McCardle Cultural Heritage Pty Ltd

Orogen Pty Ltd

Balickera Hard Rock Quarry

LGA: Port Stephens

Indigenous Archaeological Due Diligence Assessment

July 2012

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Executive Summary

McCardle Cultural Heritage Pty Ltd (MCH) was commissioned by Orogen Pty Ltd to prepare an Indigenous Heritage Impact Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 located off Italia Road at Balickera. The proponent seeks to extract 10,000 – 15,000 kilo tonnes (kt) of quarry resources from the site over a period of approximately 30 years.

Extraction of the resource from the site will require the removal of vegetation followed by the extraction of the resource. The extraction activities will be located to the west of existing composting facilities and to the west of Seven Mile Creek. A new bridge crossing of Seven Mile Creek will be constructed in the northern part of the site, and all of the operational and extraction areas will be located adjacent to quarrying extraction areas in order to minimise the extent of impacts on other parts of the site.

The study area is located within the Central Lowlands and consists of slopes and drainage lines. The study area has five 1st orders streams, one 2nd order and 1 3rd order (Seven Mile Creek). Seven Mile Creek runs north south through the study area and the remaining drainage drains into this creek. The study area is considered moderately resourced in terms of water availability and associated resources during wet seasons or after continuous heavy rain when water was available.

The study area has been cleared and primarily used for pastoral purposes (grazing), involving the wholesale clearance of native vegetation, the introduction of pasture grass, the construction of dams, fencing, numerous tracks and the existing quarry to the north east, and associated infrastructure (water, electricity, telephone).

A search of the OEH AHIMS register has shown that 7 known Aboriginal sites are currently recorded within five kilometres of the study area. These include 4 AFT, 2 PADs, and one STQ/AFT (Stone quarry & artefact. The predictive model suggests that there is a high potential for isolated finds and/or artefact scatters to be located along Seven Mile Creek (3rd order). There is moderate potential along the 2nd order to the south and low potential for sites found throughout the remainder of the study area due to the distance from reliable water and landforms that are steep slopes.

The overall effective coverage was 4.67% with grass and leaf litter being the limiting factor and erosion across the study area is minimal and included sheet and creek bank erosion. The disturbances included clearing, fences, tracks, the quarry/current compost facility to the north east and motor bike tracks to the south east and erosion all of which have impacted upon the landscape and associated cultural materials. These disturbances result in the lateral and horizontal movement of materials. In particular, the north east and south east has been significantly disturbed and the remainder disturbed through tracks and erosion only with minimal disturbances along the creeks (bank erosion).

One isolated find was identified within a creek bed. The mudstone flake exhibits weathering (smooth edges that were once sharp) and was located in the creek bed which may have been washed form upstream.

Two PADs were also identified. BQ PAD1 includes the 3rd order creek (Seven Mile Creek) situated to the east and drains north to south and flows along a simple slope. The PAD is defined as including the creek and extends in width to 50m both sides of the creek bank. This is the area that typically contains the highest density and number of sites throughout the Hunter Valley. The PAD has been subject to minimal disturbances, is heavily vegetated and has been subject to creek bank erosion. There is a high potential for both surface and subsurface cultural materials along this creek.

BQ PAD2 includes the 2nd order creek that is situated to the south and drains west east down a simple slope and into Seven Mile Creek. The PAD is defined as including the creek and extends in width to 50m both sides of the creek bank. This is the creek that contains the isolated artefacts and another area that typically contains the highest density and number of sites throughout the Hunter Valley. The PAD

has been subject to minimal disturbances, is heavily vegetated and has been subject to creek bank erosion. There is a high potential for both surface and subsurface cultural materials along this creek.

The site and PADs are considered typical of the Hunter valley region in both their content and location. The isolated find was of low scientific significance and the significance of the PADs remain unknown at this time and may be determined following test excavations if required. The following recommendations were made:

1) The persons responsible for the management of an on site will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;

2) The involvement of the registered Aboriginal stakeholders in the ongoing management of the Aboriginal cultural materials within the project study should be promoted and included in the Environmental Management Plan and/or the Aboriginal Heritage Management Plan; and

3) A cultural awareness program should be included as part of the site induction program and developed with the registered Aboriginal stakeholders and form part of the Environmental Management Plan and/or the Aboriginal Heritage Management Plan.

4) If BQ PAD1 will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW; and

5) If BQ PAD2 will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW.

6) If BQ/1 will be harmed by any future development an AHIP will be required.

Glossary

Aeolian deposits: sediments transported by wind (sand dunes, loess).

Alluvial: sediment mass that is deposited from transport by channelled stream flow or over-bank flow.

Aboriginal Cultural Heritage Values: traditional values of Aboriginal people, handed down in spiritual beliefs, stories and community practices and may include local plant and animal species, places that are important and ways of showing respect for other people.

Aboriginal Place: are locations that have been recognised by the Minister for Climate Change and the Environment (and gazetted under the *National Parks and Wildlife Act1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Artefact: any object that is physically modified by humans.

Artefact scatter: a collection of artefacts scattered across the surface of the ground. Also referred to as open camp sites.

Assemblage: a collection of artefacts associated by a particular place or time and assumed generated by a single group of people and can comprise different artefact types.

Association: the co-occurrence of an artefact with other archaeological remains, usually in the same matrix.

Axe: a stone-headed axe usually having two ground surfaces that meet at a bevel.

Backed artefact: a stone tool where the margin of a flake is retouched at a steep angle and that margin is opposite a sharp edge.

Background scatter: a term used to describe low density scatter of isolated finds that are distributed across the landscape without any obvious focal point.

B.C: abbreviation for the term Before Christ. In academic, historical and archaeological professions, this term is now generally replaced by Before Common Era (B.C.E).

B.C.E: Before Common Era. See B.C.

Biface: a stone artefact flaked on both faces.

Bipolar flake: a stone artefacts produced by striking into an anvil with a hammer stone. These flakes usually display crushing at either end.

Blade: a flake that is at least twice as long as it is wide.

Bondi point: a small asymmetrical backed artefact with a point at one end and backing retouch.

B.P: Before Present, used in age determination instead of B.C or B.C.E. Present is academically defined as the year 1950 (the year the term was invented).

Bulb of percussion: a small, rounded protrusion on a flake resulting from the blow that separated the flake from its core or other flake.

Bulbar depression: a depression left on the core (where a flake's bulb of percussion was attached) when a blade or flake was struck off.

Calcined bone: burned bone reduced to white or blue mineral constituents.

Ceremonial Sites: Included in the OEH AHIMS database are sites which were associated with the spiritual beliefs and activities of Aboriginal people. They may be natural places in the landscape, or places where structures were made as part of particular ceremonies. Structures include bora rings, stone arrangements etc.

Conjoin: a physical link between artefacts broken.

Contact site: a site that displays interaction between early colonists and Aboriginal Australians.

Context: the position and associations of an artefact, feature, or archaeological find in space and time. Noting where the artefact was found and what was around it assists archaeologists in determining chronology and interpreting function and significance. Loss of context removes the artefacts meaning and make sit more difficult to determine function.

Core: a chunk of stone from which flakes are removed and will have one or more negative flake scars but no positive flake scars. The core itself can be shaped into a tool or used as a source of flakes to be formed into tools.

Cortex: the rough outer weathered surface of a rock, usually chemically altered and removed during knapping.

Cultural deposit: sediments and materials laid down by, or heavily modified by human activity.

Cultural Heritage Sensitivity: This term is used to denote not just the value of a place in the landscape to Aboriginal people, but also the vulnerability of the value. For instance, places with important spiritual values may be very sensitive because the rocks, pools or trees are easily damaged by the activities of others, or only a very few examples remain.

Debitage: small pieces of stone debris that break off during the manufacturing of stone tools. These are usually considered waste and are the by product of production (also referred to as flake piece).

Distal: the terminating end of a flake opposite the bulb.

Edge damage: the removal of small flakes, or crushing, from the edge of an artefact.

Elders: Older Aboriginal people in the local community for whom there is great respect because of their knowledge, dignity or communication skills. These people are not necessarily the descendents of traditional Aboriginal people from the area.

Elouera: a type of backed blade, triangular sectioned and resembling an orange segment in shape.

Exposure: an area of land surface where the ground surface is visible, usually as a result of thinner vegetation cover, erosion or human caused disturbances. In archaeological surveys, the percentage of ground surface exposed is recorded and the used to calculate effective survey coverage.

Flake: any piece of stone struck off a core and has a number of characteristics including ring cracks showing where the hammer hit the core and a bulb of percussion. May be used as a tool with no further working, may be retouched or serve as a platform for further reduction.

Flaked piece/waste flake: an unmodified and unused flake, usually the by product of tool manufacture or core preparation (also referred to as debitage).

Fluvial deposit: sediments laid down by running water.

Formation processes: human caused (land uses etc) or natural processes (geological, animal, plant growth etc) by which an archaeological site is modified during or after occupation and abandonment. These processes have a large effect on the provenience of artefacts or features.

Grinding Grooves: Aboriginal people made a range of edge ground implements such as 'axes' and 'hatchets'. The sharp edge of these tools was maintained by grinding it on sandstone outcrops, most often in stream beds where pools of water were available to wet the grindstone. Spear shafts were also sometimes shaped by grinding. The grinding sites can be identified by elongated grooves in the sandstone surface in sets of 2 to more than 100. Some portable grindstones are also reported from Aboriginal sites.

Grinding stone: an abrasive stone used to abrade another artefact or to process food.

Ground edge hatchet: a stone axe that is oval or rounded in shape and has edges formed by grinding and sharpening and were hafted to wooden handles using resin, wax or a combination of materials.

Hafting: the process of attaching a stone artefact onto a handle or spear.

Hammer stone: a stone that has been used to strike a core to remove a flake, often causing pitting or other wear on the stone's surface.

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

Holocene: the post-glacial period, beginning about 10,000 B.P.

In situ: archaeological items are said to be "in situ " when they are found in the location where they were last deposited.

Isolated find: a single artefact not located with any other.

Knapping: the process of striking rocks causing them to fracture.

Midden: a type of archaeological site that is dominated by shell deposits that may have been sourced by Aboriginal people from fresh water, estuarine or open coastline habitats. The long-term disposal of refuse can result in stratified deposits, which are useful for relative dating.

Pleistocene: the latest major geological epoch, colloquially known as the "Ice Age" due to the multiple expansion and retreat of glaciers. Ca. 3.000,000-10,000 years B.P.

Post-depositional: after deposition.

Retouched flake: a flake that has been flaked again in a manner that modified the edge for the purpose of resharpening that edge.

Salvage archaeology: archaeological research carried out to preserve or rescue sites, materials and data from areas threatened by man-made or natural disturbance.

Scarred tree: a tree that bears a scar or scars which are wounds formed from the deliberate removal of bark or wood by Aboriginal people and are usually an indicator of an activity area.

Scraper: stone tool made on a flake or core with steep retouch along one or more edges.

Sedimentation: the accumulation of geological or organic material deposited by air, water, or ice.

Site: an area where archaeological evidence is observed.

Stone arrangement: an arrangement of stones into a shape or pattern and often used for ceremonial purposes or place markers.

Spiritual Significance: the importance of a place in the landscape that is valued by Aboriginal people because it is part of their spiritual culture. Examples include places associated with totem species or places that are the subject of traditional cultural stories.

Stratified Archaeological Deposits: Aboriginal archaeological objects may be observed in soil deposits and within rock shelters or caves. Where layers can be detected within the soil or sediments, which are attributable to separate depositional events in the past, the deposit is said to be stratified. The integrity of sediments and soils are usually affected by 200 years of European settlement and activities such as land clearing, cultivation and construction of industrial, commercial and residential developments.

Surface collection: archaeological materials obtained from the ground surface.

Surface scatter: archaeological materials found distributed over the ground surface.

Taphonomy: the study of processes which have affected organic materials such as bone after death; it also involves the microscopic analysis of tooth-marks or cut marks to assess the effects of butchery or scavenging activities.

Test excavation: excavation of small sections (a sample) of an area to determine the archaeological remains and significance.

Toe-hold: small scar on tree trunks and branches used to facilitate climbing.

Traditional Aboriginal Owners: Aboriginal people who are listed in the Register of Aboriginal owners pursuant to Division 3 of the *Aboriginal Land Register Act (1983)*. The Registrar must give priority to registering Aboriginal people for lands listed in Schedule 14 of the *National Parks and Wildlife Act 1974* or land subject to a claim under 36A of the *Aboriginal Land Rights Act 1983*.

Traditional Knowledge: Information about the roles, responsibilities and practices set out in the cultural beliefs of the Aboriginal community. Only certain individuals have traditional knowledge and different aspects of traditional knowledge may be known by different people, e.g. information about men's initiation sites and practices, women's sites, special pathways, proper responsibilities of people fishing or gathering food for the community, ways of sharing and looking after others, etc.

Typology: the systematic organization of artefacts into types on the basis of shared attributes.

Use wear: the wear displayed on an artefact as a result of use.

Weathering: the natural chemical or physical alteration of an object or deposit through time.

Abbreviations and Acronyms

ACHMP	Aboriginal Cultural Heritage Management Plan
AHIMS	Aboriginal Heritage Information Management System. Data base of recorded sites across NSW managed by OEH
OEH	Office of Environment and Heritage

OEH AHIMS Site Acronyms

ACD	Aboriginal ceremonial and dreaming
AFT	Artefact (stone, bone, shell, glass, ceramic and metal)
ARG	Aboriginal resource and gathering
ART	Art (pigment or engraving)
BOM	Non-human bone and organic material
BUR	Burial
CFT	Conflict site
CMR	ceremonial ring (stone or earth)
ETM	Earth mound
FSH	Fish trap
GDG	Grinding groove
HAB	Habitation structure
HTH	Hearth
OCQ	Ochre quarry
PAD	Potential archaeological Deposit. Used to define an area of the landscape that is believed to contain subsurface archaeological deposits.
SHL	Shell
STA	Stone arrangement
STQ	stone quarry
TRE	Modified tree (carved or scarred)
WTR	Water hole

1 INTRODUCTION

1.1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Orogen Pty Ltd to prepare an Indigenous Heritage Impact Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 at Balickera.

The assessment has been undertaken to meet the NSW Office of Environment and Heritage (OEH) Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), the OEH Due Diligence Code of Practice for the protection of Aboriginal Objects in New South Wales and the Brief.

1.2 PROPONENT DETAILS

Castle Quarry Products Pty Ltd.

1.3 STUDY AREA& HOW IT IS DEFINED

The investigation area includes Lot 2 DP 1108702 which is located off Italia Road at Balickera. The location and extent of the study area is illustrated in *Figures 1.1* to *1.3*.

1.4 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed project is a hard rock quarry and the proponent seeks to extract 10,000 – 15,000 kilo tonnes (kt) of quarry resources from the site over a period of approximately 30 years. The proposed mine plan is shown in *Figure 1.4*.

Quarry extraction activities will be located to the west of existing composting facilities and to the west of Seven Mile Creek, generally quarrying through the ridge located in the north-western part of the site. The operations area, as well as the sales, administration, and maintenance area will be located to the eastern boundary of the quarry extraction areas, still to the west of Seven Mile Creek. The operations are will include:

- Stockpiling of extracted material;
- Mobile crusher circuit consisting of primary, secondary and tertiary crushers;
- Screening plants and a fine aggregate wash plant; and
- A pug mill, for road base applications.

The sales, administration and maintenance area will include:

- Administration buildings to provide for office, lunchroom, lab-maintenance, first aid and toilet facilities;
- Weighbridge;
- Fuel storage;
- Maintenance Shed; and
- Parking area for mobile machinery (e.g. loaders and dump trucks).

During the first two years of quarrying the existing crossing of Seven Mile Creek will be utilised, until a new bridge crossing is constructed in the northern part of the site.

1.5 DESCRIPTION OF IMPACTS

Extraction of the resource from the site will require the removal of vegetation followed by the extraction of the resource.

