companies roamed over any part of the country within the prescribed limits of the main tribe to which they belonged" (Hodgkinson 1845:222).

The broad picture of the Dunghutti at the time of first European contact was of a "vigorous and healthy people, the majority of whom lived on the floodplain and its surrounds, relying heavily on aquatic resources" (Callaghan 1980:25). The population is said to have been "very numerous about Trial Bay" (Massie 1846). While early reports suggest that fish provided a local dietary staple (Hodgkinson 1845:23), shellfish, and terrestrial plants and animals, especially those from the river's rainforests, were also integral to the economy (Callaghan 1980:24). Evidence suggests that the country was regularly burnt to assist in hunting (Sullivan 1982). Cook, for instance, sailed past the study locality in 1770 and observed so many Aboriginal fires that he named Smoky Cape as a result (Beaglehole 1955-6).

A wide variety of the Macleay region's material items were made from wood, bark and plant fibre. These include spears, boomerangs, clubs, shields, digging sticks, containers, canoes, and woven nets and bags (Campbell 1969:93-4). Aboriginal people controlled the natural fracture properties of fine-grained stones to produce a variety of cutting and scraping tools, many of which were used to manufacture and maintain these types of

perishable items. The cultural assemblage also included spears barbed with “jagged bits” of flint or glass (Henderson 1851:144).

The arrival of European settlers in the region in the early 1830s had a predictably dramatic and drastic effect on the Aboriginal population. According to Reiner the 1816 wreck of the brig *Trial* marks one of, if not the first, contact between Aboriginal people of the Trial Bay region, and Europeans (Robinson 1965). Reiner writes that ‘one female passenger who had survived [the wreck] was taken by a local Aboriginal man with whom she had two sons’ (Robinson 1965). It was not until 1826 that the Macleay River was ‘discovered’ by Europeans, and it was a decade later again that the area started to become more intensively settled by European people (Robinson 1965). The introduction of the Crown Lands Occupation Act 1836 and the subsequent creation of the Port Macquarie Pastoral District mark the beginning of intensive European occupation of the area, although forestry grants for the exploitation of cedar had been issued in the previous year (Carey 1993). Morris has argued that the Aboriginal people of the lower Macleay Valley and the coastal regions ‘retained a large degree of autonomy in relation to European occupation partly because of the environmental particularities of this coastal region’ (Morris 1988).

Morris (1988) characterises the first decades of white settlement as a time of violence as once the Aborigines used guerrilla tactics and attacked the settlers and killed their livestock. In retaliation many Aborigines were killed and dispossessed of their lands, their hunting grounds and the animals and fish they relied on (Morris 1988). Aboriginal-settler violence was brought under control or slowed through the use of the Native Police, a force of Aboriginal men from other districts.

By the 1860 period the Aboriginal people of the region had become increasingly dependent upon handouts from the government or on rations from the settlers who claimed the land which had once supplied all their needs (Morris 1988). In many instances Aboriginal people formed camps on specific properties, working for the new property owner and being paid with rations. Morris (1988) notes that relationships between Aboriginal people and station owners, particularly on the Upper Macleay, enabled and promoted a lifestyle which was somewhat similar to the pre-contact way of living that lasted into the early twentieth century.

5.1.3 Mythology

Myths, or sacred stories, accounted for the existence of both Aboriginal people and their environment, providing tangible links between the two. Some myths associated with landscape features explain the origin of aspects of the natural world, while others are concerned with the exploits and travels of Dreaming deities and culture heroes. A well known site (#22-4-35) reflecting this latter type of myth is situated on a low bedrock ridge in the centre of the South West Rock Golf Course, west of the study area. The site, marked by a naturally occurring granite boulder, represents the grave of the culture hero Birrogun, who was speared during a tribal battle (Somerville and Perkins 2010:184).

Unfortunately, the site is not in its natural condition. A 60 acre (24.3ha) area including Birrogun’s grave was dedicated as a recreation ground/racecourse in 1892, but periodic race meetings were held there from as early as 1878 (Carey 1993:102). Two separate

accounts of the Birrogun myth related to Robinson (1989:68) indicate that the grave site was located in the racecourse, “where the winning post is” (John Flanders cited in Robinson 1989:70). Birrogun’s grave was later encompassed by the South West Rocks Golf Course, and in the 1960’s its marking boulder was moved to the side to make way for the seventh fairway (Gumbaynggir Language and Culture Group 1992:32). The site also comprised a number of Paperbark trees (into which Birrogun’s mother transformed his enemies following his death) but few, if any, of these have survived golf course development. Birrogun’s grave represents the end point in a cycle of myths that trace Birrogun’s journey south from his Valla homeland, spiritually connecting the Dunghutti people with their Gumbaingirr neighbours to the north. Several detailed accounts of Birrogun’s travels and exploits have been published (Gumbaynggir Language and Culture Group 1992). Particular places linked to Birrogun’s journey, including places along the Nambucca River, Mount Yarrahapinni, and his South West Rock grave, are of enduring cultural significance despite modern modifications (Somerville and Perkins 2010:184).

6 Aboriginal Archaeological Context

Aboriginal heritage assessment process requires that the significance of Aboriginal sites within a study area is assessed. It is important that Aboriginal sites are contextualised within the local and regional landscape, in order to inform the assessment of significance. The Aboriginal heritage context is also needed in order to develop a predictive model of Aboriginal sites in the study area. Historical information also provides additional information for the interpretation of archaeological sites.

6.1 Regional Archaeological Heritage Context

In 1989 Kempsey Shire Council commissioned *Aboriginal Heritage in the Kempsey Shire: A report for Aboriginal people* (Anutech 1989). The study and subsequent report provided an overview of research into Aboriginal heritage. The archaeological content was largely based on the work of the University of New England (UNE), Department of Classics & Ancient History and the Department of Prehistory & Archaeology.

Systematic research into the prehistory of the Macleay Valley commenced in 1969 with an academic survey of coastal midden conducted by Campbell, a student at UNE. Campbell's initial work was followed by a more intensive academic investigation involving the excavation of two extensive shell middens at Clybucca and Stuarts Point north of the Macleay River, and two midden at Maguire Crossing further south (Connah 1975,1976).