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

MCH:

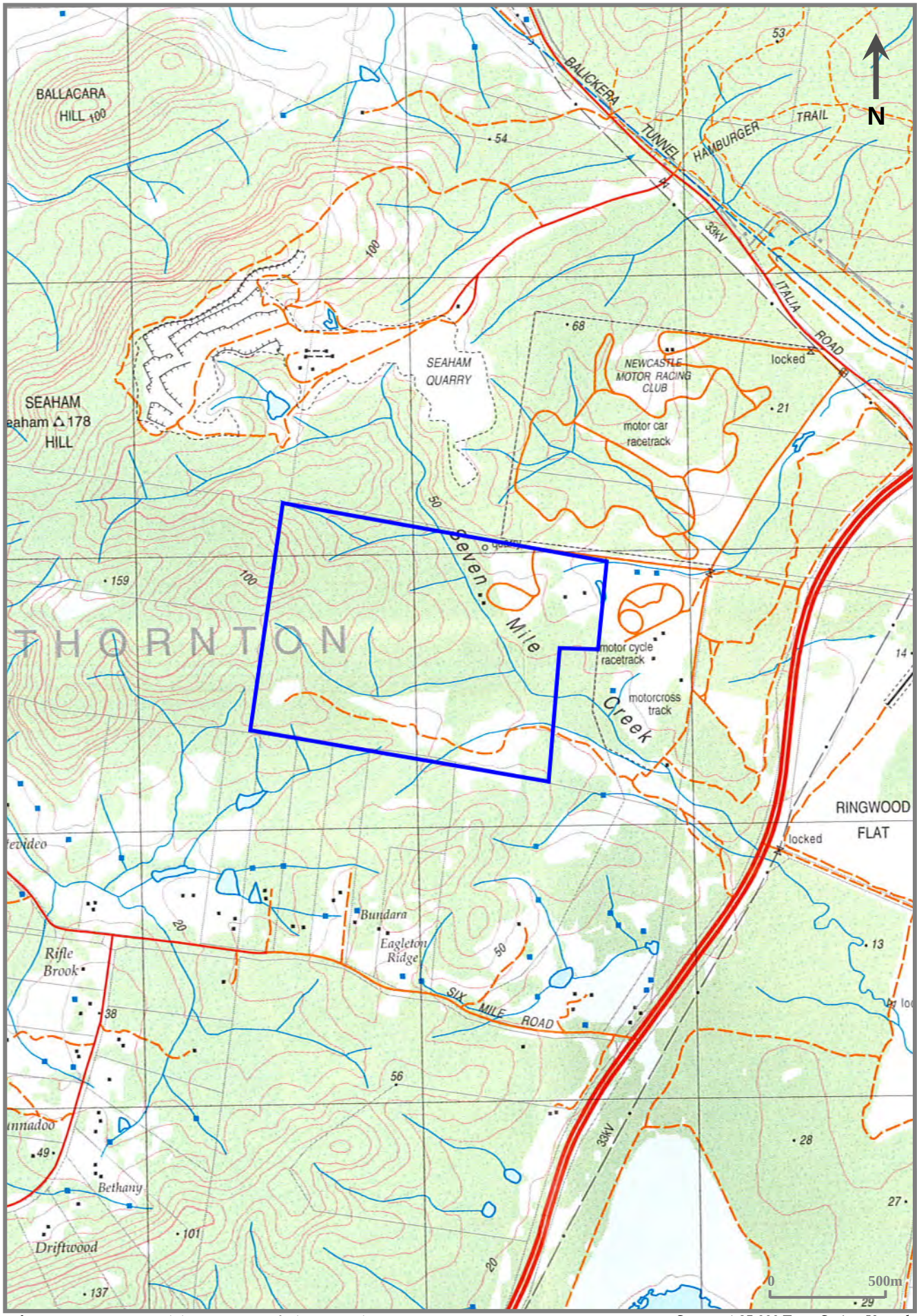

Figure 1.2 Local location of the study area

Source: 1:25 000 Topo Series: Karuah

MCH:

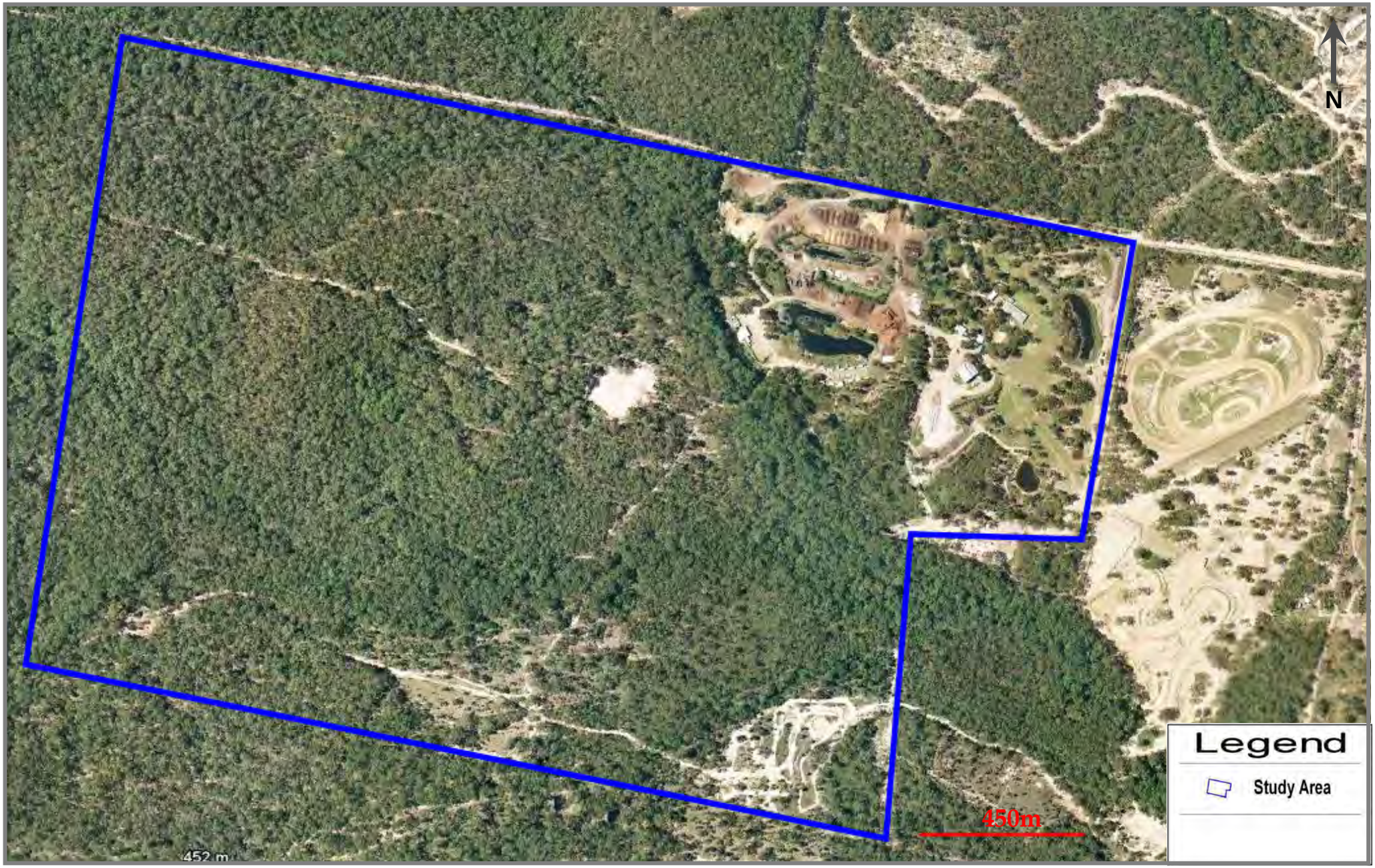

Figure 1. 3 Aerial location of the study area

Source: Google earth

MCH:

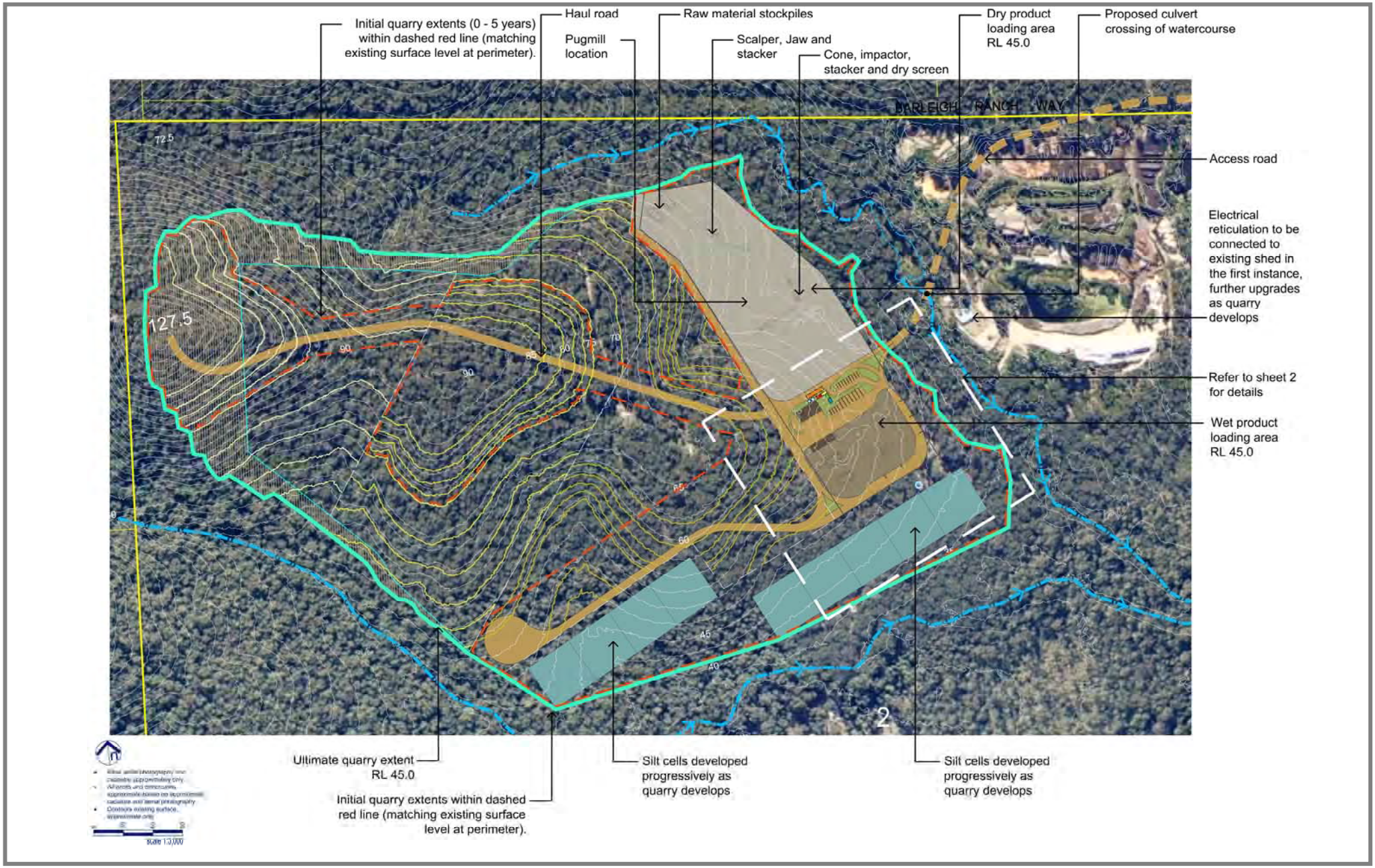

Figure 1. 4 Mine plan

Quarrying will require a new bridge crossing of Seven Mile Creek to be constructed in the northern part of the site, and all of the operational and extraction areas will be located adjacent to the quarry extraction areas in order to minimise the extent of impacts on other parts of the site.

1.6 PROJECT LEGISLATIVE FRAMEWORK

The EP&A Act establishes the statutory framework for planning and environmental assessment in New South Wales and the implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils. The EP&A Act contains three parts which impose requirements for planning approval:

- Part 3 relates to the preparation and making of Environmental Planning Instruments, including Local Environmental Plans (LEP) which zone land for particular purposes.
- Part 3A provides for the assessment and approval of major development of state or regional planning significance. Part 3A has now been repealed, however transitional arrangements remain in place for dealing with projects to which Part 3A applied prior to its repeal.
- Part 4 generally provides for the control of local development that requires development consent from the local Council.
- Part 5 provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority.

The applicable approval process is determined by reference to the relevant environmental planning instruments and other controls including local environmental plans (LEPs) and State Environmental Planning Policies (SEPPs). Pursuant to section 36 of the EP&A Act there is a general presumption that a SEPP prevails over a LEP in the event of an inconsistency.

The Director of Mining and Industry Projects, as delegate of the Minister for Planning confirmed under clause 6(1) of State Environmental Planning Policy (Major Development) 2005, that the project is development referred to in clause 1(1)(a) of Schedule 2 of the Major Development SEPP. Therefore, the project was declared to be a project to which Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) applies.

An Environmental Assessment Report (EAR) is required to address the Director General Requirements issued on 16/12/2010 for the project. This Indigenous Heritage Impact Assessment Report forms part of the EAR which will be submitted for the project.

1.7 PURPOSE OF THE ARCHAEOLOGICAL ASSESSMENT

The purpose of the assessment is to assess any archaeological constraints to support the hard rock quarry and to provide opportunities and options to ensure any cultural materials present are protected.

1.8 OBJECTIVES OF THE ASSESSMENT

The objective of the assessment is to identify areas of indigenous cultural heritage value, to determine possible impacts on any indigenous cultural heritage identified (including potential subsurface evidence) and to develop management recommendations where appropriate.

The assessment employs a regional approach, taking into consideration both the landscape of the study area (landforms, water resources, soils, geology etc) and the regional archaeological patterning identified by past studies.

1.9 PROJECT BRIEF/SCOPE OF WORKS

The following tasks were carried out:

- a review of relevant statutory registers and inventories for indigenous cultural heritage including the NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) for known archaeological sites, the State Heritage Register, the Australian Heritage Database (includes data from the World Heritage List UNESCO, National Heritage List, Commonwealth Heritage List, Register of the National Estate) and the Port Stephens Local Environmental Plan;
- a review of local environmental information (topographic, geological, soil, geomorphological and vegetation descriptions) to determine the likelihood of archaeological sites and specific site types, prior and existing land uses and site disturbance that may effect site integrity;
- a review of previous cultural heritage investigations to determine the extent of archaeological investigations in the area and any archaeological patterns;
- the development of a predictive archaeological statement based on the data searches and literature review;
- identification of human and natural impacts in relation to the known and any new archaeological sites archaeological potential of the study area;
- consultation with the Aboriginal stakeholders as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010);
- undertake a site inspection with the participation of the registered Aboriginal stakeholders, and
- the development of mitigation and conservation measures in consultation with the registered Aboriginal stakeholders.

1.10 STATUTORY CONTROLS

Land managers are required to consider the affects of their activities or proposed development on the environment under several pieces of legislation. Indigenous cultural heritage in NSW is protected and managed under both Commonwealth and State legislation. The appropriate legislation is summarised below.

- *New South Wales National Parks and Wildlife Act* 1974, Amendment 2010

The National Parks and Wildlife Act (1974), Amended 2010, administered by the OEH is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales.

Part 6 of the Act provides protection for Aboriginal objects and declared Aboriginal places through the establishment of offences of 'harm' to these objects and places. Under the Act, it is an offence to knowingly harm or desecrate an Aboriginal object or Aboriginal place. If harm to an object or place is anticipated, an Aboriginal Heritage Impact Permit (AHIP) must be applied for and OEH may issue and AHIP under the s90 of the Act.

Previously, the NPW Act required two permits for the majority of activities and included one for test excavations (s87) and one for the activity itself (s90). The new provisions collapse these requirements into a single regulatory provision. A permit is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW).Where an AHIP s90 is required, they can now be issued in relation to specific parcels of land, deal with multi stage developments, and there are clear provisions for variation, transfer, suspension and revocation.

Linked to the NPW Act (amendment 2010) are the Due Diligence Code of Practice and the Archaeological Code of Practice. The Due Diligence Code of Practice explains and provides guidance about what due diligence means. It also provides steps in which individuals or organisations that own, use or manage land can identify if Aboriginal objects are or likely to be there, determine if their activities will harm Aboriginal objects and determine of an AHIP is required. The code enables people to take reasonable steps or precautions to consider if Aboriginal objects may be present and avoid harm to them. If harm cannot be avoided, then an AHIP is required. The Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW assists in establishing the requirements for undertaking test excavations as part of an archaeological investigation without an AHIP and to establish the requirements that must be followed when undertaking an archaeological investigation in NSW where an AHIP application is likely to be made.

- *Environmental Planning and Assessment Act* 1979, (EP&A Act, NSW)

Consideration of potential impacts of a development on Aboriginal heritage is a key component of the environmental impact assessment process under the EP&A Act. In NSW the Environmental Planning and Assessment Act (EP&A Act) is the principal law overseeing the assessment and determination of development proposals which are considered under the different parts of the Act (DoP 2010) including Part 3, 4 and 5.

The standards of the OEH Due Diligence Code may be used or adapted by proponents to inform the initial assessment of the environmental impacts of an activity on Aboriginal heritage. An environmental assessment that meets all the requirements of the Due Diligence Code will satisfy the Due Diligence test.

- *The Heritage Act* 1977 (NSW)

The Heritage Act 1977 protects the natural and cultural history of NSW with emphasis on non-indigenous cultural heritage through protection provisions and the establishment of a Heritage Council. While Aboriginal heritage sites and objects are protected primarily by the NPW Act 1974, if an Aboriginal site, object or place is of great significance it can be protected by a heritage order issued by the Minister on the advice of the Heritage Council.

- *The Aboriginal and Torres Strait Islander Heritage Protection Act* 1984, Amendment 1987 (Commonwealth)

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. A significant area or object is defined as one that is of particular importance to Aboriginal people according to Aboriginal tradition. The Act can, in certain circumstances override state and territory provisions, or it can be implemented in circumstances where state or territory provisions are lacking or are not enforced. The Act must be invoked by or on behalf of an Aboriginal or Torres Strait Islander or organisation.

- *The Australian Heritage Commission Act* 1975 (Commonwealth)

The Australian Heritage Commission Act 1975 established the Australian Heritage Commission, which assesses places to be included in the National Estate and maintains a register of these places, which are significant in terms of their association with particular community or social groups for social, cultural or spiritual reasons. The Act does not include specific protective clauses.

1.11 QUALIFICATIONS OF THE INVESTIGATOR

Penny McCardle: Principal Archaeologist & Forensic Anthropologist has 10 years experience in Indigenous archaeological assessments, excavation, research, reporting, analysis and consultation. Six years in skeletal identification, biological profiling and skeletal trauma identification.

- BA (Archaeology and Palaeoanthropology, University of New England 1999
- Hons (Archaeology and Palaeoanthropology): Physical Anthropology), University of New England 2001
- Forensic Anthropology Course, University of New England 2003
- Armed Forces Institute of Pathology Forensic Anthropology Course, Ashburn, VA 2008
- Analysis of Bone trauma and Pseudo-Trauma in Suspected Violent Death Course, Erie College, Pennsylvania, 2009
- Currently undertaking a PhD, University of Newcastle, 2012

1.12 REPORT STRUCTURE

The report includes *Chapter 1* which outlines the project, *Chapter 2* provides the consultation, *Chapter 3* presents the environmental context, *Chapter 4* presents ethno historic context, *Chapter 5* provides the archaeological background, *Chapter 6* provides the results of the fieldwork, analysis and discussion; *Chapter 7* provides the significance assessment, *Chapter 8* presents the development impact assessment, *Chapter 9* presents the mitigation strategies and *Chapter 10* presents the management recommendations.

2 CONSULTATION

As per the Aboriginal cultural heritage consultation requirements for proponents (April 2010), MCH followed the four stages of consultation as set out below. All correspondences for each stage are provided in *Annex A*.

In relation to cultural significance, MCH recognises and supports the indigenous system of knowledge. That is, that knowledge is not 'open' in the sense that everyone has access and an equal right to it. Knowledge is not always definitive (in the sense that there is only one right answer) and knowledge is often restricted. As access to this knowledge is power, it must be controlled by people with the appropriate qualifications (usually based on age seniority, but may be based on other factors). Thus, it is important to obtain information from the correct people: those that hold the appropriate knowledge of those sites and/or areas relevant to the project. It is noted that only the Aboriginal community can identify and determine the accepted knowledge holder(s) may be not archaeologists or proponents.