The range of radiocarbon dates obtained from the midden indicate that Aboriginal people were occupying the area at least 5,000 years ago and accessing estuarine shellfish resources. The resource base later broadened to include fish and land animals (Knuckey 1999). Two of these recent coastline sites (#22-4-46 and #22-4-47), situated beside a small creek at the base of Smoky Cape, were excavated by Hughes (1979), revealing 60-75cm deep cultural deposits composed of open shore and rock platform shellfish, with small quantities of fish, bird and macropod bone.

The archaeological research appeared to demonstrate that the sites varied both in usage and the period they were used. One midden Clybucca 3, in close proximity to a source of suitable stone for artefacts was found to contain a high proportion of waste stone material with little evidence of food consumption at 4,200 years ago. However around 3,300 years ago there is evidence that the area was occupied on a more regular basis potentially a result of its location of high ground during a wetter period. Clybucca 3 also had a high proportion of animal bone present in excavated material leading to the theory that land based resources were of more importance here than at Stuarts Point midden (Anutech 1989:21).

Stuarts Point appeared to have always functioned as a shellfish gathering area with a corresponding shell dump (Anutech 1989:21). These estuarine middens are believed to have been occupied between 5,000 and 2,000 years ago, and reflect silting up of the open estuary and formation of confined mangrove communities (Sullivan 1982:115-6).

Stone artefact assemblages included backed blades found at Stuarts Point and Clybucca. Generally the source material was found to be chert and mudstone.

Coleman (1978:181) considered that the archaeological evidence demonstrated that the area was utilised during the drier periods potentially January to March.

In the wider Macleay Valley area an assessment of recorded Aboriginal site types was conducted as part of the Kempsey Shire project (Heritage Resource Services Anutech Pty Ltd 1989:25). This analysis found that sites of mythological and ceremonial significance were relatively common and in the instance of ceremonial grounds often in close association with former Aboriginal reserves. Mythological sites have been further recorded and documented (Somerville and Perkins 2010).

Middens were the most common site type, a reflection of a resource rich coastal region. Also relatively common finds were open camp sites (artefact scatters). Burial sites were also relatively frequent in terms of site type (Heritage Resource Services Anutech Pty Ltd 1989:26).

6.2 Local Archaeological Heritage Context

The local Aboriginal heritage context provides a review of previous archaeological work conducted in the local landscape, determines whether Aboriginal sites have been previously identified (AHIMS search) in the study area and informs the predictive model of Aboriginal sites for the study area. The review of previous archaeological work includes relevant local research publications and archaeological consultancy reports. Two types of archaeological investigations are generally undertaken: excavations and surveys. Archaeological excavations can provide high resolution data regarding specific sites, such as the dates or chronology of Aboriginal occupation and information on stone tool technology (reduction sequences, raw material use, tool production, usewear and similar). Archaeological surveys generally cover wider areas than excavations and can provide important information on the spatial distribution of sites. The detection of sites during survey can be influenced by the amount of disturbance or erosion and therefore sensitivity mapping is sometimes also required to interpret survey results. The local Aboriginal heritage context also provides a context for assessing archaeological significance of sites.

6.2.1 Aboriginal Heritage Information Management System (AHIMS)

A search was undertaken on 16 December 2010 of the DECCW Aboriginal Heritage Information Management System (AHIMS) for a 10km area centred on the study area.

The AHIMS results summarised in Table 6.1 indicate that by far the most common site type is earth mound, shell, artefact(s) unspecified (n=83) comprising 76.8% of all sites recorded. In this instance AHIMS lists two site types that could be incorporated as one that is: Earth Mound, Shell, Artefact(s) Unspecified; *together with* Artefact(s) Unspecified, Earth Mound, Shell these two site types combined comprise 77.7% of sites recorded.

Similarly Burial, Earth Mound, Shell, Artefact(s) Unspecified and Artefact(s) Unspecified, Shell, Burial, Earth Mound combined comprise 3.5% of sites. When Burials, an important site type, is included the number of sites that includes Burials totals 7.3%.

The remaining site types are fairly consistent in terms of frequency recorded with modified tree (n=2) Aboriginal Resource and Gathering (n=2); Ceremonial ring (n=2), Aboriginal Ceremony & Dreaming (n=2) and Modified Tree (Carved or Scarred) Ceremonial Ring (n=1). A full list of the AHIMS results can be found at Appendix 3 while Appendix 4 provides information on site types.

Table 6-1: Summary of AHIMS Results Ordered by Site Types and Frequency.

Site Type	Frequency	Percent
Earth Mound, Shell, Artefact(s) Unspecified	83	76.8%
Burial	4	3.7%
Burial, Earth Mound, Shell, Artefact(s) Unspecified	3	2.7%
Restricted	2	1.85%
Modified Tree (Carved or Scarred)	2	1.85%
Aboriginal Resource and Gathering	2	1.85%
Aboriginal Ceremony & Dreaming	2	1.85%
Earth	2	1.85%
Artefact(s) Unspecified, Shell, Burial, Earth Mound	1	0.9%
Artefact(Unspecified)	1	0.9%
Artefact(s) Unspecified	1	0.9%
shell	1	0.9%
Modified Tree (Carved or Scarred) Ceremonial Ring	1	0.9%
Artefact(s) Unspecified, Earth Mound, Shell	1	0.9%
Shell, Aboriginal Resource & Gathering	1	0.9%
Ceremonial Ring (Stone or Earth)	1	0.9%
Total	108	100%

Three sites were found to be in the vicinity of the study area. To ascertain the nature of those sites the following site cards were obtained from DECCW AHIMS: #22-4-15; #22-4-48; and #22-4-95.

Site card 22-4-95 (1994) records the finding of a burial/midden during excavation works associated with an industrial development. Limited information is available on the site card however it appears two instances of bone material was found; one on the surface and the second in a trench at a depth two metres. There is no description of the midden material.

Site card 22-4-15 (1988) records the finding of a midden located approximately 0.25 kilometres south west of the current study area. The description on the site cards is of an extensive midden with one artefact (core). There is no further description of the midden

content i.e. shell type etc. A previous original recording for this site records it at the foot of a steep hill on Spencers Creek. This may indicate that the GPS coordinates for the midden on AHIMS requires clarifying as Figure 4.1 plots that site some distance north of the creek.