If knowledge is shared, that information must be used correctly and per the wishes of the knowledge holder. Whilst an archaeologist may view this information as data, a custodian may view this information as highly sensitive, secret/sacred information and may place restrictions on its use. Thus it is important for MCH to engage in affective and long term consultation to ensure knowledge is shared and managed in a suitable manner that will allow for the appropriate management of that site/area.

MCH also know that archaeologists do not have the capability nor the right to adjudicate on the spirituality of a particular location or site as this is the exclusive right of the traditional owners who have the cultural and hereditary association with the land of their own ancestors. For these reasons, consultation forms an integral component of all projects and this information is sought form the registered stakeholders to be included in the report in the appropriate manner that is stipulated by those with the information.

2.1 STAGE 1: NOTIFICATION OF PROJECT PROPOSAL & REGISTRATION OF INTEREST

The aim of this stage is to identify, notify and register Aboriginal people and/or groups who hold cultural knowledge that is relevant to the project area, and who can determine the cultural significance of any Aboriginal objects and/or places within the proposed project area. In order to do this, the sources identified by OEH (2010:10) and listed in *Table 2.1*, to provide the names of people who may hold cultural knowledge that is relevant to determining the significance of Aboriginal objects and/or places were contacted by letter on 4 April 2011. A reply was requested by the 18 April 2011 and it was stipulated that if no response was received, the project and consultation will proceed. Information included in the correspondence to the sources listed in *Table 2.1* included the name and contact details of the proponent, an overview of the proposed project including the location and a map showing the location.

Table 2.1 Sources contacted

Organisations contacted	Response
Department of Climate Change and Water	8 groups
WLALC	2 groups
Port Stephens Local Council	no response
Registrar Aboriginal Land Rights Act 1983	no groups
National Native Title Tribunal	no groups
Native Title Services Corporation Limited	no groups
Catchment Authority	no groups

Following this, MCH compiled a list of people/groups to contact (Refer to *Table 2.2*).

As per the Aboriginal cultural heritage consultation requirements for proponents (April 2010), archaeologists and proponents must write to all those groups provided asking if they would like to register their interest in the project. Unfortunately some Government departments written to requesting a list of groups to consult with do not differentiate groups from different traditional boundaries and provide an exhaustive list of groups from across the region including those outside their traditional boundaries.

Table 2.2 List of people/groups to contact

Maaiangal Aboriginal Heritage
Mur-Roo-Ma Inc
Nur-Run-Gee Pty Ltd
Worimi Aboriginal Community Co-operative
Worimi LALC
Garrigal Aboriginal Community Inc
Worimi Knowledge Holders AC
Do-Wa-Kee
Worimi Conservation Lands Boards Management

MCH wrote to all parties identified in *Table 2.2*on 18 April 2011, and an advertisement was placed in the Port Stephens Examiner on 24 April 2011. The correspondence and advertisement included the following information:

- the name and contact details of the proponent;
- an overview of the proposed project including the location of the proposed project;
- a statement that the purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director General of DECCW in his or her consideration and determination of the application should an AHIP be required;
- an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation;
- the closing date for the registration of interests (2 May 2011 for the letter and 5 May 2011 for the add);
- that unless otherwise specified that those who are registering their interest that their details will be provided to OEH and the LALC;
- that LALC's who hold cultural knowledge relevant to the proposed project area that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register must do so as an Aboriginal organisation not an individual;
- where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge relevant to the proposed project area and that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register must nominate a contact person and provide written confirmation and contact details of this person or persons, and
- to nominate the preferred option for the presentation of information about the proposed project: an information packet or a meeting and information packet (Refer to Stage 2).

The registered parties are listed in *Table 2.3*.

Table 2.3 List of registered parties

Group	Contact
Mur-Roo-Ma Inc	Anthony Anderson
Nur-Run-Gee Pty Ltd	Lennie Anderson

2.2 STAGE 2: PRESENTATION OF INFORMATION ABOUT THE PROPOSED PROJECT

The aim of this stage is to provide the registered Aboriginal stakeholders with information regarding the scope of the proposed project and the cultural heritage assessment process.

As the registered parties opted for an information packet to be forwarded to them instead of a meeting, the following information was provided to each party.

- an outline of the project details including the nature, scope and methodology of the survey, maps as well as any impacts;
- an outline of the impact assessment process;
- an outline of critical timelines and milestones for the completion of the assessment and delivery of reports;
- to clearly define agreed roles, functions and responsibilities of the OEH, proponent, the registered Aboriginal parties and the LALC,
- to allow for opportunities for the registered Aboriginal parties to identify, raise and discuss their cultural concerns, perspectives and assessment requirements (if any);
- requested the preferred option for the gathering of information about cultural significance (Refer to Stage 3);
- a written response to the survey methods and the preferred method of sharing traditional knowledge methods was due no later than 26 May 2011.

This pack also stipulated that consultation was not employment, and requested that in order to assist the proponent in the engagement of field workers, that the groups provide information in relation to two of the criteria as set out in the Interim Community Consultation Requirements for Applicants (January 2005). This included:

- the ability to assist in communicating the results of the survey back to all registered Aboriginal stakeholders for the assessment of cultural significance and returning advice on their response to MCH (asked to provide details on their ability to discuss results of field work, ability to effectively represent the Aboriginal community and provide a cultural heritage report in an appropriate time frame)and

- experience in field work and in providing cultural heritage advice (asked to nominate at least two individuals who will be available and fit for work (physically able to undertake field work) and their relevant experience.

This pack also asked the registered groups to provide a CV and insurance details for MCH to pass onto the client. Finally, it was also noted that failure to provide the required information by the date provided will result in a missed opportunity for the individuals or knowledge holders to contribute to their cultural heritage and the project will proceed.

2.3 *STAGE 3: GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE*

The aim of this stage is to facilitate a process whereby the registered Aboriginal stakeholders can contribute to culturally appropriate information gathering and the research methodology, provide information that will enable the cultural significance of any Aboriginal objects and or/places within the proposed project area to be determined and have input into the development of any cultural heritage management options and mitigation measures.

In order to do his, included in the information pack sent for Stage 2, was information pertaining to the gathering of cultural knowledge. This included the following information;

- MCH noted that information provided by registered Aboriginal parties may be sensitive and MCH and the proponent will not share that information with all registered Aboriginal parties or others without the express permission of the individual. MCH and the proponent extended an invitation to develop and implement appropriate protocols for sourcing and holding cultural information including any restrictions to place on information, as well as the preferred method of providing information;

- request for traditional/cultural knowledge or information associated with ceremonial, spiritual, mythological beliefs, traditions and known sites from the pre-contact period;

- request for traditional/cultural knowledge or information regarding sites or places with historical associations and/or cultural significance which date from the post-contact period and that are remembered by people today (e.g. plant and animal resource use areas, known camp sites); and

- request for traditional/cultural knowledge or information in relation to any sites or places of contemporary cultural significance (apart from the above) which has acquired significance recently.

The registered Aboriginal stake holders did not disclose any specific traditional/cultural knowledge or information of sites or places associated with spiritual, mythological, ceremonies or beliefs from the pre contact period within the study area or surrounding area. The stakeholders did not disclose any information pertaining to sites or places of cultural significance associated with the historic or contemporary periods within the study area or surrounding area.

2.4 *SURVEY*

All groups were invited to participate in the survey on 9 June 2011. The survey was undertaken by surveyed by Chris Collins (Moo-roo-ma) and Brett Chambers (Nur-run-gee) and the archaeologist in accordance with the proposed methodology provided to the stakeholders for review and approved.

During the survey, the Aboriginal representatives were also asked of their traditional knowledge and of any areas of cultural significance within the study area and if they felt comfortable in sharing that information. Discussions centred on places associated with ceremonial, spiritual, mythological beliefs, traditions and known sites that date from the pre-contact period. Sites or places with historical associations and/or significance which date from the post-contact period and that are remembered by people today (e.g. plant and animal resource use areas, known camp sites) were discussed as well as sites or places of contemporary significance (apart from the above) which has acquired significance recently.

The Aboriginal stakeholder field team did not disclose any specific traditional/cultural knowledge or information of sites or places associated with spiritual, mythological, ceremonies or beliefs

from the pre contact period, any information pertaining to sites or places of cultural significance associated with the historic or contemporary periods within the study area or surrounding area.

2.5 STAGE 4: REVIEW OF DRAFT CULTURAL HERITAGE ASSESSMENT

A copy of the DRAFT report was forwarded to all registered Aboriginal parties (those listed in *Table 1.3*) for their review and were asked to provide a written or verbal response no later than 29 July 2012. Both groups provided a response that supported the project and recommendations.

All submissions from the registered Aboriginal parties were responded to, the draft report altered to include their comments, and all parties were provided a copy of the final report. MCH consulted with all groups identified who registered an interest in the project and all documentation regarding the consultation process is presented in *Annex A*.

3 LANDSCAPE CONTEXT

3.1 INTRODUCTION

The nature and distribution of Aboriginal cultural materials in a landscape are strongly influenced by environmental factors such as topography, geology, landforms, climate, geomorphology, hydrology and the associated soils and vegetation (Hughes and Sullivan 1984). These factors influence the availability of plants, animals, water, raw materials, the location of suitable camping places, ceremonial grounds, burials, and suitable surfaces for the application of rock art. As site locations may differ between landforms due to differing environmental constraints that result in the physical manifestation of different spatial distributions and forms of archaeological evidence, these environmental factors are used in constructing predictive models of Aboriginal site locations.

Environmental factors also effect the degree to which cultural materials have survived in the face of both natural and human influences and affect the likelihood of sites being detected during ground surface survey. Site detection is dependent on a number of environmental factors including surface visibility (which is determined by the nature and extent of ground cover including grass and leaf litter etc), the survival of the original land surface and associated cultural materials (by flood alluvium and slope wash materials), and the exposure of the original landscape and associated cultural materials (by water, sheet and gully erosion, ploughing, vehicle tracks etc), (Hughes and Sullivan 1984). Combined, these processes and activities are used in determining the likelihood of both surface and subsurface cultural materials surviving and being detected.

It is therefore necessary to have an understanding of the environmental factors, processes and activities, all of which affect site location, preservation, detection during surface survey and the likelihood of in situ subsurface cultural materials being present. The environmental factors, processes and disturbances of the surrounding environment and specific study area are discussed below.

3.2 TOPOGRAPHY

The topographical context is important to identify potential factors relating to past Aboriginal land use patterns. Story *et al* (1963) divided the Hunter Valley into eight main sub-regions including the Southern Mountains, Central Goulburn Valley, Merriwa Plateau, Liverpool and Mt Royal Ranges, Barrington tops, North-Eastern Mountains, Central lowlands and the Coastal Zone.

The study area is located within the Central Lowlands, (a broad lowland belt of lowlands approximately 15 kilometres wide) which lies at the centre of the region extending from Murrurundi to Newcastle. It is bounded on all sides by steep rugged country except in the far west where the Cassilis Gate provides access to the interior. To the south is dissected plateau country; to the north and west are the Liverpool Range and Barrington Uplands. This area contains much alluvial land consisting of open undulating grassland and level alluvial plains. Formerly rural, open cut mining has developed throughout on a large scale, especially around Singleton and Muswellbrook. The specific study area includes slopes and drainage lines (Refer to *Figure 3.1*).

3.3 GEOLOGY

The geology of a region is not only reflected in the environment (landforms, topography, geomorphology, vegetation, climate etc), it also influences past occupation and its manifestation in the archaeological record.

MCH:

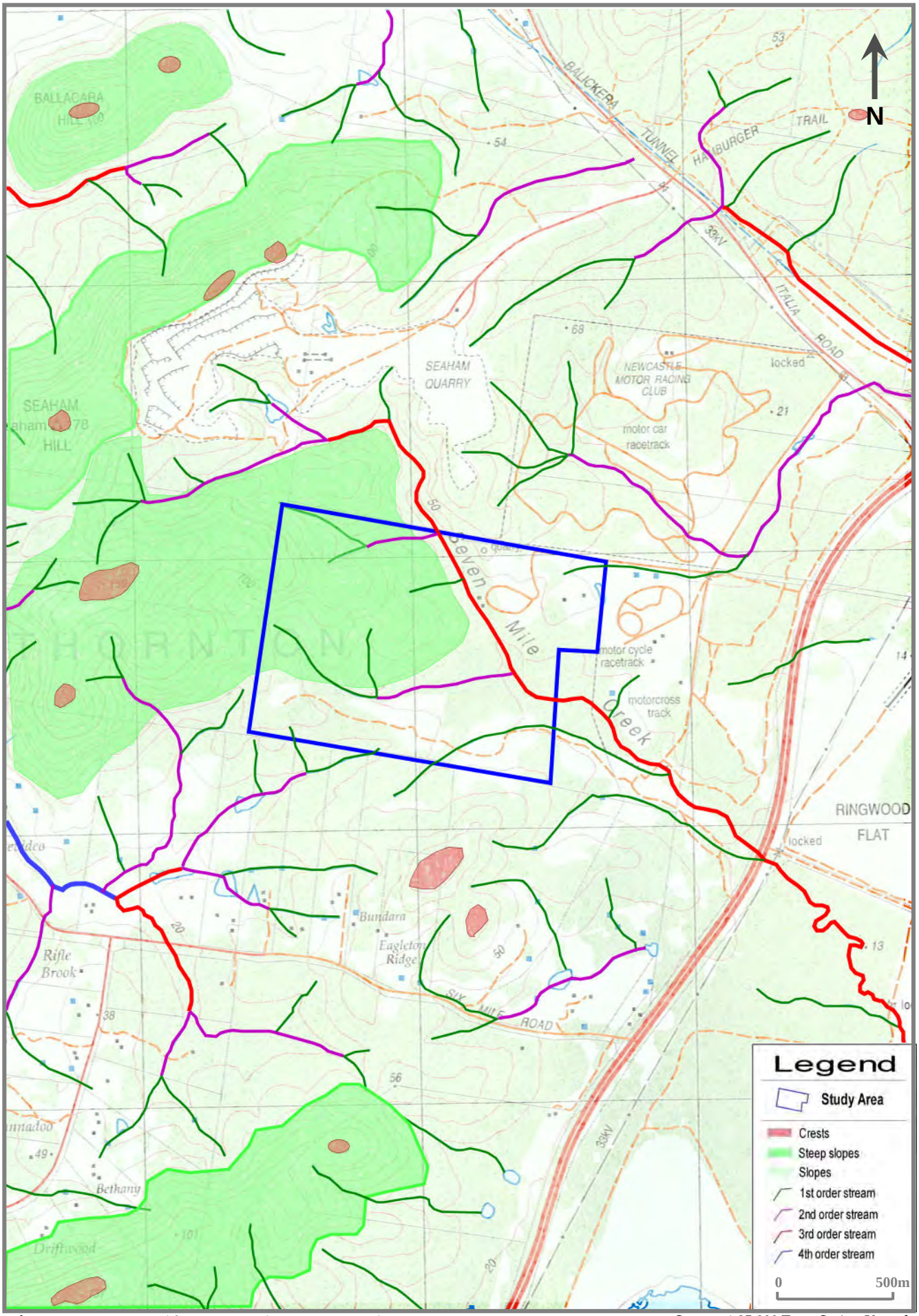

Figure 3.1 Landforms and stream orders

Source: 1:25 000 Topo Series: Karuah

The nature of the surrounding and local geology along with the availability and distribution of stone materials has a number of implications for Aboriginal land use and archaeological implications. The implications for past Aboriginal land use mainly relate to location of stone resources or raw materials and their procurement for manufacturing and modification for stone tools. Evidence of stone extraction, and manufacture, can be predicted to be concentrated in the areas of stone availability. However, stone can be transported for manufacture and/or trading across the region.

The Hunter Valley consists of four major geological provinces: the New England Geosyncline in the northeast, the Sydney Basin in the centre and south, the Great Artesian Basin in the northwest, and the eastern Australian Tertiary Volcanic Province in the north and west (Hughes 1984). The Central Lowlands are situated on the Sydney Basin, on Permian rocks that are folded and consist of shales, tuffs, sandstone, mudstones, and conglomerate, with some lava beds in the basal portion, and contain the extensive coal measures that are mined throughout the region. Generally, the Permian rocks are only moderately resistant, consequently forming the lowlands.

The study area is situated on Carboniferous Crawford Formation that includes sandstone, conglomerate, mudstone, chert and tuff (Newcastle Geological Map 1966). Materials most dominant in stone tool manufacture throughout the Central Lowlands are indurated mudstone/tuff and silcrete (Kuskie 2000) and are commonly found in creek line deposits, such as those observed at Black Hill and Woods Gully (Kuskie and Kamminga 2000:183). Others include quartz, chert, porcellanite, quartzite and basalt.

3.4 GEOMORPHOLOGY

Geomorphology is the study of landscapes, their evolution and the processes operating within earth systems. Cultural remains are part of these systems, having being deposited on, and in part, resulting from interactions within landscapes of the past. An understanding of geomorphological patterning and alterations is therefore essential in assess and interpreting the archaeological record.

The geomorphology of the Hunter Valley is complex and is summarised below based upon studies undertaken by Galloway (1963) and Hughes (1984). The Hunter Valley contains a variety of landforms ranging from rugged mountains to plains and varying in elevation from sea level to over 1500 metres (AHD). It is surrounded on all sides by mountainous terrain with the exception of the western portion where a low rise divides it from the Darling River drainage area and the south eastern zone where it is bounded by the Pacific Ocean.

Four major elements are distinguished in the drainage pattern. The western half of the valley is drained by the Goulburn River and its tributaries that flow east to Denman. The north-eastern part is drained by the upper Hunter River, which flows southwest to unite with the Goulburn River at Denman. The combined rivers then flow east-south-east as the lower Hunter River, opening to the ocean at Newcastle. The Williams and Paterson Rivers drain the high country of the Barrington Tops in the east and join the Hunter River near its mouth. The watershed of the Goulburn River coincides with the Great Dividing Range, where it swings west in a vast loop.

The CSIRO (Story *et al* 1963) conducted a study of the Hunter Region and classified the landforms into nine sub-regions (Mt Royal Range, Liverpool Ranges, Northeast Mountains, Barrington Tops, Merriwa Plateau, Central Goulburn Valley, Southern Mountains, Central Lowlands and the Coastal Zone). The study area lies within the Central Lowlands, which is a belt of lowlands developed on the weak sedimentary rocks that extend from Murrurundi to Newcastle.

The soils throughout the region reflect the influence of a range of factors including the parent geological material, topography, climate, organisms and length of formation time. Differences between these elements are reflected in variation in soil types across the Hunter Valley. Texture contrast soils mantle the undulating to hilly landscapes on Permian and Carboniferous rocks and the older alluvial terraces and valley fills. The two major groups of texture contrast soils include solonetzic and podzolic soils. These soils consist of an upper soil Horizon A and underlying B (referred to as duplex soils). The upper A unit consists of grey to buff silts and sand with gravels, is usually no greater than one metre in depth (usually shallower), has a weakly developed soil profile and is typically discontinuous, especially along hill slopes. The underlying B unit consists of brown-red gravel rich clays with evidence of deep weathering and strongly contrasting horizons.

Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts. Given the lack of detailed information regarding artefact sequences and chronologies in the Hunter Valley, this assumption should not be accepted without question. However, on geomorphological grounds, A horizon soils in this context are generally considered as dating to the mid-late Holocene (Dean-Jones and Mitchell 1993:76).

In contrast, the underlying weathered nature of the clayey B-horizon indicates that its parent material is much older. Evidence of earlier occupation of the region was identified at Warkworth West (AMBS 2002) where a limited artefact assemblage is present within deposit older than 14,000 years. It is also suggested that materials from Fal Brook and Carrington date to the Pleistocene period (Koettig 1987). The B-horizon parent material in hill slope formations is typically composed of weathered, in-situ bedrock whereas soils along the valley floors are generally alluvial or colluvial in origin.

The archaeological importance of foot slopes and valley floors with soils of this type is enhanced by the fact that the interaction between alluvial and colluvial deposition can result in the formation of sealed deposits. However, landforms of this type area also prone to erosion which may broadly reveal previously buried archaeological evidence. Extensive sheet and gully erosion occurs throughout the area, potentially resulting in artefacts that were originally deposited on or within the A-horizon being exposed as highly visible lag. Thus, although erosion greatly increases the visibility of artefacts, it also disturbs and damages them.

Similarly, the impacts of bioturbation upon the archaeological record must also be addressed. Focussed studies regarding bioturbation have primarily been conducted outside Australia (e.g. Armour-Chelu and Andrews 1994; Fowler *et al* 2004; Peacock and Fant 2002). Therefore, whilst the subsequent findings are broadly applicable within the Australian context, further research is certainly warranted. In general, it appears that, within duplex soils, the burrowing activities of fauna including earthworms can often cause the lateral and horizontal movement of artefacts through the soil profile, eventually resulting in the formation of a stone layer at the interface of the A and B horizons. The other important element to address is the differential movement of artefacts according to size/weight. In this respect, bioturbation has the potential to artificially conflate and separate artefacts according to size grouping as opposed to depositional context (Fowler *et al* 2004; Armour-Chelu and Andrews 1994).

As duplex soils are the dominant soil type within the Central Lowlands, the inherent properties of these soils must be taken into consideration in regard to the likelihood of site detection (through exposure by erosion), the stratigraphic context and age of sites, potential site location

in relation to past use of the landscape and landscape instability. Certain land systems and types of deposit are however, considered to have greater potential to contain stratified and/or older archaeological sites. This does not imply that older sites are intrinsically more significant than more recent sites, rather, the more important issue in scientific terms is the level of integrity within the site. In broad terms, windblown sand sheets/dunes (such as those at Warkworth), alluvial fan deposits and footslopes with the potential to have colluvial deposits should be considered as archaeologically sensitive landforms (refer to Dean-Jones and Mitchell 1993; Hughes 1984).

3.5 SOILS

The nature of the surrounding soil landscape also has implications for Aboriginal land use and site preservation, mainly relating to supporting vegetation and the preservation of organic materials and burials.

The study area is situated on the erosional Ten Mile Road soil landscape which is characterised by undulating low hills with elevations ranging from 70-150 metres. Local relief is 40-80 metres and drainage lines are common throughout the area (Mattehi 1995:151).

The main soils include an A1 horizon of brown sandy loam (pH of 6.0) up to 15 centimetres in depth which overlays the A2 horizon of bleached sandy loam (pH 5.6-6.0) up to 25 centimetres deep. The B horizon consists of brown dense medium clay (pH 5.0 – 6.0), (Mattehi 1995:151-153).

Moderate gully erosion occurs in drainage lines and moderate sheet and gully erosion occurs on poorly maintained unsealed roads (Mattehi 1995:151).

3.6 CLIMATE

Climatic conditions would also have played a part in occupation of an area as well as impacted upon the soils and vegetation and associated cultural materials. The climate is characterised by temperatures ranging from an average minimum of below 5°C to an average maximum of 28°C. Winter rainfall levels are somewhat variable and generally average 30 millimetres per month. Summer rainfalls are more stable at approximately 55-60 millimetres per month, giving a mean annual rainfall of 740 millimetres (Mattehi 1995:5. During summer, the increased rainfall rate and reduced ground cover is reflected in a proportionately higher risk of erosion.

3.7 WATERWAYS

One of the major environmental factors influencing human behaviour is water as it is essential for survival and as such people will not travel far from reliable water sources. In those situations where people did travel far from reliable water, this indicates a different behaviour such as travelling to obtain rare or prized resources and/or trade. Proximity to water not only influences the number of sites likely to be found but also artefact densities. The highest number of sites and the highest density are usually found in close proximity to water and usually on an elevated landform. This assertion is undisputedly supported by the regional archaeological investigations carried out in the Hunter Valley where by such patterns are typically within 50 metres of a reliable water source.

The main types of water sources include permanent (rivers and soaks), semi-permanent (large streams, swamps and billabongs), ephemeral (small stream and creeks) and underground (artesian). Stream order assessment is one way of determining the reliability of streams as a water source. Stream order is determined by applying the Strahler method to 1:25 000 topographic maps. Based on the climatic analysis the study area will typically experience

comparatively reliable rainfalls under normal conditions and thus it is assumed that any streams above a third order classification will constitute a relatively permanent water source.

The Strahler method dictates that upper tributaries do not exhibit flow permanence and are defined as first order streams. When two first order streams meet they form a second order stream. Where two-second order streams converge, a third order stream is formed and so on. When a stream of lower order joins a stream of higher order, the downstream section of the stream will retain the order of the higher order upstream section (Anon 2003; Wheeling Jesuit University 2002).

The study area has five 1st orders streams, one 2nd order and 1 3rd order (Seven Mile Creek). Seven Mile Creek runs north south through the study area and the remaining drainage drains into this creek (Refer to Figure 3.1). Therefore, the study area may be considered moderately resourced in terms of water availability and associated resources during wet seasons or after continuous heavy rain when water was available.

When assessing the relationship between sites and water sources it must be noted that the Australian continent has undergone significant environmental changes during the past 60,000 years that people have lived here and that Pleistocene sites (older than 10,000 years) would have been located in relation to Pleistocene water sources that may not exist today. Stone tool type will assist with the age of sites (Pleistocene or Holocene).

3.8 FLORA AND FAUNA

The availability of flora and associated water sources affect fauna resources, all of which are primary factors influencing patterns of past Aboriginal land use and occupation. The assessment of flora have two factors that assist in an assessment including a guide to the range of plant resources used for food and medicine and to manufacture objects including nets, string bags, shields and canoes which would have been available to Indigenous people in the past. The second is what it may imply about current and past land uses and to affect survey conditions such as visibility, access and disturbances.

European settlers extensively cleared the original native vegetation in the 1800's. Prior to clearing native vegetation would have included open forest consisting of spotted gum, white mahogany, white stringybark, grey ironbark, forest red gum, grey gum with tea tree (Matthei 1995:151). Present vegetation is consistent with past vegetation. The drainage throughout the study area would have supported a limited range of faunal populations including kangaroo, wallaby, goanna, snakes and a variety of birds. A wider variety of resources would have been available in areas to the north and south east where more reliable water would have been available.

Typically, due to vegetation cover, most artefacts identified through surface inspection are identified when they are visible on exposures created by erosion or ground surface disturbances (Dean-Jones and Mitchell 1993; Kuskie and Kamminga 2000). The grass ground cover throughout the study area expected to result in limited visibility, hence reducing the detection of surface cultural materials.

3.9 LAND USES AND DISTURBANCES

Based upon archaeological evidence, the occupation of Australia extends back some 40,000 years (Mulvaney and Kamminga 1999) whilst Aboriginal people have been present within the Hunter Valley for at least 20,000 years (Koettig 1987). Although the impact of past Aboriginal occupation on the natural landscape is thought to have been relatively minimal, it cannot simply be assumed that 20,000 years of land use have passed without affecting various environmental variables. The practice of 'firestick farming' whereby the cautious setting of fires served to drive

game from cover, provide protection and alter vegetation communities significantly influenced seed germination, thus increasing diversity within the floral community.

Following European settlement of the Hunter Valley in the 1820s, the landscape has been subjected to a range of different modifactory activities including extensive logging and clearing, agricultural cultivation (ploughing), pastoral grazing, residential developments and mining (Turner 1985). The associated high degree of landscape disturbance has resulted in the alteration of large tracts of land and the cultural materials contained within these areas.

The specific study area has been cleared and primarily used for pastoral purposes (grazing), involving the wholesale clearance of native vegetation, the introduction of pasture grass, the construction of dams, fencing, numerous tracks and the existing quarry to the north east, and associated infrastructure (water, electricity, telephone).

Although pastoralism is a comparatively low impact activity, it does result in disturbances due to vegetation clearance and the trampling and compaction of grazed areas. These factors accelerate the natural processes of sheet and gully erosion, which in turn can cause the horizontal and lateral displacement of artefacts. Furthermore, grazing by hoofed animals can affect the archaeological record due to the displacement and breakage of artefacts resulting from trampling (Yorston *et al* 1990). Pastoral land uses are also closely linked to alterations in the landscape due to the construction of dams, fence lines and associated structures.

As a sub-set of agricultural land use, ploughing typically disturbs the top 10-12 centimetres of topsoil (Koettig 1986b) depending on the method and machinery used during the process. Ploughing increases the occurrence of erosion and can also result in the direct horizontal and vertical movement of artefacts, thus causing artificial changes in artefact densities and distributions. In fact, studies undertaken on artefact movement due to ploughing (e.g. Roper 1976; Odell and Cowan 1987) has shown that artefact move between one centimetre up to 18 metres laterally depending on the equipment used.

Ploughing may also interfere with other features and disrupt soil stratigraphy (Lewarch and O'Brien 1981). Ploughing activities are typically evidenced through 'ridges and furrows' however a lengthy cessation in ploughing activities dictates that these features may no longer be apparent on the surface.

Excavation works required for quarrying requires the removal of soils and rock effectively destroying any cultural materials that may be present. Excavation works required for dam construction and the laying of infrastructure (water, telephone) would require the removal of soils thus displacing and destroying any cultural materials that may have been present. As fence construction and the erection of telegraph poles require the removal of sols for the holes, this would also have resulted in the disturbance and possible destruction of any cultural materials.

Whilst the impacts of vehicular movements on sites have not been well documented, based on general observations it is expected that the creation of dirt tracks for vehicle access would result in the loss of vegetation and therefore will enhance erosion and the associated relocation of cultural materials.

3.10 NATURAL DISTURBANCES

It must be recognised that the disturbance of cultural materials can also be a result of natural processes. The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of sediment accumulation is generally very high, artefacts deposited in such an environment will be buried

shortly after being abandoned. Frequent and lengthy depositional events will also increase the likelihood of the presence of well-stratified cultural deposits (Waters 2000:538,540).

In a stable landscape with few episodes of deposition and minimal to moderate erosion, soils will form and cultural materials will remain on the surface until they are buried. Repeated and extended periods of stability will result in the compression of the archaeological record with multiple occupational episodes being located on one surface prior to burial (Waters 2000:538-539). Within the Hunter Valley duplex soils artefacts typically stay within the A horizon on the interface between the A and B horizons (Refer to *Section 2.4*).

If erosion occurs after cultural material is deposited, it will disturb or destroy sections of archaeological sites even if they were initially in a good state of preservation. The more frequent and severe the episodes of erosional events, the more likely it is that the archaeological record in that area will be disturbed or destroyed (Waters 2000:539; Waters and Kuehn 1996:484). Regional erosional events may entirely remove older sediments, soils and cultural deposits so that archaeological material or deposits of a certain time interval no longer exist within a region (Waters and Kuehn 1996:484-485).

The role of bioturbation is another significant factor in the formation of the archaeological record. Post-depositional processes can disturb and destroy artefacts and sites as well as preserve cultural materials. Redistribution and mixing of cultural deposits occurs as a result of burrowing and mounding by earthworms, ants and other species of burrowing animals. Artefacts can move downwards through root holes as well as through sorting and settling due to gravity. Translocation can also occur as a result of tree falls (Balek 2002:41-42; Peacock and Fant 2002:92). Depth of artefact burial and movement as a result of bioturbation corresponds to the limit of major biologic activity (Balek 2002:43). Artefacts may also be moved as a result of an oscillating water table causing alternate drying and wetting of sediments, and by percolating rainwater (Villa 1982:279).

Experiments to assess the degree that bioturbation can affect material have been undertaken. In abandoned cultivated fields in South Carolina, Michie (summarised in Balek 2002:42-43) found that over a 100 year period 35% of shell fragments that had been previously used to fertilise the fields were found between 15 and 60 centimetres below the surface, inferred to be as a result of bioturbation and gravity. Earthworms have been known to completely destroy stratification within 450 years (Balek 2002:48). At sites in Africa, conjoined artefacts have been found over a metre apart within the soil profile. The vertical distribution of artefacts from reconstructed cores did not follow the order in which they were struck off (Cahen and Moeyersons 1977:813). These kinds of variations in the depths of conjoined artefacts can occur without any other visible trace of disturbance (Villa 1982:287).

However, bioturbation does not always destroy the stratigraphy of cultural deposits. In upland sites in America, temporally-distinct cultural horizons were found to move downwards through the soil as a layer within minimal mixing of artefacts (Balek 2002:48).

3.11 DISCUSSION

The regional environment provided resources, including raw materials, fauna, flora and water, that would have allowed for sustainable occupation of the area. Within the study area, the landforms of a ridge/crest overlooking a third order stream may have been suitable for occupation during the wet season and/or during times of heavy rain as this would have provided water along the 1st, 2nd and 3rd order streams.

In relation to modern alterations to the landscape, the past clearing of the majority of the study area can be expected to have had low impacts upon the archaeological record while quarrying,

excavation works and tracks would have displaced cultural materials, however in less disturbed areas, it is likely that archaeological deposits may remain relatively intact.

Vegetation cover across the study area consists of open woodland which will affect visibility and thereby reduce the potential for identifying archaeological evidence. Typically, due to vegetation cover, most artefacts identified through surface inspection are identified when they are visible on exposures created by erosion or ground surface disturbances (Kuskie and Kamminga 2000).

Because of the natural and cultural processes discussed above, site integrity cannot be assumed for the study area. However, the existence of *in situ* cultural materials cannot be ruled out.

4 ETHNO-HISTORIC BACKGROUND

Unfortunately, due to European settlement and associated destruction of past Aboriginal communities, their culture, social structure, activities and beliefs, little information with regards to the early traditional way of life of past Aboriginal societies remains.

4.1 USING ETHNO-HISTORIC DATA

Anthropologists and ethnographers have attempted to piece together a picture of past Aboriginal societies throughout the Hunter Valley. Although providing a glimpse into the past, one must be aware that information obtained on cultural and social practices were commonly biased and generally obtained from informants including white settlers, bureaucrats, officials and explorers. Problems encountered with such sources are well documented (e.g. Barwick 1984; L'Oste-Brown *et al* 1998). There is little information about who collected information or their skills. There were language barrier and interpretation issues, and the degree of interest and attitudes towards Aboriginal people varied in light of the violent settlement history. Access to view certain ceremonies was limited. Cultural practices (such as initiation ceremonies and burial practices) were commonly only viewed once by an informant who would then interpret what he saw based on his own understanding and then generalise about those practices.

4.2 HUNTER VALLEY ETHNO-HISTORIC ACCOUNTS

Brayshaw (1987) examined early ethnographic literature relating to the Aboriginal occupation and European settlement of the Hunter Valley in order to determine the manner in which past Aboriginal communities adapted to their environment, the extent to which they utilised the available resources, and to assess the comparability of the described material culture (ethno-historic documentation) with the archaeological evidence.

In relation to the limitations inherent within the ethno-historic documentation, Brayshaw (1987) notes that the early records of settlers, explorers and surveyors provide the only picture of past Aboriginal life in the Hunter Valley, as it was prior to the impact of contact and white settlement and therefore worthy of consideration.

Dawson (1830; in Brayshaw 1987) and Fawcett (1898; in Brayshaw 1987) suggest that fire was used to deter Europeans, to attract game for hunting and to signal to other tribes for both hunting and ceremonial purposes. It is also commonly known that firestick farming was used to modify the environment throughout Australia (Mulvaney and Kamminga 1999). Floral resources were also utilised in many ways. Bark appears to have been widely used as huts or 'gunyahs', canoes, string, baskets, drinking containers and in burial practices. Vegetable and bark fibres were also used for fishing lines, nets and sewing. Wood was used for clubs, yam sticks, boomerangs, spears, spear throwers and hatchets, and both wood and bark was used to make shields (Paterson 1801; Barrallier 1802).

Shells were used as scrapers to sharpen spears (later replaced by glass) and ground into shape for fishhooks (Caswell 1841 and Gunson 1974, both in Brayshaw 1987:67). There is no apparent ethnographic reference to stone being used as tools. However, physical evidence indicates stone was utilised at as tools. Kangaroo bones were made into awls and used to repair canoes and in sewing possum and kangaroo skins for clothing (Boswell 1890; Fawcett 1898 in Brayshaw 1987). Dawson (1830:115-116) notes that kangaroo bone also functioned as a comb.

Dietary staples included a variety of plant foods, shellfish and other animal foods (Grant 1803:161; Wood 1972:44). Animal foods may have included kangaroos, wallabies, echidna, emus, possums, birds, goannas, snakes and honey from native trees. The occurrence of these resources would have depended largely on seasonality and geographic location.Little is known of past ritual life, as access to these rites was restricted.