Site card 22-4-48 (1977) records the potential presence of an Aboriginal burial ground approximately 0.5 kilometres south of the current study area. The author of the report was unable to locate any indication of the site. The recording of what is called the Jerseyville Aboriginal cemetery/ Saltwater Lagoon was instigated by the recollections of a local inhabitant. The informant indicated that the burials were 19th century. No archaeological material was recorded across the site.

6.2.2 Local Archaeological Studies

Archaeological work has also been undertaken in response to individual development proposals at South West Rocks. This work has included a ground-probing radar survey of a reported post-contact Aboriginal burial ground at Spencerville (Collins and Griffin 1993), and a shovel test pit and auger investigation of land adjacent to a series of midden that stretch along a former embayment of the Macleay River (Collins 1995).

Dunghutti December 2006 & October 2007

Previous surveys over the current study area have been conducted by Dunghutti Elders with no sites were recorded. The reports from those surveys can be found at Appendix 5.

Collins, 2004, Aboriginal Heritage Assessment at South West Rocks

Kempsey Shire Council prepared a draft Local Environmental Plan (LEP) to facilitate the rezoning of 111.8 hectares between South West Rocks and Arakoon, approximately three kilometres north-east of the current study area, for residential purposes. That study area was seen to comprise extensively disturbed drainage impeded lowlands. No sites were recorded and the report concluded that given more preferable occupation areas such as coastal dunes and the Macleay estuarine system nearby that area was unlikely to have been used extensively for habitation. The author in assessing previous reports found that recorded sites in the South West Rocks area tended to be associated with well drained ground, particularly fore-dunes, foot slopes that bordered estuarine channels and swamps (Collins 2004).

Smith, 2001, Field Inspection for Aboriginal sites at South West Rocks

This survey was conducted for a proposed residential subdivision approximately two kilometres north east of the current study area. Two small land parcels, each approximately one hectare, was surveyed by Sites Officers from the Kempsey LALC. No archaeological materials were identified. Exposure was considered excellent with at least one third of an allotment comprising fully exposed eroded sand sheets (Smith 2001).

Cohen, 1997, Aboriginal Heritage Assessment at South West Rocks

This survey was over a study area approximately three kilometres north east of the current study area. The area surveyed provided good visibility. The survey was carried out following consultation with the local Aboriginal community who advised they had no

knowledge of cultural sites in the area. Following the survey, monitoring of subsequent earth works found no evidence of cultural heritage material. The author quoted Kempsey LALC officers, Harold Smith and Greg Blair as advising that the vegetated hind dune in the north-eastern corner of the study area, and the better drained area in the south-west have also been inspected by Land Council representatives in the past, both with a nil result. This location would describe the present study area (Cohen 1997).

Envirosciences, 1993 Proposed optical fibre cable Clybucca to South West Rocks New South Wales.

An archaeological investigation was carried out prior to the installation of a 11.5 kilometres long section of optical fibre cable that required a trench 1.2 metres deep with a 4 metre wide construction corridor. This study at its nearest point was approximately 0.05 kilometres from the current study area. The survey recorded three new middens and noted nine previously recorded middens all in association with Spencers Creek. None of these sites were in the vicinity of the current study area and the closest would be approximately 0.05 kilometres south east of the current study area (Envirosciences Pty Limited 1993).

Collins and Griffin, 1993, Archaeological and Ground Probing Radar investigation of proposed Aboriginal cemetery site at Spencerville, Mid-north coast NSW.

This survey was undertaken approximately 0.5 kilometres south east of the current study area. The investigation was instigated in 1977 following recollections of an informant that internments had occurred in that area and subsequently an Aboriginal Cemetery site AHIMS (#22-4-48) was recorded though no evidence of the cemetery was located.

In 1993 in an attempt to locate the cemetery Collins and Griffin were enlisted to conduct a study using GPR. The GPR investigation found no evidence of burials in that location. A preliminary survey of the area did identify twelve stone artefacts and five scatters of fractured midden shell all archaeological material. In her discussion of burials within the wider Macleay Valley Collins found that nine prehistoric burials had been recorded and of these five were in association with midden material.

Following this work in 1996 human bone (Aboriginal) was uncovered when trenches were being dug for a nearby industrial subdivision. This area was outside the area indicated as being the cemetery site (AHIMS Site card 22-4-95) and the area investigated by Sullivan and Griffin (Collins and Griffin 1993).