5 ARCHAEOLOGICAL CONTEXT

A review of the archaeological literature of the Central Lowlands, and more specifically the Balickera area and the results of a DECCW AHIMS search provide essential contextual information for the current assessment. Thus, it is possible to obtain a broader picture of the wider cultural landscape highlighting the range of site types throughout the region, frequency and distribution patterns and the presence of any sites within the study area. It is then possible to use the archaeological context in combination with the review of environmental conditions to establish an archaeological predictive model for the study area.

5.1 REGIONAL ARCHAEOLOGICAL CONTEXT

The majority of archaeological surveys and excavations throughout the region have been undertaken in relation to environmental assessments for the coal mining and power industries of the Central Lowlands. A review of the most relevant investigations (Dyall 1979, 1980; Davidson *et al* 1993; Dean-Jones and Mitchell 1993; Koettig and Hughes 1984; McDonald 1997; Haglund 1999; Kuskie 2000; HLA-Envirosciences 2002; AMBS 2002; MCH 2004a, b) illustrates consistency in site type and location across the region as well as a possible bias in the results due to a focus on specific landforms. The corpus of recorded sites are described and assessed qualitatively in MCH (2004b) and these findings are summarised and supplemented below.

Based on the available information it is possible to identify a number of trends in site location and patterning within the local area. Open campsites are by far the most common site type with isolated finds also comparatively well represented. A variety of other site types have been identified in far lower concentrations and include grinding grooves, scarred trees, rock shelters, shelters with art and burials. The high representation of sites containing stone artefacts is to be expected due to the durability of stone in comparison to other raw materials.

In relation to stone artefact raw materials, it is important to note that there is a potential for discrepancies in the way in which archaeologists classify lithic materials. This will consequently affect the proportional representation of raw materials within the recorded assemblages. However, as a whole mudstone is the most common lithic artefactual material found in the region, followed by silcrete. Chert, tuff, quartz, quartzite, petrified wood, porcellanite, hornfels, porphyry, basalt, limestone, sandstone, rhyolite, basalt, European glass and other non-specific lithic types also occur in smaller quantities.

Variation in the classificatory definitions employed by archaeologists will again significantly influence the range of artefact types identified within a study area. Due to differences in recording techniques it is difficult to determine how many of each artefact type is represented across the region though types include flakes, broken flakes, retouched flakes, multi-platform cores, single platform cores, bipolar cores, flaked pieces, 'waste' pieces, 'chips', debitage, 'geometric microliths', 'backed blades', 'bondi points', 'scrapers', 'eloueras', 'burrins', 'blades', 'hatchets', 'unifacial choppers', 'bifacial choppers', 'pebble tools', a 'slice', edge-ground axes, anvils, hammer stones and heat. Due to variations in both the amount of data that is included in reports, and the terms different archaeologists used to describe artefact types, it is not practicable to provide a count of the different artefact types.

For example, the distinction between a waste flake, a debitage flake and a flaked piece may be heavily subject to the perspective of the recorder. Thus, it is not productive to attempt to quantify the proportionate representation of artefact types identified in previous studies. That said, based on the information collated from previous regional studies (refer to MCH 2004b) it is apparent that the most common artefact types are flakes, flake fragments and flaked pieces. Cores, edge ground axes, millstones, grindstones, hammer stones and backed artefacts including

backed blades, bondi points, geometric microliths and eloueras also occur though in lower frequencies.

In general, the stone artefact assemblage in the area has been relatively dated to what was previously known as the Small Tool Tradition (10,000 years BP). On the basis of stone tool technology, the overwhelming majority of Aboriginal open sites within the region are attributed to the Holocene period. However, at Glennies Creek, north of Singleton, based on radiocarbon dated charcoal and geomorphological evidence it is suggested that artefacts found in the B-horizon may have been deposited between 10,000 and 13,000 BP (Koettig 1986a, 1986b).

An analysis of sites according to the number of artefacts present, the distance from water and the landform type may allow for the identification of a number of trends. However, that there are various factors influencing these results, including, but not limited to:

- the fact that the landform on which a site area is observed may not necessarily be its origin, for example, artefacts from a crest may be relocated by erosion such that they are recorded further down a slope;

- effects of biased sampling of landforms due to decisions made by archaeologists and as a result of development area boundaries, levels of exposure on different landforms and variable recording by archaeologists. For example, the large percentage of sites found along creek lines may be (at least partially), a result of the biased focus of many cultural heritage surveys towards this landform. In addition, it was not possible to obtain sufficient information from a large number of site cards and reports; and

- artefact counts can be skewed due to factors such as the differing fragmentation levels of discrete stone types and levels of ground surface visibility. Typically, a very large number of sites/artefacts are located on exposures and yet no, or very few artefacts are visible away from these exposures.

When assessing sites in terms of distance to water, generally in the Hunter Valley there is a bi-modal distribution, in that the majority of sites are situated within 50 metres of water and the next highest proportion of sites are over 100 metres from water, with comparatively few sites present in the zone 50-100 metres from water. This contrasts somewhat with the generally accepted theorem that, within the Hunter Valley, site numbers decrease with distance from water. Rather, it appears that there is a distinct pattern whereby site numbers are greatest within 50 metres of water, becoming scarce 50-100 metres from water before again increasing in number beyond this distance category.

This bimodal pattern is echoed in relation to site size. The bulk of large and medium sites are situated within 50 metres of water, dropping in representation in the area 50-100 metres from water before reaching another lesser peak at distances over 100 metres from water.

Thus, it is apparent that open campsites/isolated finds are most concentrated in number and size within 50 metres of water. A secondary, lesser, peak in site numbers and size occurs at distances over 100 metres from water. This represents a refinement of the generally accepted premise that site numbers and artefact quantities within sites decrease in inverse proportion with distance to water. However, it must also be said that this pattern can be considered indicative only and is by no means conclusively proven.

As is to be expected, the majority of sites within 50 metres of water are present on creek lines whilst slopes and crest/ridge formations are also common site locations. The frequent presence of sites on crest/ridges and slopes is also noticeable for sites located over 50 metres from water.

Due to the importance of water in the grinding process, it is not surprising that sites of this type are situated close to water.

5.1.1 Discussion

In summary, despite the recognised limitations of utilising previous studies as the basis for generalisations regarding archaeological patterning, the following broad predictions can be made for the Central Lowlands region:

- a wide variety of site types are represented in the study area with open campsites and isolated artefacts by far the most common;
- lithic artefacts are primarily manufactured from mudstone and silcrete with a variety of other raw materials also utilised but in smaller proportions;
- site numbers and artefact volumes are greatest within close proximity to water;
- there appears to be a secondary peak in site numbers and artefact volumes at distances over 100 metres from water;
- creek lines, crest/ridges and slopes are the most archaeologically sensitive landforms; and

These findings are consistent with models developed for the area.

5.2 OEH ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM

It must be noted that there are many limitation with an AHIMS search. Firstly site coordinates are not always correct due to errors and changing of computer systems at OEH over the years that failed to correctly translate old coordinate systems to new systems. Secondly, OEH will only provide up to 100 sites per search, thus limiting the search area surrounding the study area and enabling a more comprehensive analysis and finally, few sites have been updated on the OEH AHIMS register to notify if they have been subject to a s87 or s90 and as such what sites remain in the local area and what sites have been destroyed , to assist in determining the cumulative impacts, is unknown.

In addition to this, other limitations include the number of studies in the local area. Fewer studies suggests that sites have not been recorded, ground surface visibility also hinders site identification and the geomorphology of the majority of NSW soils and high levels of erosion have proven to disturb sites and site contents, and the extent of those disturbances is unknown (i.e. we do not know if a site identified at the base of an eroded slope derived from the upper crest, was washed along the bottom etc: thus altering our predictive modelling in an unknown way). Thus the OEH AHIMS search is limited and provides a basis only that aids in predictive modelling.

The new terminology for site names including (amongst many) an 'artefact' site encompasses stone, bone, shell, glass, ceramic and/or metal and combines both open camps and isolated finds into the one site name. Unfortunately this greatly hinders in the predictive modelling as different sites types grouped under one name provided inaccurate data.

A search of the OEH AHIMS register has shown that 7 known Aboriginal sites are currently recorded within five kilometres of the study area. These include 4 AFT, 2 PADs, and one STQ/AFT (Stone quarry & artefact. The AHIMs results are provided in *Annex B* and the location of sites is shown in *Figure 5.1*.

MCH:

Figure 5.1 Known sites

Source: 1:100 000 Topo Series: Newcastle

5.3 LOCAL ARCHAEOLOGICAL CONTEXT

No assessments (no reports registered with OEH) have been undertaken within the 10 kilometre radius of the study area and site search. Therefore, all predictive modelling will be based on the regional information and modelling and will be reassessed following the survey and results.

5.4 LOCAL & REGIONAL CHARACTER OF ABORIGINAL LAND USE & ITS MATERIAL TRACES

Although no local character of past Aboriginal land use and its material culture can be determined due to the lack of assessments in the local area, a regional one can. It must be remembered, however, that there are various factors which will have skewed the results. These include but are not limited to:

- the landform on which a site area is observed is not necessarily its origin, for example, artefacts which would have originated on a crest may be located eroding down the slope;
- biases due to differential sampling of landforms based on decisions made by archaeologists and as a result of restrictions due to the locations of proposed development areas, levels of exposure on different landforms, and the variable level of reporting by archaeologists will affect the count of sites on each landform type. For example, the large percentage of sites found along creek lines may be, at least partially, representative of how many cultural heritage surveys focused on these landforms, and
- artefact counts can be skewed due to factors such as differing levels of fragmentation of material and levels of ground surface visibility. A very large number of sites/ artefacts were located on exposures with either no or very few artefacts visible away from the exposures.

Therefore these results provide merely an indication of what may be expected in terms of site location and distribution. Based on previous work it is also clear that the majority of sites contain stone artefacts. This is to be expected due to stone's high preservation qualities. Based on information gained from regional based studies, it can be expected that:

- the likelihood of locating sites increases with proximity to water;
- the likelihood of finding large sites increases markedly with proximity to water;
- the majority of sites more than 50 metres from a watercourse may contain less than 10 visible artefacts;
- large artefact scatters can occur more than 50 metres from a watercourse but infrequently;
- a variety of raw materials will be represented though the majority of sites will be predominated by mudstone and silcrete;
- a variety of artefact types will be located though the majority will be flakes, flaked pieces and debitage;
- grinding grooves will be located along or near water sources;
- the likelihood of finding scarred trees is dependent on the level of clearing in an area' and
- the majority of sites will be subject to disturbances including human and natural.

These findings are consistent with models developed for the region.

5.5 *PREDICTIVE MODEL FOR THE STUDY AREA*

Due to issues surrounding ground surface visibility and the fact that the distribution of surface archaeological material does not necessarily reflect that of sub-surface deposits, it is essential to establish a predictive model.

Previous archaeological studies undertaken throughout the region, the OEH AHIMS register and the environmental context provide a good indication of site types and site patterning in the area. This research has shown that occupation sites (artefact scatters and isolated finds) are the most frequently recorded site type and are commonly located along or adjacent to watercourses, and on relatively flat to gently sloping topography in close proximity to reliable water. Sites with higher artefact densities are similarly concentrated within fifty metres of watercourses.

Within the local area, previous assessments within a similar environmental context indicate that, within a well-watered context, there is high potential for archaeological material to be present on level, typically well-elevated landforms that provide ready access to low-lying waterlogged areas and the associated resources.

Within the study area, there is a high potential for isolated finds and/or artefact scatters to be located along Seven Mile Creek (3rd order). There is moderate potential along the 2nd order to the south and low potential for sites found throughout the remainder of the study area due to the distance from reliable water and landforms that are steep slopes (Refer to *Figure 5.2*).

The refinement of this predictive model will be dependent upon an investigation of the range of landforms and the occurrence of modern disturbances within the study area.

5.6 *ARCHAEOLOGICAL POTENTIAL IN THE STUDY AREA*

Based on archaeological sites registered in the region and the results of past archaeological studies, two sites types are likely to occur throughout the study area:

- Artefact scatters

Also described as open campsites, artefact scatters and open sites, these deposits include archaeological remains such as stone artefacts, shell, and sometimes hearths. These sites are usually identified as surface scatters of artefacts in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing) and access ways can also expose surface campsites.

- Isolated finds

Isolated artefacts are usually identified in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing) and access ways can also expose surface artefacts.

5.7 *HERITAGE REGISTER LISTINGS*

the State Heritage Register, the Australian Heritage Database (includes data from the World Heritage List UNESCO, National Heritage List, Commonwealth Heritage List, Register of the National Estate) and the Port Stephens Local Environmental Plan. However, not all indigenous places are listed, and the Heritage Commission is consulting with Traditional Owners to gradually include indigenous information. There are no indigenous heritage items listed on the Port Stephens Local Environment Plan.

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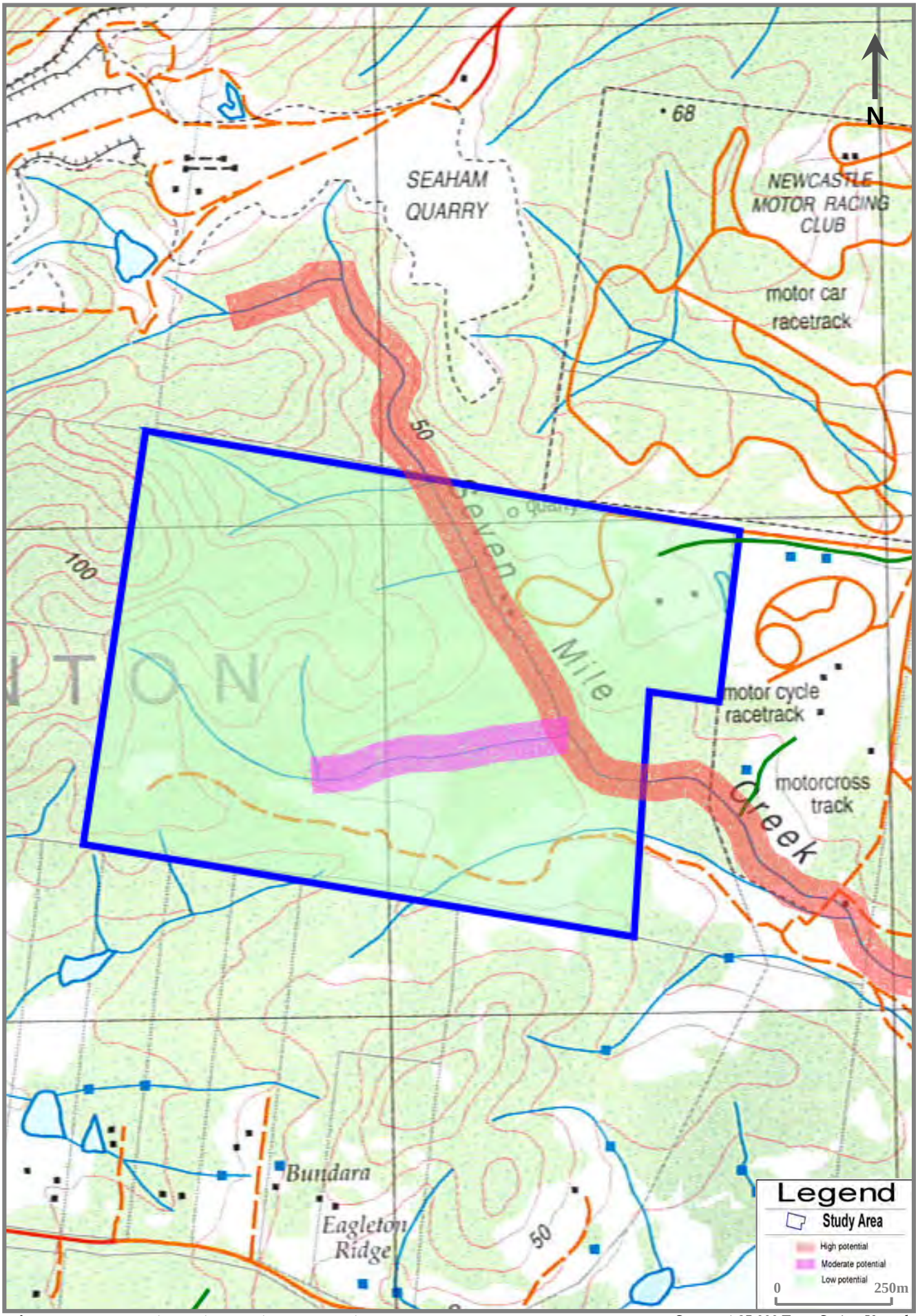


Figure 5.2 Archaeological potential

Source: 1:25 000 Topo Series: Karuah

5.8 *MODELS OF PAST ABORIGINAL LAND USE*

The main aim of this project is to attempt to define both the nature and extent of occupation across the area. As a result, the nature of the analysis will focus on both the landform units and sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area treating assemblages as a continuous scatter of cultural material across the landscape.

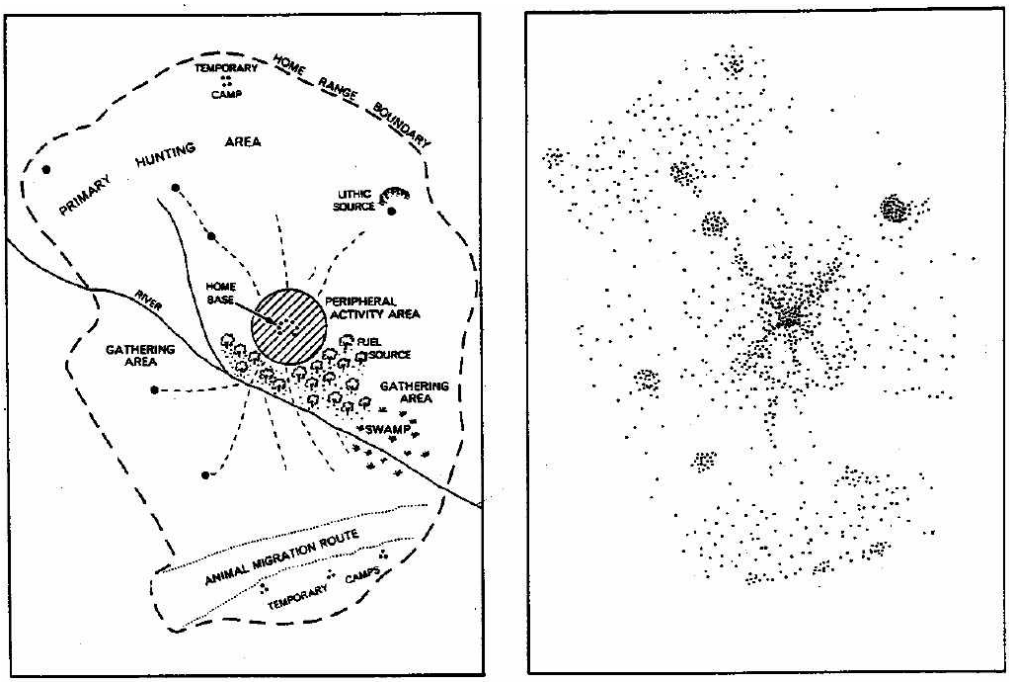
In doing this, it is possible to identify variation across the landscape, landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. Thus the nature of activities and occupation can be identified through the analysis of stone artefact distributions across a landscape.