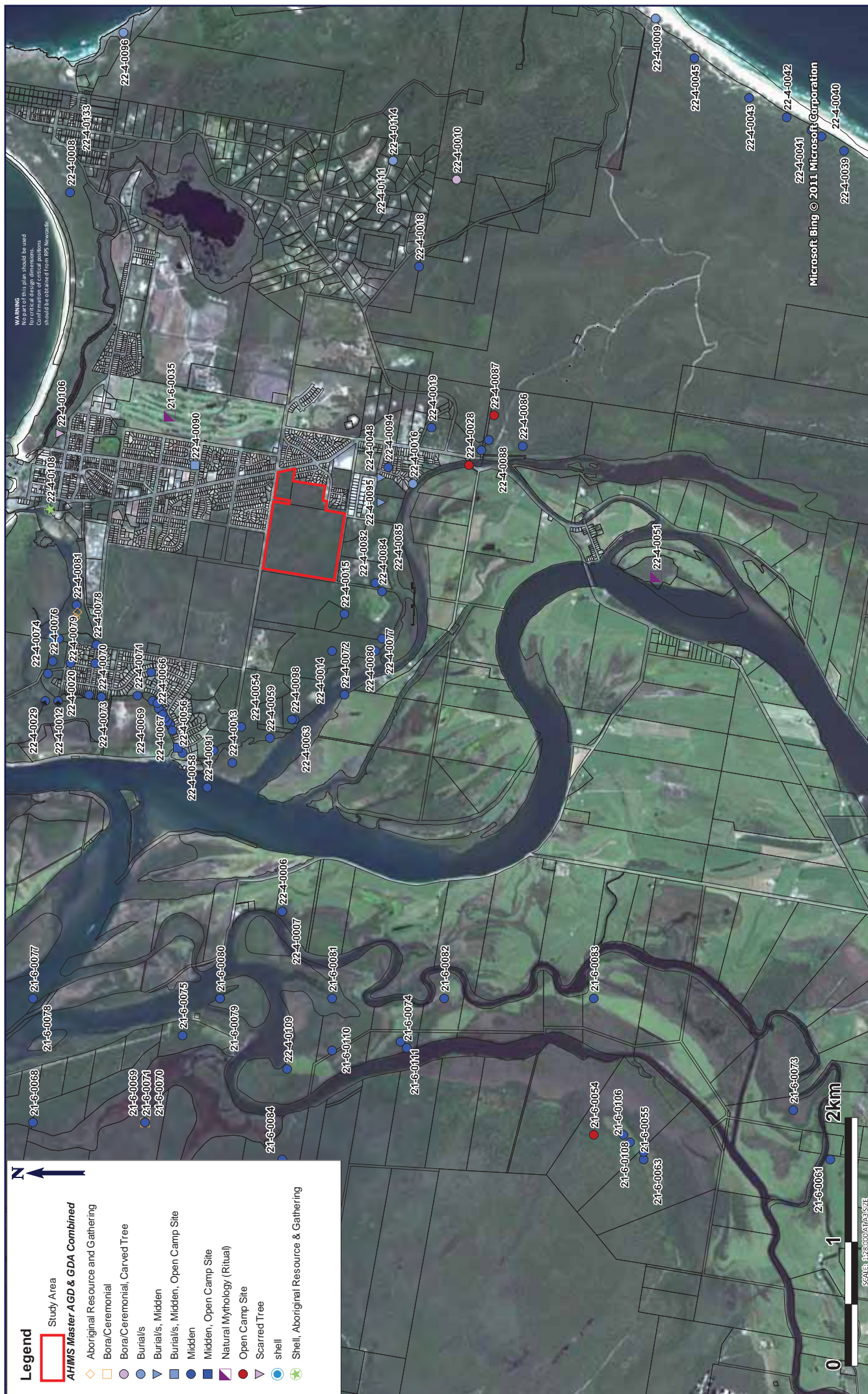
6.3 Overview of Research Results

An assessment of the results of the AHIMS search and previous local archaeological research indicates sites are most often found in close association with creeks and waterways. Local surveys that have occurred away from creeks have returned nil finds (Dunghutti 2001,2004; Collins, 2004; Smith, 2001; Cohen, 1997; and Effenberger 1993).

The sites found in association with creeks are generally midden. With an overview of the middens in the South West Rocks area showing most are closely associated with

Spencers Creek. Spencers Creek at its closest point is approximately 0.5 kilometres south of the current study area.

Burials have also been recorded in the South West Rocks area with the recording of a burial ground approximately 0.5 kilometres south of the study area. The location of this burial ground was based on recollection and has never satisfactorily identified. This is consistent with the assumption that due to their subsurface context burials are seldom detectable during surveys of undisturbed surfaces. The likelihood of burials within the vicinity of that area was supported by the later discovery of human bone during construction works at the present day industrial subdivision on Lindsay Noonan Drive, South West Rocks. The area where the bone was located off Lindsay Noonan Drive is approximately 0.3 kilometres south of the current study area.



6.4 Predictive Model for Aboriginal Archaeology in the Study Area

A predictive model assists in determining the potential for Aboriginal sites for sites to occur and the type of site to occur within the study area. It draws on the review of the existing information from the regional and local archaeological context, as well as, the environmental context. The predictive model is necessary to formulate appropriate field methodologies, as well as, providing information for the assessment of archaeological significance.

There are a number of factors which influence Aboriginal occupation of an area. These include essential subsistence resources such as food (flora and fauna), as well, as freshwater. However, other resources such as stone raw materials, wood and bark, animal skins, reeds for uses such as basket weaving, string, clothing and similar were also used. Landscape features such as ridges, flat elevated areas, rockshelters and similar, may have also influenced Aboriginal occupation of an area. In addition, cultural activities may have also taken place at certain locations in the landscape for example corroborees, mythological places, initiation sites and similar.

The most common site type, middens, are found in a cluster along the present and former shores of the Macleay estuary, where they form distinctive mounds of cockle (in basal layers) and oyster shell (in upper layers). They may also contain faunal remains, stone artefacts and charcoal and ash from cooking fires. In South West Rocks middens are most often associated with Spencers Creek.

Aboriginal burials have been recorded in direct association with midden deposits at South West Rocks. Aboriginal burials on the mid-north coast are most commonly found as unmarked graves in sand or midden deposits in sand. Due to their subsurface context burials are seldom detectable during surveys of undisturbed surfaces.

Other site types that may occur are open camp sites (artefact scatters). These are most often found in close proximity to reliable fresh water and while few have been recorded across the area there presence remains a possibility if there is fresh water in the vicinity of the study area.

Culturally modified trees while not common are a potential site type where previous timber-getting and land clearing practices have left mature trees present. Culturally modified trees include carved trees, rarely found adjacent urban areas and scarred trees. Scarred trees more commonly occur and are the result of the removal of bark for canoes, shields or domestic implements.

6.5 Site Predictions

The following site predictions for the study area have been made on the basis of the environmental context, available historic observations of Aboriginal people in the region, archaeological studies, as well as, analysis of the AHIMS data.

6.5.1 Site Type

A comparison of site types and their location in the South West Rocks area would indicate that the study area has a low potential for Aboriginal cultural heritage sites. Middens, the most common site type are generally found in close proximity to estuarine or marine water bodies in this area, the estuarine Spencers Creek. The study area is located 0.5 kilometres from Spencer Creek and 1.5 kilometres from the nearest ocean beach area and therefore it is unlikely that shell middens would be found in the study area.

There has been one instance of bone material (Burials) found 0.3 kilometres south of the present study area and though an Aboriginal cemetery is recorded other than that bone no other evidence has been found.

Modified trees, artefact scatters; Aboriginal resource and gathering areas may potentially be found however they are not commonly found across the South West Rocks area. Ceremonial areas such as Dreaming sites; Bora grounds and ceremonial rings are known to be in the South West Rocks area however given previous investigations across the wider area it could be considered unlikely that ceremonial and mythological sites remain undocumented in or near the study area.

6.5.2 Site Location

The majority of Aboriginal archaeological sites in the vicinity of the study area were identified within 100 metres of a watercourse. The study area is a minimum of 500 metres from Spencers Creek and does not have any watercourses. It should be noted however that the central and south west portion of Lot 31 DP754396 contains a depression that may tend toward swamp in periods of rain.

Artefact scatters within the South West Rocks area are generally associated with middens however they may be the only contents of an open camp site.

Modified trees may be found anywhere mature trees have survived logging and land clearing practices. The presence of forest may indicate that mature trees may be present and raise the possibility of scarred or modified trees being present.

Burials are generally associated with middens and are more often found in sandy soils.

While this area may not provide permanent water the additional variety of resources available in such an area may provide an attractive resource gathering area.

6.6 Predictive Model Discussion

A review of previous archaeological reports and the AHIMS for the South West Rocks area indicates that within the study area there is low potential for sites to occur. Those site types that may occur are scarred trees, middens and burials.

Scarred trees may be found in any landform type however there is a need for trees of sufficient age to have been present when Aboriginal people were still practising traditional

skills. While much of the area has been cleared of mature forests by early logging and farming practices there is still potential for scarred trees to occur.

Middens are more likely found in close proximity to estuarine or marine water bodies. While Spencers Creek is located approximately 0.5 kilometres from the southern and western boundaries of the study area it is noted that a midden (AHIMS #22-4-0015) has been recorded 250 metres from the north western corner of the study area. It is likely that there is an error in the coordinates of the midden with a description of it as being *on* Spencers Creek and its location plotted as being approximately 300 metres north of Spencers Creek.

Burials are often but not always associated with midden. In some instances burials may have been marked by two trees bound in such a way as to form an arch (pers. comm. Greg Blair) however given previous land clearing practices and the age of such trees it is more likely that burial sites would have no distinguishable ground surface features. Other than an association with middens and sand there are no readily identifiable features that would identify a burial site.

7 Archaeological Field Survey

7.1 Survey Methodology

The study area was surveyed in accordance with the requirements set out in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Code of Practice) (DECCW 2010).

7.1.1 Survey Aims

The purpose of the survey was to inspect visible ground surfaces, observe exposed soil profiles or other visible features such as rockshelters, scarred trees and rock art, in addition to assessing whether potential archaeological deposits are present in the study area. The survey also aimed to record any cultural sites or Aboriginal landscapes, if identified by the Aboriginal stakeholders.

7.1.2 Sampling Strategy

The purpose of a sampling strategy is to provide a framework for conducting archaeological surveys in a manner which can be quantified and thus can be compared to other survey reports in the local landscape and for regional comparison (Burke and Smith 2004). The sampling strategy used for this assessment targeted all landforms which may be affected by the proposed development and where possible, targeted landforms which had been identified as having archaeological potential on the basis of background research. The landforms which would be affected by the proposed development were identified as: crest; slope; and depression and were included in the survey sampling strategy.

7.1.3 Field Methods

The survey was conducted on foot (pedestrian) and targeted the landforms identified in the survey strategy above. The area surveyed was recorded in survey units. Each survey unit was mapped and recorded in accordance with landforms, study area boundaries, changes in survey conditions (such as visibility or ground surface exposure) and/or other relevant considerations. The mapping of survey units was undertaken on the basis of GPS recorded data and with reference to aerial and topographic information. The recording of survey units was undertaken using representative digital photographs (with scale) and field notes which included observations of soils, ground surface exposure and visibility, vegetation cover, rock outcrops, levels of ground surface disturbance, erosion and similar observations. The field notes provide a basis for the reporting of survey coverage and calculating survey effectiveness as presented in the survey results section. It is required that any Aboriginal sites identified are recorded and submitted to the AHIMS database.

7.2 Field Survey

A pedestrian survey of the study area was undertaken by RPS archaeologists, Laraine Nelson and Ali Byrne, in conjunction with Greg Blair and Craig Smith, site officers representing Kempsey Local Aboriginal Land Council on the 30 March 2011. The study area was surveyed and is described as three survey units (Figure 6-1) exposure and visibility for each survey unit was assessed according to the criteria listed in Table 7-1 and the survey coverage for the study area was recorded in Table 7-2 with a summary of the landform types at Table 7-3.

The landform overall could be considered fairly homogenous and described as low rolling hills. The study area divided into three survey units is described in Field Survey Results as:

- Survey Unit 1 – Crest
- Survey Unit 2 - Slope
- Survey Unit 3 – Depression

7.3 Field Survey Results

Survey Unit 1 - Crest

The crest was the smallest of the survey units. Three crests were situated toward the eastern portion of the study area (Figure 6-1: Study Area with AHIMS.). In terms of slope these area were relatively level ($<1^{\circ}$). The two crests in the northern portion of the study area were covered in open forest with open understorey and dense leaf litter. While the majority of the trees observed were of insufficient age to be considered candidates for Aboriginal cultural modification there were a number of dead trees of considerable age. All these trees when observed were checked. These mature trees appeared to have been ring barked many years before with Greg Blair (Sites Officer, Kempsey LALC) relating that it most likely occurred when the area was cleared for early farming. There was a small number of granite boulders (erratics) present however no other stone was observed. Ground visibility in theses areas could be considered nil with no available exposures. Ground surface visibility rating at (0-9% to 10-29%) (Table 7-1) was considered to be Low (Plate 1).

The crest in the south eastern portion of the study area had good surface exposure with the A horizon comprising white sand. This was the only white sand seen across the study area, with sandy loam the most commonly occurring soil type. Ground surface visibility rating at (50 - 59%) (Table 7.1) was considered to be Moderate (Plate 2).

Survey Unit 2 - Slope

The slope area comprised the largest of the survey units and the majority of the study area. The slope was generally very gentle (1° - 5°) to gentle (6° - 20°). The soils were A horizon comprising sandy loam. Vegetation consisted of open forest with open to

moderately dense understorey and dense grasses and leaf litter. While the majority of the trees observed were of insufficient age to be considered candidates for Aboriginal cultural modification there were a number of dead trees of considerable age. All these trees when observed were checked. As discussed above these trees appear to have been ring barked some time previously.