A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral 'activity locations'. Basically, the home base is the focus of attention and many activities and the activity locations are situated away from the home base and are the focus of specific activities (such as tool manufacturing). This pattern is illustrated in *Figure 5.3*.

Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials etc). The degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return to sites and hence the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area).

Activity locations occur within the foraging radius of a home base camp (approximately 10 km); (Renfrew and Bahn 1991). Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages.

Figure 5.3 Foley's model (left) and its manifestation in the archaeological record (right), (from Foley 1981).



5.8.1 Model of occupation for the Hunter Valley

Work in the Hunter Valley has aimed to understand the nature of Aboriginal occupation and determine the nature of land use. This theme often aims to identify and explain archaeological patterning in site type, content and distribution. General theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence. A number of models developed for the Hunter Valley have been reviewed (Koettig 1994; Dean-Jones and Mitchell 1993;Rich 1995; Kuskie and Kamminga 2000) and the most commonly accepted model is summarised below.

Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. Used as a starting point, it makes a general set of predictions for the Hunter that is consistent with other studies (e.g. Nelson 1991). The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities. Combining this information with a general review of assemblage contents from a sample of excavated sites within the Hunter Valley, a baseline of settlement activities may be determined (Barton 2001).

The model provides a number of archaeological expectations that may be tested. For example, the presence of features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time. The presence of grindstones is also a reliable indicator of low mobility and extended occupation. Seed grinding requires a large investment of time and effort (Cane 1989). In most ethnographic examples, seed grinding is an activity that takes place over an entire day to provide adequate energetic returns (Cane 1989; Edwards and O'Connell 1995).

Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation. It may also have been the case that the location of particular activities could not be predicted by tool users, adding to the increased low-density scattering of artefacts over the landscape. Also, if individuals were opting to carry a number of stone tools during hunting and gathering activities and maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high. *Table 5.1* has been adapted from Kuskie and Kamminga (2000).

To identify the specific activity areas through analysis of the composition of patterning of lithic assemblages, is utilised. However, this is applied to excavated materials as they provide more realistic data due to the lesser degree of disturbances, removal and breakages.

Table 5.1 Site descriptions (Kuskie & Kamminga 2000)

Occupation Pattern	Activity Location	Proximity to water	Proximity to food	Archaeological expectations
Transitory movement	All landscape zones	Not important	Not important	• Assemblages of low density & diversity • Evidence of tool maintenance & repair • Evidence for stone knapping
Hunting &/or gathering without camping	All landscape zones	Not important	Near food resources	• Assemblages of low density & diversity • Evidence of tool maintenance & repair • Evidence for stone knapping • High frequency of used tools
Camping by small groups	Associated with permanent & temporary water	Near (within 100m)	Near food resources	• Assemblages of moderate density & diversity • Evidence of tool maintenance & repair • Evidence for stone knapping & hearths
Nuclear family base	Level or gently	Near reliable	Near food resources	• Assemblages of high density &diversity • Evidence of tool maintenance & repair &

camp	undulating ground	source (within 50m)		casual knapping • Evidence for stone knapping • Heat treatment pits, stone lined ovens • grindstones
Community base camp	Level or gently undulating ground	Near reliable source (within 50m)	Near food resources	• Assemblages of high density & diversity • Evidence of tool maintenance & repair & casual knapping • Evidence for stone knapping • Heat treatment pits, stone lined ovens • Grindstones & ochre • Large area >100sqm with isolated camp sites

6 RESULTS

6.1 METHODOLOGY

The survey areas were surveyed on foot by the archaeologist and registered Aboriginal stakeholder representatives in accordance with the proposed methodology provided to the stakeholders for review and approved. The survey included transects at approximately 2 metres apart and focused on areas of high ground surface visibility and exposures (erosional features, creek banks, tracks, cleared areas).

6.2 LANDFORMS

McDonald *et al* (1998) describes the categories of landform divisions. This is a two layered division involving treating the landscape as a series of 'mosaics'. The mosaics are described as two distinct sizes: the larger categories are referred to as *landform patterns* and the smaller being *landform elements* within these patterns. Landform patterns are large-scale landscape units, and landform elements are the individual features contained within these broader landscape patterns. There are forty landform pattern units and over seventy landform elements. However, of all the landform element units, ten are morphological types. For archaeological investigations they divide the landscape into standardised elements that can be used for comparative purposes and predictive modelling. As outlined in *Chapter 2*, the study area includes two landforms: slopes and drainage lines.

6.3 SURVEY UNITS

For ease of management, the study area was divided into 2 Survey Units (SUs) that were based on landforms (Refer to *Figure 6.1*).

Survey Unit 1

This unit includes the drainage lines throughout the study area. This unit has been previously cleared and has numerous tracks crossing them. Vegetation is predominantly open woodland with grasses, shrubs and lantana which contributed to reduced ground surface visibility. Exposures were low and included track crossings and stream bank erosion.

Survey Unit 2

This unit included the remainder of the study area and consisted of slopes. Bound on all sides by fencing, had area been previously cleared and currently has numerous tracks throughout. Vegetation includes open woodland with shrubs, grass and lantana. Exposures were low and included sheet wash and tracks.

6.4 EFFECTIVE COVERAGE

Effective coverage is an estimate of the amount of ground observed taking into account local constraints on site discovery such as vegetation and soil cover. There are two components to determining the effective coverage: visibility and exposure.

Visibility is the amount of bare ground on the exposures which may reveal artefacts or other cultural materials, or visibility refers to 'what conceals'. Visibility is hampered by vegetation, plant or leaf litter, loose sand, stony ground or introduced materials (such as rubbish) On its own, visibility is not a reliable factor in determining the detectability of subsurface cultural materials (DECCW 2010/783:39).

The second component in establishing effective coverage is exposure. Exposure refers to 'what reveals'. It estimates the area with a likelihood of revealing subsurface cultural materials rather than just an observation of the amount of bare ground. Exposure is the percentage of land for

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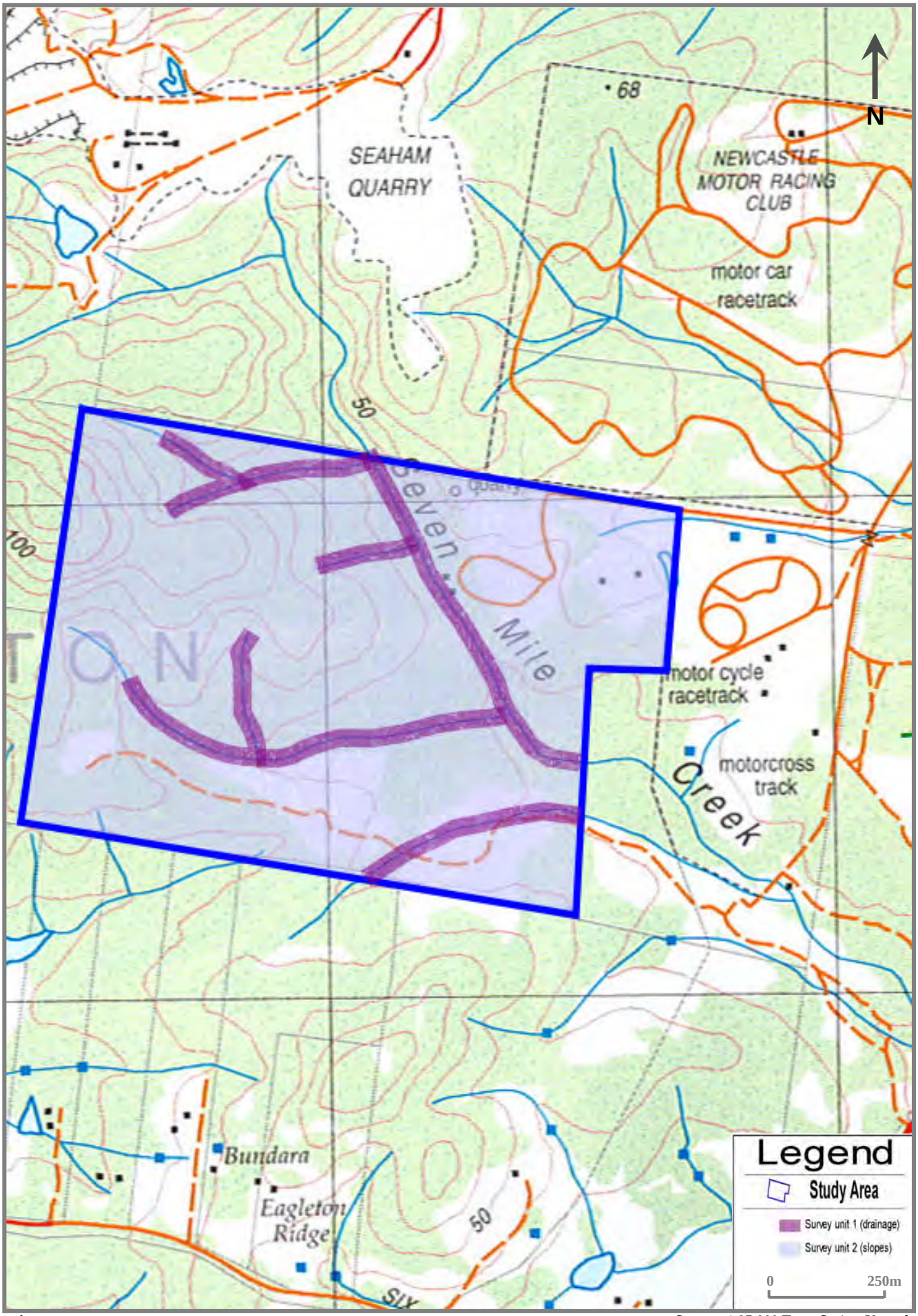

Figure 6.1 Survey units

Source: 1:25 000 Topo Series: Karuah

which erosion and exposure is sufficient to reveal cultural materials on the surface (DECCW 2010/783:37).

The effective coverage for the study area was determined for both visibility and exposure ratings and *Table 6.1* details the visibility rating system used.

Table 6.1 Ground surface visibility rating

Description	GSV Rating %
Very Poor – heavy vegetation, scrub foliage or debris cover, dense tree of scrub cover. Soil surface of the ground very difficult to see.	0-9%
Poor – moderate level of vegetation, scrub, and / or tree cover. Some small patches of soil surface visible in the form of animal tracks, erosion, scalds, blowouts etc, in isolated patches. Soil surface visible in random patches.	10-29%
Fair – moderate levels of vegetation, scrub and / or tree cover. Moderate sized patches of soil surface visible, possibly associated with animal, stock tracks, unsealed walking tracks, erosion, blow outs etc, soil surface visible as moderate to small patches, across a larger section of the study area.	30-49%
Good – moderate to low level of vegetation, tree or scrub cover. Greater amount of areas of soil surface visible in the form of erosion, scalds, blowouts, recent ploughing, grading or clearing.	50-59%
Very Good – low levels of vegetation / scrub cover. Higher incidence of soil surface visible due to recent or past land-use practices such as ploughing, grading, mining etc.	60-79%
Excellent – very low to non-existent levels of vegetation/scrub cover. High incidence of soil surface visible due to past or recent land use practices, such as ploughing, grading, mining etc.	80-100%
Note: this process is purely subjective and can vary between field specialists, however, consistency is achieved by the same field specialist providing the assessment for the one study area/subject site.	

As indicated in *Table 6.2*, the effective coverage for study area illustrates that overall effective coverage being 4.67% with grass and leaf litter being the limiting factor and erosion across the study area is minimal and included sheet and creek bank erosion. The disturbances included clearing, fences, tracks, the quarry/current compost facility to the north east and motor bike tracks to the south east and erosion all of which have impacted upon the landscape and associated cultural materials. As described in detail in *Chapter 3*, these disturbances result in the lateral and horizontal movement of materials. In particular, the north east and south east has been significantly disturbed and the remainder disturbed through tracks and erosion only with minimal disturbances along the creeks (bank erosion). The disturbances are illustrated in *Figure 6.2* and examples of vegetation cover are shown in *Figure 6.3*.

Table 6.2 Effective coverage

SU	Landform	Area (m2)	Vis %	Exp %	Exposure type	Previous disturbances	Present disturbances	Limiting visibility factors	Effective coverage (m2)
1	drainage	57,000	50 %	50%	erosion, tracks	clearing, tracks, fencing	tracks, erosion	grass, leaf litter	14,250
2	slopes	693,000	10 %	30%	erosion, tracks	clearing, tracks, fencing, quarry	tracks, erosion	grass, leaf litter	20,790
Totals		**750,000**							**35,040**
								Effective coverage %	**4.67%**

The level and nature of the effective survey coverage is considered satisfactory to provide an effective assessment of the Aboriginal sites identified and those potentially present within the investigation area. The coverage was comprehensive for obtrusive site types (e.g. grinding

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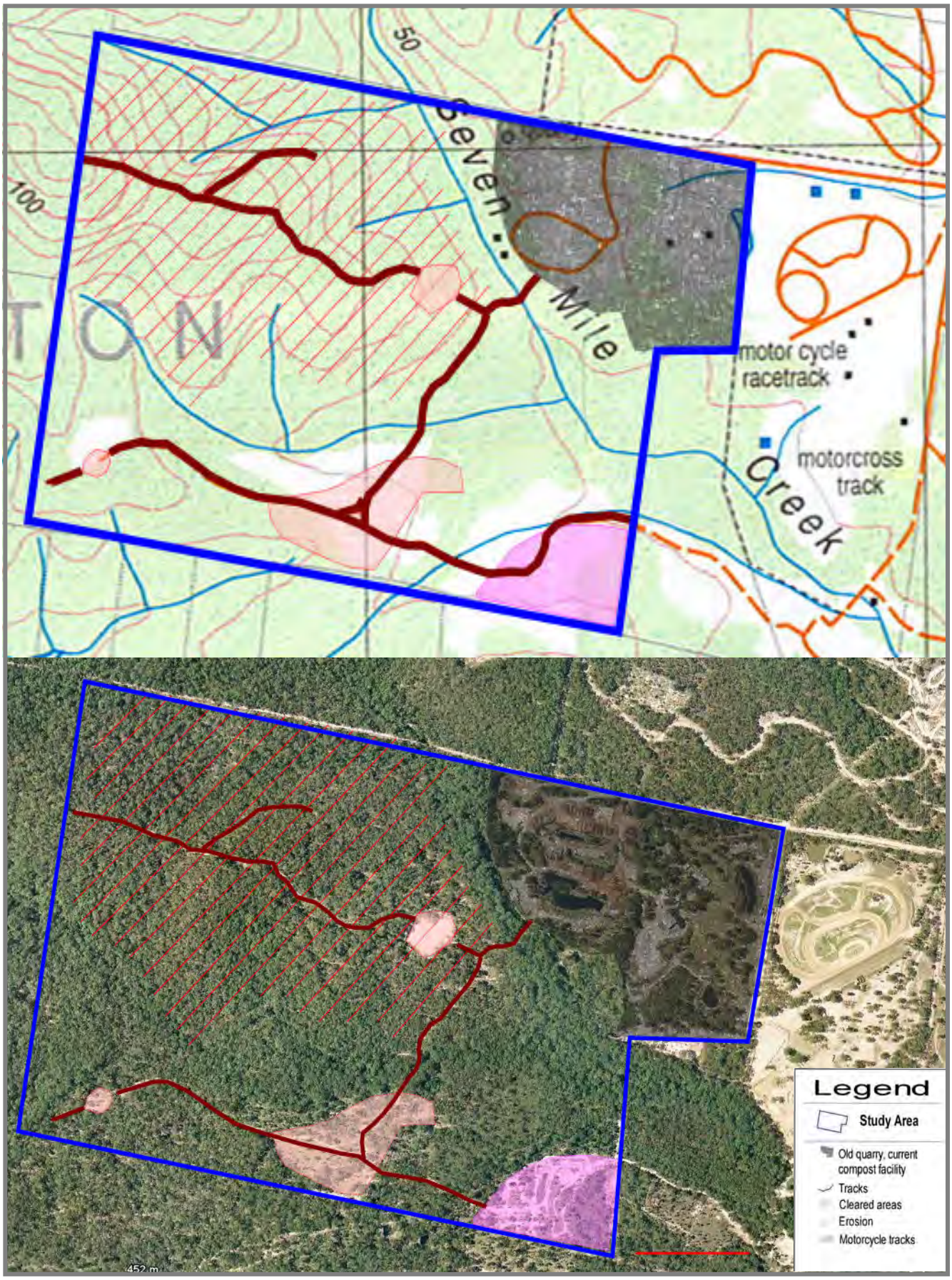

Figure 6.2 Disturbances across the study area

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Figure 6.3 Vegetation across the study area

Source: Google earth

grooves and scarred trees) but somewhat limited for the less obtrusive surface stone artefact sites by surface visibility constraints that included vegetation cover and minimal exposures.

In view of the predictive modelling and the results obtained from the effective coverage, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the management of the identified sites and potential Aboriginal sites.

6.5 ARCHAEOLOGICAL SITES

Sites were labelled according to the project title, e.g. BQ/1 where BQ represents Balickera Quarry, and 1 indicates the site number allocated consecutively.

6.5.1 Definition of a Site

A 'site' can be defined by various factors. For this study a 'site' was defined on the combination of the following inter-related factors:

1) landform;
2) exposure and visibility;
3) visible boundaries of artefacts; and
4) a feature identified by the Aboriginal community on the basis of their own cultural knowledge and significance.