Ground surface visibility was generally confined to a number of tracks that criss-crossed the study area. These tracks included foot and motor cycle tracks. Away from the tracks visibility was considered nil with dense leaf litter and/or long grasses. Ground surface visibility rating (Table 7.1) was considered to be Low (0-9% to 10-29%). There was a small number of granite boulders (erratics) present however no other stone was observed (Plates 3 & 4).

One tree recorded as RPS SWR 1 (Plates 5 & 6) was located within the slope survey unit. RPS SWR 1, an upright dead tree, has a scar consistent with the removal of bark by Aboriginal people. A further tree was examined for the possibility that incisions along its trunk were of Aboriginal cultural origin. These marks were discounted as being of Aboriginal origin with a discussion on the reasoning behind that decision in *Section 7.3.3 Discussion of Aboriginal Survey Results*.

Survey Unit 3 – Depression

The area of depression, the second largest of the survey units was small in survey unit size. The area in terms of slope was level (<1°) with poor drainage. Vegetation which impeded access consisted of closed forest and dense understorey that included creepers and vines (Plate 7). In the central portion of the study area some tracks crossed the depression providing limited visibility and access (Plate 8). Ground surface visibility rating (Table 7-1) was considered to be Low (0-9%). No stone material or outcrops were observed.

Table 7-1: Ground Surface Visibility Rating

GSV Rating	Overall Rating	Description
0 – 9%	Low	Heavy vegetation with scrub foliage, debris cover and/or dense tree cover. Ground surface not clearly visible.
10 – 29%	Low	Moderate level of vegetation, scrub or tree cover. Small patches of soil surface visible resulting from animal tracks, erosion or blowouts. Patches of ground surface visible.
30 – 49%	Moderate	Moderate levels of vegetation, scrub and/or tree cover. Moderate sized patches of soil surface visible possibly associated with animal tracks, walking tracks and erosion surfaces. Moderate to small patches across a larger section of the study area.
50 – 59%	Moderate	Moderate to low level of vegetation, tree and/or scrub. Greater amounts of areas of ground surface visible in the form of erosion scalds, recent ploughing, grading or clearing.

GSV Rating	Overall Rating	Description
60 – 79%	High	Low levels of vegetation and scrub cover. High incidence of ground surface visible due to recent or past land–use practices such as ploughing, grading and mining. Moderate level of ground surface visibility due to sheet wash erosion, erosion scalds and erosion scours.
80 – 100%	High	Very low to nonexistent levels of vegetation and scrub cover. High incidence of ground surface visible due to past or recent land use practices, such as ploughing, grading and mining. Extensive erosion such as rill erosion, gilgai, sheet wash, erosion scours and scalds.

Table 7-2: Survey Coverage Data


Landform	Survey Unit	Survey Unit Area (Square metres)	Exposure (%)	Surface Visibility (%)	Effective coverage area (sq m)	Effective coverage %
Crest	1	5728	<5	60	171	3
Slope	2	44840	<1	40	179	4
Depression	3	1496	<1	40	6	0.4

Table 7-3: Landform summary


Landform	Landform area	Area effectively surveyed	% landform effectively surveyed	Number of sites	Number of artefacts or feature
Crest	20255	171	3	0	0
Slope	344335	179	4	2	2
Depression	40510	6	0.4	0	0


WARNING
No part of this plan should be used
for critical design dimensions.
Confirmation of critical positions
should be obtained from RPS Newcastle.

Legend

 Study Area

Survey Units

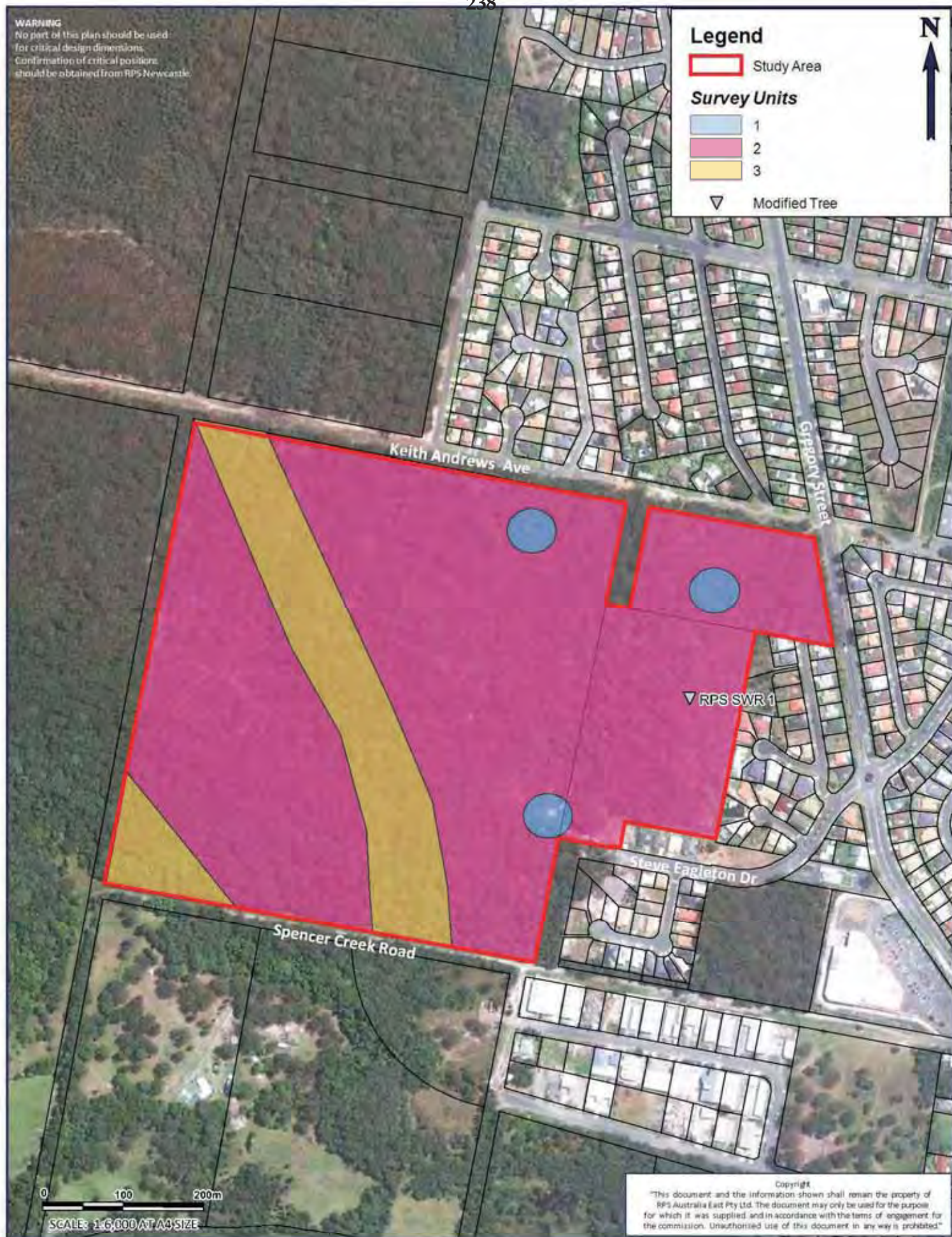
 1

 2

 3



Modified Tree



TITLE: FIGURE 7-1 SURVEY UNITS AND
NEWLY RECORDED SITES

LOCATION: SOUTH WEST ROCKS

DATUM: (GDA 94)
PROJECTION: MGA ZONE 56

DATE: 23/08/2012
PURPOSE: HERITAGE

LAYOUT REF: 320-5mtrg/nyh/000000
VERSION (PLAN BY): C A4 (NW-EN)

CLIENT:
JOB REF: 107050

RPS AUSTRALIA EAST PTY LTD (ABN 44 140 292 762)
241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4940 4200 F: 02 4961 6794 www.rpsgroup.com.au

RPS

7.3.2 Aboriginal Sites and Archaeological Sensitivity

Table 7-4: Summary of sites - locations recorded in GDA94/MGA, Zone 56

No.	AHIMS Site Number	Site Name	Eastings	Northings	Site Type
1	tba	RPS SWR 1	503796	6581015	Modified tree

7.3.3 Discussion of Aboriginal Survey Results

On the basis of a review of the relevant environmental and archaeological information a predictive model of the study area was formulated. It was considered there was low potential for sites to be found sites. There was low potential for scarred trees because of previous land clearing and logging practices. There was a slight possibility that midden, burials and ceremonial sites would be present. While modified trees and resource gathering area could be found anywhere in the landscape artefact scatters and middens would be most likely found in the southern section of the study area closest to Spencers Creek.

There was no evidence of shell associated with middens, as was predicted the area is of a sufficient distance from an estuarine source to make this an unlikely finding.

The location of one modified tree did counter the predictive model that assumed from as a result of early land clearing practices mature trees would not remain. Whilst loggers would remove the trees, farmers with primitive methods of tree removal, most likely found it easier to leave the largest of the trees ringbarked rather than attempting to remove them. As a result these trees whilst dead still remain within the landscape.

The tree (RPS SWR 1) was found on slope landform though modified trees could as likely be found across any of the other relatively homogenous landform features. The location of the RPS SWR 1 is identified in Figure 7.1 & Figure 7.2.

A second fallen dead tree with a series of cut marks was examined as a potential example of an Aboriginal notched tree. Aboriginal people used a series of notches they cut into tree trunks to climb and access resources such as honey, birds, possums, etc. A close observation and discussion with other Senior Archaeologists led to the conclusion that the notches were cut by a steel axe and were consistent with the pattern and type of cuts used by loggers. This theory was supported by the presence of branches in the canopy that had been sawn through. Early logging practices included the removal of branches of sufficient size and type where necessary rather than the removal of whole trees.

7.4 Historic Field Survey Results

The only evidence of prior European use of the landscape found during the survey, other than the ringbarked trees was a number of fence posts. The fencing method incorporated wooden upright fence posts and strung wire. The redundant fences were the subject of a brief desk top study on the history of rural fencing in Australia following the survey. The

study indicates that while post and rail was the earliest known rural fencing in Australia, post and wire fencing was also used from the 1860's onward (Heritage Office and Department of Urban Affairs & Planning 1996:150). This type of fence is common across the environment and is not in this instance considered to be of European cultural heritage.

8 Significance Assessment

In order to develop appropriate heritage management outcomes, it is necessary for the significance of Aboriginal sites or areas of archaeological sensitivity to be assessed. Aboriginal heritage can be significant for cultural and/or scientific reasons. Aboriginal people are the best placed to assess cultural significance and are therefore consulted in the Aboriginal heritage management process. Scientific significance is assessed according to scientific criteria outlined in DECCW heritage guidelines.

8.1.1 Cultural Significance Criteria and Assessment

An assessment of European and Aboriginal cultural significance incorporates a range of values which may vary for different individual groups and may relate to both the natural and cultural characteristics of places or sites.

With regard Aboriginal cultural significance and cultural views these can only be determined by the Aboriginal community using their own knowledge of the sites and their own value system. As the cultural significance is a criterion that only Aboriginal people can assess, a detailed appraisal of cultural significance for the study area has not been included as part of this study. Discussions with Kempsey LALC sites officers Greg Blair and Craig Smith indicated that while all areas are significant to Aboriginal people this area of South West Rocks was not known to have a specific cultural significance. Further details are included in the Aboriginal consultation log.

With regard European cultural significance in NSW this is governed by the use of the NSW Heritage Council specific criteria for heritage assessment (NSW Heritage Act 1977) (as amended). As no items of European cultural significance were recorded during this survey this is not addressed in this report.

8.2 Aboriginal Archaeological Significance Criteria

Archaeological significance, also referred to as scientific significance, is determined by assessing an Aboriginal heritage site or area according to archaeological criteria. The assessment of archaeological significance is used to develop appropriate heritage management strategies. The criterion for archaeological significance has been developed in accordance with the principals of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (2010).