The 'site area' was defined as the area in which artefacts were observed on a landform, though it must be remembered that this may not represent an accurate picture of site size. Visibility of artefacts is affected by differences in vegetation cover and hence ground surface visibility, as well as the degree of natural and human-induced disturbance.

6.5.2 Definition of site complex

Site complex refers to sites that occur in groups. For example, complexes may consist of burial grounds and carved trees, artefact scatters that represent different stages of procurement and manufacture or artefact scatters and shell middens. Complexes may also consist of artefact scatters that are connected across a landscape with the scatters being either specific activity centres (such as tool manufacturing sites) or larger base camp areas (with more artefacts and a variety of artefacts).

6.5.3 Mapping identified sites

MCH use topographic maps with MGA system 1994 (unless they are new maps produced after 1999 that have used the MG94 system) and our hand held Global Positioning System (GPS) units use MGA.

It is important to note that the Global Positioning System is operated by the United States and is subject to changes that may affect the accuracy and performance of all GPS equipment. At present, the hand held unit operated by MCH have an estimated error of approximately 5-10 metres though this is also dependant on the number of satellites available and detected and other factors such as tree coverage/interference.

6.5.4 Sites identified

One isolated find was identified within a creek bed. The mudstone flake exhibits weathering (smooth edges that were once sharp) and was located in the creek bed which may have been washed form upstream. The site is summarised in *Table 6.3* and its location and artefact in *Figure 6.4*. Due to tree cover, only 2 satellites were registered on the hand held GPS and as such the

MCH:

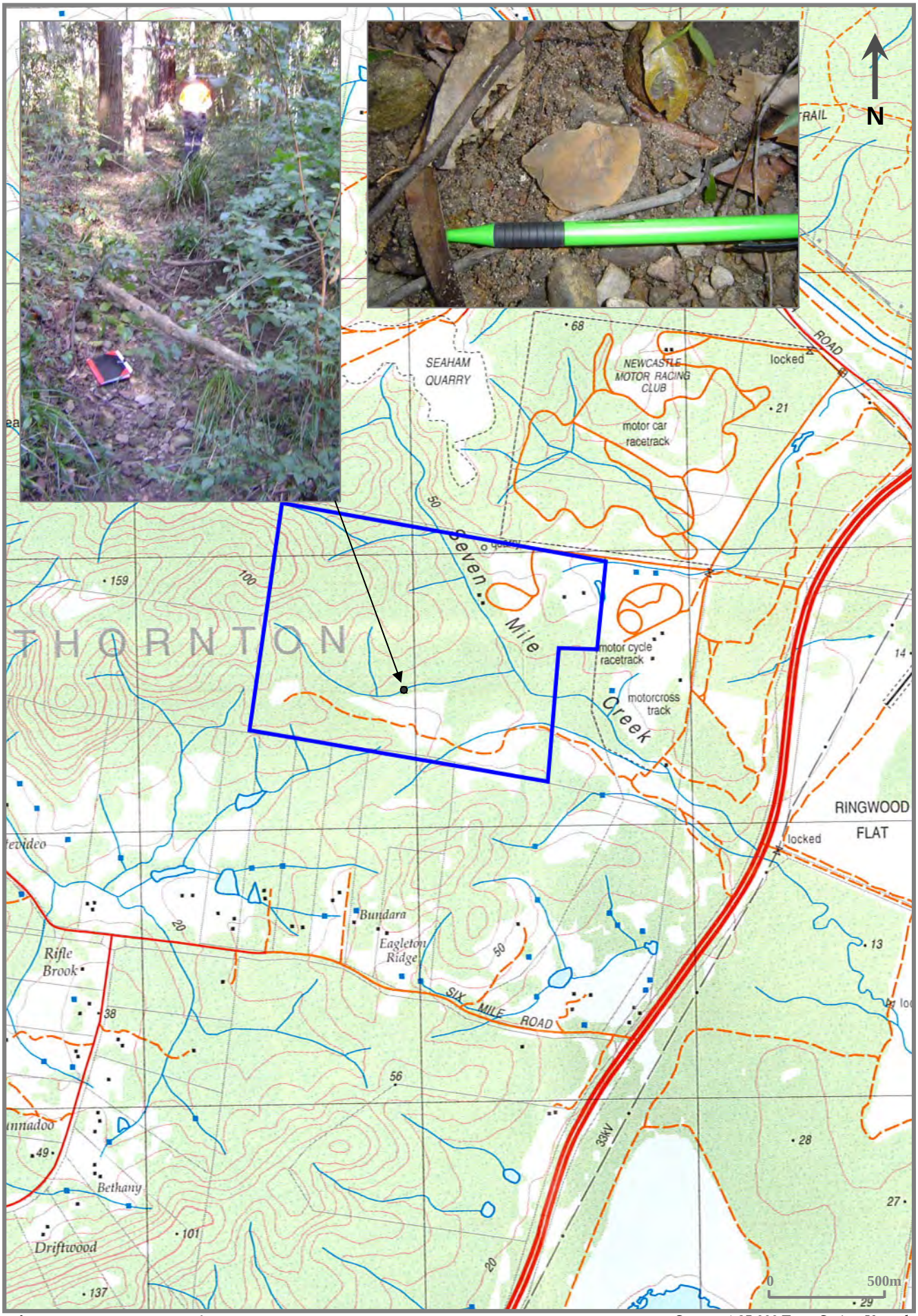

Figure 6.4 Site BQ/1

Source: 1:25 000 Topo Series: Karuah

coordinates are considered unreliable. However, using the topographic map and tracks the location was mapped manually.

Table 6.3 Site summary

Site number	Site type	Feature(s)/ content	Survey unit	Landform	Distance from water	Stream order
BQ1	isolated	single artefact	1	creek	0	3rd

6.6 POTENTIAL ARCHAEOLOGICAL DEPOSIT (PAD)

The terms 'Potential Archaeological Deposit (PAD)' and 'area(s) of archaeological sensitivity' are used to describe areas that are likely to contain sub-surface cultural deposits. These sensitive landforms or areas are identified based upon the results of fieldwork, the knowledge gained from previous studies in or around the subject area and the resultant predictive models. Any or all of these attributes may be used in combination to define a PAD.

The likelihood of a landscape having been used by past Aboriginal societies and hence containing archaeologically sensitive areas is primarily based on the availability of local natural resources for subsistence, artefact manufacture and ceremonial purposes. The likelihood of surface and subsurface cultural materials surviving in the landscape is primarily based on past land uses and preservation factors.

Given the known extent and content of sites typically situated along reliable water and given that the study area contains numerous 1st and 2nd order streams that flow into a reliable 3rd order, it is likely that subsurface materials would have existed within the study area, in particular along the 3rd order creek. In addition to this, the second order stream located to the south is situated on a slight slope and contains the isolated artefacts strongly indicating this creek was also used in the past. Two PADs have been identified, they are described below and their location shown in *Figure 6.5*.

6.6.1 BQ PAD1 3rd order creek

This PAD includes the 3rd order creek (Seven Mile Creek) that is situated to the east and drains north to south and flows along a simple slope. The PAD is defined as including the creek and extends in width to 50m both sides of the creek bank. This is the area that typically contains the highest density and number of sites throughout the Hunter Valley. The PAD has been subject to minimal disturbances, is heavily vegetated and has been subject to creek bank erosion. There is a high potential for both surface and subsurface cultural materials along this creek.

6.6.2 BQ PAD1 2nd order creek

This PAD includes the 2nd order creek that is situated to the south and drains west east down a simple slope and into Seven Mile Creek. The PAD is defined as including the creek and extends in width to 50m both sides of the creek bank. This is the creek that contains the isolated artefacts and another area that typically contains the highest density and number of sites throughout the Hunter Valley. The PAD has been subject to minimal disturbances, is heavily vegetated and has been subject to creek bank erosion. There is a high potential for both surface and subsurface cultural materials along this creek.

Table 6.4 PAD summary

PAD number	Feature(s)	SU	Landform
BQ PAD1	3rd order draining down a gentle slope	1	creek
BQ PAD1	2nd order draining down a gentle slope into 3rd order, isolated artefact	1	creek

MCH:

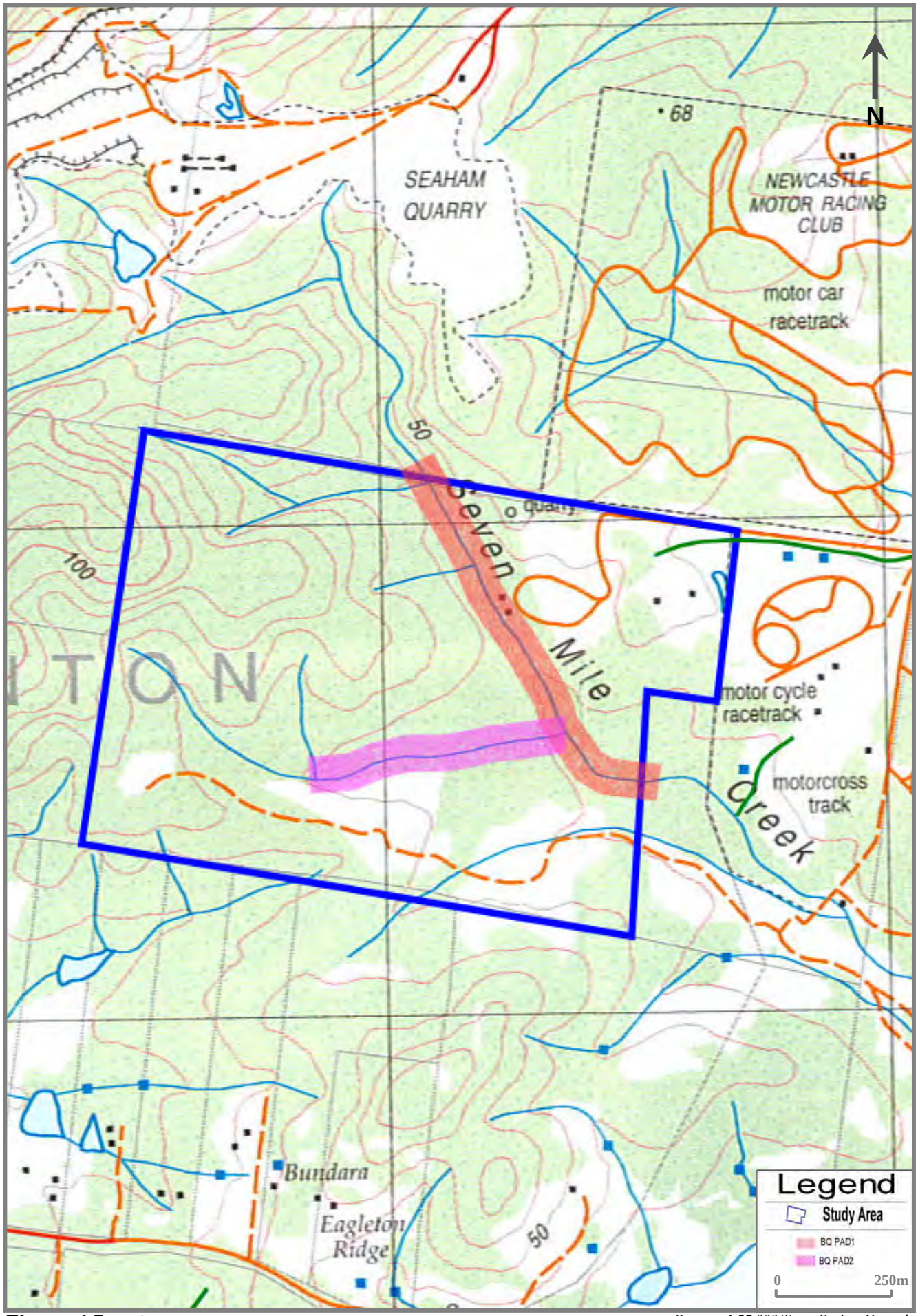

Figure 6.5 PADs

Source: 1:25 000 Topo Series: Karuah

6.7 *INTERPRETATION, REGIONAL & LOCAL CONTEXT*

Predictive modelling and Hunter Valley occupation models indicate that areas along reliable water on landforms that are suitable for occupation (gentle slopes) and that the highest density and number of sites are found within 50 metres of these landforms.

The study area consists of steep slopes to the north west that continue south and east into gentle slopes. The study area is also dissected by a number of 1st, 2nd and 3rd order streams. The drainage along gentle slopes is considered suitable for past occupation as these areas contain reliable water and landforms that may be camped on. In particular, the 3rd order creek (Seven Mile Creek) is considered to have the highest potential for past occupation within the study area. Additionally, the second order creek situated to the south is also considered to have potential for cultural materials. Thus, it is considered that the identified site and PADs are typical of the Hunter Valley. As only one isolated artefact was identified (likely due to vegetation cover) it is not possible to provide a reliable interpretation of the study area.

6.8 *DISCUSSION & CONCLUSION*

Sites provide valuable information about past occupation, use of the environment and its specific resources including diet, raw material transportation, stone tool manufacture, and movement of groups throughout the landscape.

Proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of the tributaries. The access to water within the study area would have provided the necessary resources for sustained occupation of the area.

If the predictive model proves to be correct, it is expected that the PADs would reveal evidence of at least camping by small groups. This is based on the availability of both temporary and permanent water and associated food resources. Evidence to support this would include assemblages of moderate densities and diversities, evidence of tool maintenance, stone knapping and possibly hearths.

In addition to this, the remainder of the study area may have been used for transitory movement and/or hunting and gathering. This is based on the landforms (steep slopes) and distance from water sources. Evidence to support this would include low density assemblages, tool maintenance, evidence of knapping and high frequency of used tools.

Thus, given the reliable water, associated resources and the variety of landforms, the study area may contain a range of evidence of past occupation. However, due to vegetation cover site identification was likely hampered, thus the identification of PADs.

7 ASSESSMENT OF ARCHAEOLOGICAL SIGNIFICANCE

7.1 THE SIGNIFICANCE ASSESSMENT PROCESS

One of the key steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984; Pearson and Sullivan 1995: 7).

The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long-term outcomes for future generations as the reasons for, and objectives of, site conservation also change over time.

The assessment of significance of archaeological sites and resources is defined in most cases by what these entities can contribute to our understanding or knowledge of a place or site. In most cases, it is not possible to fully articulate or comprehend the extent of the archaeological resource at the outset, let alone its value. Therefore, the evaluation of the significance of archaeological material is based on the potential this resource has to contribute to our understanding of the past. Of importance is the type of information that can be revealed. In particular, site significance can be due to knowledge not available through other sources, and the contribution that it can make to our understanding of a place or a cultural landscape.

7.2 BASIS FOR EVALUATION

The significance of indigenous archaeological sites or cultural places can be assessed on the criteria of the Burra Charter, the Australian Heritage Commission Criteria of the National Estate, and the OEH guidelines that are derived from the former two.

The NSW NPWS Aboriginal Cultural Heritage Standards and Guidelines Kit (1997) emphasises two realms of significance assessment:

Aboriginal cultural significance

Archaeological (scientific) significance

The cultural significance of the sites or landscape will be assessed by the Aboriginal groups mentioned previously.

7.3 ARCHAEOLOGICAL (SCIENTIFIC) SIGNIFICANCE

Scientific significance is assessed according to the contents of a site, state of preservation, integrity of deposits, representativeness/rarity of the site type, and potential to answer research questions on past human behaviour (NPWS 1997).

For open campsites, evidence required to adequately assess significance includes information about the presence of sub-surface deposits, the integrity of these deposits, the nature of site's contents and extent of the site. A review of information pertaining to previously recorded sites within the local area and region enables the rarity and representativeness of a site to be assessed.

High significance is usually attributed to sites that are so rare or unique that the loss of the site would affect our ability to understand an aspect of past Aboriginal use/occupation of an area. In some cases a site may be considered highly significant because its type is now rare due to destruction of the archaeological record through development. Medium significance can be attributed to sites that provide information on an established research question. Low

significance is attributed to sites that cannot contribute new information about past Aboriginal use/occupation of an area. This may be due to site disturbance or the nature of the site's contents.

In order to clarify the significance assessment, the criteria used are explained below.

7.3.1 Research potential

Research potential refers to the potential for information gained from further investigations of the evidence to be used in answering current or future research questions. Research questions can relate to any number of issues concerning past human material culture and associated behaviour (including cultural, social, spiritual etc) and/or use of the environment. Several inter-related factors to take into consideration include the intactness or integrity of the site, the connectedness of the site to other sites, and the potential for a site to provide a chronology extending back in the past. Several questions are posed for each site or area containing evidence of past occupation:

- Can the evidence contribute information not available from any other resource?
- Can the evidence contribute information not available from any other location or environmental setting?
- Is this information relevant to questions of past human occupation (including cultural, social and/or spiritual behaviour) and/or environments or other subjects?

Assessing research potential therefore relies on comparisons with other evidence both within the local and regional context. The criteria used for assessing research potential include:

- potential to address specific local research questions;
- potential to address specific regional questions;
- potential to address general methodological and theoretical questions;
- potential sub-surface deposits; and
- potential to address future research questions.

The particular questions asked of the available evidence should be able to contribute information that is not available from other resources or evidence and are relevant to questions about past human societies and their material culture. Levels for defining research potential are as follows:

High	Has the potential to provide new information not obtained from any other resource to answer current and/or future research questions.
Medium	Has the potential to contribute significant additional information to answer current and/or future research questions.
Low	Has no potential to contribute significant information to answer current or future research questions.

7.3.2 Representativeness and rarity

Representativeness and rarity are assessed at a local, regional and national level (although assessing at a national level is difficult and commonly not possible due to a lack of national

reports and available database). As the primary goal of cultural resource management is to afford the greatest protection to a representative sample of Aboriginal heritage throughout a region, this is an important criterion. The more unique or rare the evidence is, the greater its value as being representative within a regional context.

The main criteria used for assessing representativeness and rarity include:

- the extent to which the evidence occurs throughout the region;
- the extent to which this type of evidence is subject to existing and potential future impacts in the region;
- the integrity of the evidence compared to that at other locations within the region;
- whether the evidence represents a primary example of its type within the region; and
- whether the evidence has greater potential for educational purposes than at other similar locations within the region.