The following archaeological significance criteria have been used: rarity, representativeness, integrity, connectedness, complexity and research potential and are defined in Table 8-1.

Table 8-1: Archaeological Significance Criteria.

Criteria	Description
Rarity	This criterion examines the frequency of the identified site types with others previously recorded in the local or regional landscape
Representativeness	All sites are representative of a site type, however, some sites may be in better condition, or demonstrate more clearly a particular site type. Representativeness is based on the understanding of extant sites in the local or regional landscape and the purpose of this criteria is to ensure a representative sample of sites are conserved for future generations
Integrity	This refers to site intactness. A site with contextual integrity can provide information relating to chronology, social systems, tool technology, site formation processes, habitation, frequency of use as well as other occupation indicators. Moderate to high levels of disturbance will generally result in low integrity.
Connectedness	Relates to inter-site relationships, that is, whether a site can be linked to an archaeological complex, or where sequence of activities can be discerned. For example, a quarry (stone extractions site), may be linked to an adjacent heat treatment pit and knapping floor, these site thus could be linked as part of a stone tool production sequence.
Complexity	Refers to the contents of the site, such as, the variety and nature of features and/or of artefacts present. For example, rock art sites with many motifs may be ranked highly in terms of complexity, or artefact scatters with a wide variety of raw materials and/or or tool types may be more complex than surrounding sites.
Research Potential	This criteria is used to identify whether a site has the potential to contribute new information which to the interpretation of Aboriginal occupation in the area.

The archaeological significance criteria are usually assessed on two scales: local and regional; in exceptional circumstances; however, state significance may also be identified. Archaeological significance criteria is assessed in three levels to which scores are assigned; low (score=1), moderate (score=2) and high (score=3).

A combination of these scores then provides enables an overall significance ranking of the site to be determined.

- Low significance 6-10
- Moderate significance 11-14
- High significance 15-18

8.2.1 Assessment of Aboriginal Archaeological Significance

The archaeological significance of the identified Aboriginal site has been assessed and is summarised in Table 8-2.

Table 8-2: Assessed Levels of Significance for Aboriginal Sites

Site	Significance scale	Rarity	Representativeness	Integrity	Connectedness	Complexity	Research Potential	Overall Significance
RPS SWR 1	Local	2	2	1	1	1	1	Low
	Regional	1	1	1	1	1	1	Low

8.2.2 RPS SWR 1

The scar on RPS SWR 1 is in very poor condition on a dead tree.

With regard **Rarity** this type of modified (scarred) tree is the more commonly found scar type across the region. Only one other scarred tree is found within the AHIMS search area. In terms of **Representativeness** while there are few modified trees in the locality this site is in poor condition. **Integrity** this site is no longer intact it has suffered through the death of the tree and termite damage with no evidence of the processes involved in its making. **Connectedness** is no longer a factor for this site with the tree a remnant of the original forest and no evidence of further sites within the vicinity. **Complexity** is not present in this site with no further sites in the vicinity to add to the archaeological record. **Research potential** of the site is best served by its recording with little further research potential available.

A copy of the site card RPS SWR 1 for lodging with AHIMS is at Appendix 6.

8.3 Principles of Ecologically Sustainable Development

The principles of ecologically sustainable development need to be considered under 2A of the NPW Act. Inter-generational equity is part of these principles, which allows future generations to access the cultural and environmental diversity of the present generation.

Inter-generational equity has been considered as part of the assessment of significance. State significant Aboriginal sites should be considered for blanket protection for future generations, as these sites have been assessed as having highest significance within NSW. No Aboriginal sites of state significance were identified in this assessment.

9 Conclusions and Recommendations

This report has considered the environmental and archaeological context of the study area, developed a predictive model and reported on the results of an archaeological survey of the study area. The following management recommendations have been formulated with consideration of the significance of Aboriginal and European heritage and have been prepared in accordance with the relevant legislation.

The following recommendations are made with regards Aboriginal cultural heritage:

Recommendation 1

The site RPS SWR 1 the scarred tree located during this survey should be afforded protection with a cordoned off area of 10 metres X 10 metres established around it.

Recommendation 2

All relevant SJ CONNELLY CPP PTY LTD staff should be made aware of their statutory obligations for heritage under NSW NPW Act (1974) and the NSW Heritage Act (1977), which may be implemented as a heritage induction.

Recommendation 3

The location of RPS SWR 1 should be included in SJ CONNELLY CPP PTY LTD environmental management framework for the study area, so that all staff are aware that these areas will require management.

Recommendation 4

If further Aboriginal site/s are identified in the study area, then all works in the area should cease, the area cordoned off and contact made with DECCW Enviroline 131 555, a suitably qualified archaeologist and the relevant Aboriginal stakeholders, so that it can be adequately assessed and managed.

Recommendation 5

In the unlikely event that skeletal remains are identified, work must cease immediately in the vicinity of the remains and the area cordoned off. The proponent will need to contact the NSW Police Coroner to determine if the material is of Aboriginal origin. If determined to be Aboriginal, the proponent, must contact the DECCW Enviroline 131 555, a suitably qualified archaeologist and representatives of the local Aboriginal Community Stakeholders to determine an action plan for the management of the skeletal remains, formulate management recommendations and to ascertain when work can recommence.

The following recommendations are made with regards European cultural heritage:

Recommendation 6

No European heritage items were uncovered during the survey, however if, during the course of clearing work, significant European cultural heritage material is uncovered, work should cease in that vicinity immediately. A significance assessment by a suitably qualified archaeologist adhering to the NSW Heritage Branch significance criteria should be carried out and the NSW Heritage Branch should be notified if significant historical items are identified. Works should only recommence when an appropriate and approved management strategy is instigated.

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II Plates



Plate 1: Survey Unit 1 - Crest north eastern sector looking west



Plate 2: Survey Unit 1 - Crest in south eastern portion of the study area



Plate 3: Survey Unit 2 – Slope looking south east



Plate 4: Survey Unit 2 – Slope in western portion of the study area



Plate 5: RPS SWR 1 looking north east to tree



Plate 6: RPS SWR 1 close up of scar



Plate 7: Survey Unit 3 – Depression looking north from Spencers Creek Road



Plate 8: Survey Unit 3 – Depression looking north along track