7.3.3 Nature of the Evidence

The nature of the evidence is related to representativeness and research potential. For example, the less common the type of evidence, the more likely it is to have representative value. The nature of the evidence is directly related to its potential to be used in addressing current and/or future research questions. Criteria used in assessing the nature of the evidence include:

- presence, range and frequency of artefacts;
- presence, range and frequency of artefact types; and
- presence and types of other features.

7.3.4 Integrity

The state of preservation and disturbances of the evidence (integrity) is also related to representativeness and research potential. The higher the integrity (well preserved and not disturbed) of the evidence, the greater the level of information that is likely to be obtained from further study. This translates to greater importance for the evidence within a local and regional context, as it may be a suitable example for preservation/conservation. The criteria used in assessing integrity include:

- horizontal spatial distribution of artefacts;
- vertical spatial distribution of artefacts;
- preservation of intact features such as hearths or knapping floors;
- preservation of site contents such as charcoal which may enable direct dating providing a reliable date of occupation of a given area;
- preservation of artefacts which may enable use-wear/residue analysis to determine tool use and possibly diet; and

- preservation of other cultural materials that may enable interpretation of the evidence in relation to cultural/social behaviour (e.g. burial types and associated mortuary practices may have been based on cultural, social, age, and/or gender distinctions).

Many of these criteria can only be obtained through controlled excavation. Generally high levels of ground disturbance (such as erosion, tracks, dams etc) limit the possibility that an area would unlikely contain intact spatial distributions, intact features, in situ charcoal et cetera.

Definitions for defining levels of site integrity and condition have been derived from Witter (1992) and HLA (2002) and are as follows:

Excellent Disturbance, erosion or development is minimal.

Good Relatively undisturbed deposits or partially disturbed with an obvious in situ deposit.

Fair Some disturbance but the degree of disturbance is difficult to assess.

Poor Clearly mostly destroyed or disturbed by erosion or development.

Very Poor Sites totally disturbed or clearly not in situ.

Destroyed A known site that is clearly no longer there.

7.4 EVALUATION

The following is an evaluation of the scientific significance of the individual archaeological sites identified within the study area. This does not apply to the sites as a cultural landscape as not all sites were surveyed by MCH. *Table 7.1* presents the significance assessment for the sites identified.

Table 7.1 Significance Assessment

Site	Site Type	Representativeness	Integrity	Res. Pot	Sci. Sig
BQ/1	isolated	well represented	very poor	low	low
BQ PAD1	PAD	unknown	fair/good	unknown	unknown
BQ PAD2	PAD	unknown	fair/good	unknown	unknown

7.5 CULTURAL SIGNIFICANCE

While Aboriginal sites and places may have scientific significance, they also have cultural/social significance to the Aboriginal people from that area. Determining cultural/social significance can only be determined by the Aboriginal people from the area in which the sites and/or places were identified. Consultation with the Aboriginal community has been undertaken in order to document cultural/social significance and the registered groups will provide MCH with a letter/report.

8 ASSESSMENT OF IMPACTS

The archaeological record is a non-renewable resource that is affected by many processes and activities. As outlined in *Chapter 3*, the various natural processes and human activities would have impacted on archaeological deposits through both site formation and taphonomic processes. *Chapter 5* describes the impacts within the study area, showing how these processes and activities have disturbed the landscape and associated cultural materials in varying degrees.

8.1 IMPACTS

The OEH Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (2010:21) describes impacts to be rated as follows:

1) Type of harm: is either direct, indirect or none

2) Degree of harm is defined as either total, partial or none

3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

Table 8.1 Impact summary

Site	Site type	Type of harm	Degree of harm	Consequence of harm	Representative	Integrity	Res. Pot	Sci. Sig
BQ/1	isolated	direct	partial	partial loss of value	well represented	very poor	low	low
BQ PAD1	PAD	direct	partial	partial loss of value	unknown	fair/good	unknown	unknown
BQ PAD2	PAD	direct	partial	partial loss of value	unknown	fair/good	unknown	unknown

The results of the assessment indicate that the site and PADs will be impacted upon by the development. Portions of the PADs will be impacted on by road and bridge construction for the quarry.

8.2 CUMULATIVE IMPACTS

The cumulative impact to Aboriginal heritage in the area is limited given that:

- The net development footprint (i.e. the area of direct impact) is small and does not affect a high proportion of any particular landform present within the region;
- A comparable suite of landforms (creeks and slopes) that are expected to, and do contain a similar archaeological resource occur in multiple contexts both within the local area and throughout the Hunter Valley;
- The high density deposits identified to date occur outside the development footprint;
- The PADs have been subject to long term past land uses (impacts) that have resulted in a disturbed landscape and as a consequence of these disturbances the representative value of the archaeological resource is lessened. Such impacts include clearing, fencing and erosion;
- The placement of the development within this area, in particular significant distances from reliable water sources and within the disturbed context, ensures the cumulative impacts are focused in the areas of lower potential and therefore are kept to a minimum.

Mitigation measures to minimise these impacts are outlined in the following chapter.

9 MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies, as outlined through the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW and the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW, (DECCW 10011a,b), are considered below for the management of identified sites and potential archaeological deposits within the study area.

One of the most important considerations in selecting the most suitable and appropriate strategy is the recognition that Aboriginal cultural heritage is very important to the local Aboriginal community. Decisions about the management of sites and potential archaeological deposits should be made in consultation with the appropriate local Aboriginal community.

9.1 CONSERVATION/PROTECTION

The OEH is responsible for the conservation/protection of Indigenous sites and they therefore require good reason for any impact on an indigenous site.

Conservation is the first avenue and is suitable for all sites, especially those considered high archaeological significance and/or cultural significance. Conservation includes the processes of looking after an indigenous site or place so as to retain its cultural significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

Given the high potential for cultural materials along both PADs it is the preferred option that these areas be protected from all impacts.

9.2 FURTHER INVESTIGATION

An Aboriginal Heritage Impact Permit (AHIP) is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW).

Subsurface testing is appropriate when a Potential Archaeological Deposit (PAD) has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity. However, testing may only be undertaken as per the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2011) and discussions/consultation with the local Aboriginal community.

If the identified PADs will be impacted upon, test excavations will be required for the PADs (construction footprint area only) and will be undertaken as per the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2011) and discussions/consultation with the local Aboriginal community.

9.3 AHIP

If harm will occur to an Aboriginal object or Place, then an AHIP is required form the OEH. An AHIP is required when a site is identified but its extent, the nature of its contents, level of integrity and/or its significance cannot be adequately assessed through a surface survey. In this case, if a systematic excavation of the known site could provide benefits and information for the Aboriginal community and/or archaeological study of past Aboriginal occupation, a salvage program may be an appropriate strategy to further assess the site to determine its extent, nature, content, integrity and significance. The AHIP may also include surface collection of artefacts.

If site BQ/1 will be impacted upon an AHIP will be required prior to works.

9.4 MONITORING

An alternative strategy for areas where archaeological deposits are predicted to occur is was to monitor development works for cultural materials, predominantly during the initial earth moving and soil removal works. This was the main strategy for managing the possible occurrence of Aboriginal skeletal remains.

However, with the legislative changes, due diligence process and AHIP restructuring, monitoring is not an option as if there is even a slight possibility of cultural materials being present this must be addressed through the due diligence process and Code of Practice.

9.5 CULTURAL AWARENESS INDUCTION

Part of the site induction should include an induction on the cultural heritage of the study area. All personnel on site must be inducted and as such are made aware of the cultural heritage across the study area. The induction package can be included in the Environmental Management Plan and/or Aboriginal Heritage Management Plan.

9.6 PROCEDURES FOR ONGOING ABORIGINAL CONSULTATION & INVOLVEMENT

Procedures should be in place for the continued consultation and involvement with the Aboriginal stakeholders. This procedure can be included in the Environmental Management Plan and/or the Aboriginal Heritage Management Plan.

10 RECOMMENDATIONS

10.1 GENERAL

7) The persons responsible for the management of an on site will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;

8) The involvement of the registered Aboriginal stakeholders in the ongoing management of the Aboriginal cultural materials within the project study should be promoted and included in the Environmental Management Plan and/or the Aboriginal Heritage Management Plan; and

9) A cultural awareness program should be included as part of the site induction program and developed with the registered Aboriginal stakeholders and form part of the Environmental Management Plan and/or the Aboriginal Heritage Management Plan.

10.2 PADS

10) If BQ PAD1 will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW; and

11) If BQ PAD2 will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW.

10.3 SITE

12) If BQ/1 will be harmed by any future development an AHIP will be required.

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ANNEX A

Aboriginal Stakeholder Consultation

Contact made	Date	Who contacted Whom	Contacts	Purpose	Phone conversation/ notes	Outcomes
1st	4 April 2011	MCH contacted the required Government departments requesting a list of Aboriginal groups to contact for registration and consultation	DECCW, LALC, Registrar of Aboriginal Owners, Native Title Tribunal, NTSCORP Limited, local Council, Catchment Authority	Requirement under the DECCW ACHCR's (2010)	Letter contained, details of the project area (location) and proponent details, request for assistance in identifying Aboriginal stakeholder groups or persons interested and to provide a list of these groups/people	See attached
2nd	5 April 2011	DCEEW contacted MCH		List of groups	Provided a response to the request for groups to consult. 8 groups were listed.	See attached
3rd	6 April 2011	NNT contacted MCH		List of groups	Provided a response to the request for groups to consult. No groups were listed.	See attached
4th	8 April 2011	WLALC contacted MCH		List of groups	Provided a response to the request for groups to consult. 2 groups were listed.	See attached
5th	6 April 2011	NNT contacted MCH		List of groups	Provided a response to the request for groups to consult. No groups were listed.	See attached
6th	12 April 2011	Office of the Registrar contacted MCH		List of groups	Provided a response to the request for groups to consult. 1 group was listed.	See attached
18 April 2011 Request for groups to consult with closed						
4th	18 April 2011	MCH contacted all groups listed in responses from Government departments listed above	See attached	Requirement under the DECCW ACHCR's (2010)	Letter contained, proponent details, details of the project area (location), details of the proposed development, statement of the purpose of community consultation with Aboriginal people, statement that this is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation, advised that, unless otherwise specified, your details will be provided to DECCW and the LALC, that individuals must be nominated if a group or organisation registers, request for Aboriginal stakeholder groups or persons interested to register in writing to MCH no later than 2 May 2011, nominate your preferred option to receive the initial information. You may wish to have a non paid meeting and receive an information pack, or receive information packet through the mail, fax or e-mail.	See attached

Contact made	Date	Who contacted Whom	Contacts	Purpose	Phone conversation/ notes	Outcomes
5th	20 April 2011	CMA contacted MCH (received 29/4/2011)		List of groups	State that they do not provide list of groups to consult with and direct MCH to contact DCEEW.	See attached
6th	21 April 2011	Add in the Port Stephens Examiner Newspaper placed by client.	NA	Requirement under the DECCW ACHCR's (2010)	Add contained, proponent details, details of the project area (location), details of the proposed development, statement of the purpose of community consultation with Aboriginal people, statement that this is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation, advised that, unless otherwise specified, your details will be provided to DECCW and the LALC, that individuals must be nominated if a group or organization registers, request for Aboriginal stakeholder groups or persons interested to register in writing to MCH no later than 5 May 2011, nominate your preferred option to receive the initial information. You may wish to have a non paid meeting and receive an information pack, or receive information packet through the mail, fax or e-mail.	See attached
7th	26 April 2011	Mur-roo-ma Inc (MI) contacted MCH	Anthony Anderson (MI) contacted Penny McCardle (MCH)	Registration letter	Anthony registered for the project	See attached
8th	2 May 2011	Nur-run-gee Pty Ltd (N) contacted MCH	Lennie Anderson (N) contacted Penny McCardle (MCH)	Registration letter	Lennie registered for the project	See attached
5 May Registration closed						
9th	5 May 2011	MCH contacted all registered groups: sent an information pack for the project	See attached	Requirement under the OEH ACHCR's (2010) Posted Information package	Information package contained, cover letter, project overview, details of the project area and maps, roles and responsibilities of all parties, methods of gathering information on cultural knowledge and the archaeological assessment, defined consultation and employment, critical time lines and pro forma for response due by 26 May 2011	See attached

Contact made	Date	Who contacted Whom	Contacts	Purpose	Phone conversation/ notes	Outcomes
10th	19 May 2011	Mur-roo-ma Inc (MI) contacted MCH	Anthony Anderson (MI) contacted Penny McCardle (MCH)	Response to info pack	Anthony provided Penny with his response to the info pack and agreed to the methodology	See attached
11th	20 May 2011	Nur-run-gee Pty Ltd (N) contacted MCH	Lea Anderson (N) contacted Penny McCardle (MCH)	Response to info pack	Leanne provided Penny with her response to the info pack and agreed to the methodology	See attached
12th	20 May 2011	MCH contacted all registered groups (MI & N)	See attached	Survey invitation	MCH sent both groups an invitation to the survey on 9 June 2011	See attached
13th	20 May 2011	Nur-run-gee Pty Ltd (N) contacted MCH	Lea Anderson (N) contacted Penny McCardle (MCH)	Response to survey invitation	Leanne provided Penny with the required paperwork to participate in the survey	See attached
14th	25 May 2011	Mur-roo-ma Inc (MI) contacted MCH	Anthony Anderson (MI) contacted Penny McCardle (MCH)	Response to survey invitation	Anthony provided Penny with the required paperwork to participate in the survey	See attached
9 June 2011 Survey						
15th	2 July 2012	MCH contacted all registered groups (MI & N)	See attached	draft report	MCH sent both groups a copy of the draft report and requested their report no later than 29 July 2012	See attached
16th	2 July 2012	Mur-roo-ma Inc (MI) contacted MCH	Anthony Anderson (MI) contacted Penny McCardle (MCH)	draft report	Provided MCH with their report and supported the project and recommendations	See attached
17th	4 July 2012	Nur-run-gee Pty Ltd (N) contacted MCH	Lennie Anderson (N) contacted Penny McCardle (MCH)	draft report	Provided MCH with their report and supported the project and recommendations	See attached
18th	4 July 2012	MCH contacted all registered groups (MI & N)	See attached	Final report	MCH provided both groups with a copy of the final report	See attached

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

General Manager,
Hunter Central Rivers CMA
Private Bag 2010
Paterson NSW 2421

Fax: 4930 1013

MCH Reference: Indigenous Archaeological Assessment at Balickera

Dear Sir/Madam,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 18 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Peter Schultz and George Tonna
NTSCORP Limited
PO Box 2105,
Strawberry Hills 2012

FAX: 9310 4177

MCH Reference: Indigenous Archaeological Assessment at Balickera

Dear Peter and Goerge,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 18 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

McCardle Cultural Heritage Pty Ltd
A.C.N. 104 590 141 A.B.N.89 104 590 141

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Native Title Tribunal
Kimberley Wilson
GPO Box 9973
Sydney NSW 2001

Fax: (02) 9233 5613
Email: kimberley.wilson@nntt.gov.au

MCH Reference: Indigenous Archaeological Assessment at Balickera

Dear Sir/madam,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

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Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

McCardle Cultural Heritage Pty Ltd
A.C.N. 104 590 141 A.B.N.89 104 590 141

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Port Stephens Local Council
PO Box 42,
RAYMOND TERRACE NSW 2324

Fax: 4987 3612

MCH Reference: Indigenous Archaeological Assessment at Balickera

Dear Sir/Madam,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 18 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Kyle Finlay
WLALC
PO Box 56
Tanilba Bay NSW, 2319

Fax: 4965 1799

MCH Reference: Indigenous Archaeological Assessment at the Balickera

Dear Kyle,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 18 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

McCardle Cultural Heritage Pty Ltd
A.C.N. 104 590 141 A.B.N.89 104 590 141

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Department of Environment, Climate Change & Water
Rosalie Neve
Locked Bag 914
COFFS HARBOUR NSW 2450

Fax: 6651 6187

MCH Reference: Archaeological assessment at Balickera

Dear Rosalie,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 18 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

McCardle Cultural Heritage Pty Ltd
A.C.N. 104 590 141 A.B.N.89 104 590 141

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

4 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Office of the Registrar,
Aboriginal Land Rights Act 1983
PO Box 112
Glebe NSW 2037

FAX: 9562 6350

MCH Reference: Indigenous Archaeological Assessment at Balickera

Dear Sir/madam,

RE: INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

In accordance with the new DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), I am contacting you in order to obtain assistance in identifying Aboriginal stakeholder groups or persons interested in the above project.

MCH have been commissioned by orogen Pty Ltd to undertake an Aboriginal Archaeological assessment at Balickera, Port Stephens LGA (see attached map). Could you please provide the contact details for any interested parties no later than 118 April 2011. Please note that no response by the specified date will result in the proponent proceeding with the consultation process.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Forensic Anthropologist

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

NSW GOVERNMENT | Environment, Climate Change & Water

Date: 5 April 2011
Our reference: DOC11/16989
Contact: Rosalie Neve
(02) 66598221

Ms Penny McCardle
McCardle Cultural Heritage Pty Ltd
PO Box 166
ADAMSTOWN NSW 2289

Dear Ms McCardle

RE: PROPOSED INDIGENOUS ARCHAEOLOGICAL ASSESSMENT AT BALICKERA

I refer to your correspondence, dated 4 April 2011, to the Department of Environment, Climate Change and Water (DECCW), for your project located within Port Stephens LGA and described as proposed Indigenous archaeological assessment at Balickera. We advise that DECCW is now referred to as the Office of Environment and Heritage (OEH) within the Department of Premier and Cabinet,

Please find attached a list of known Aboriginal parties that OEH considers is likely to have an interest in your development. I note this is not necessarily an exhaustive list of all interested Aboriginal parties. Receipt of this list does not remove the requirement for a proponent/consultant to advertise the proposal in the local print media and contact other bodies and community groups seeking interested Aboriginal parties, in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (CRs).*

We would also like to take this opportunity to remind the proponent or consultant of a number of key issues we have been encountering of late, and we'd ask your organisation to take note and ensure compliance please. These issues include:

- Please ensure the project documents the full consultation process in the Aboriginal cultural heritage assessment report or Aboriginal Heritage Impact Permit application and to include copies of all correspondence sent or received from all relevant stakeholders (including Aboriginal stakeholders and the agencies listed in section 4.1.2). *Omission of these records in the final report may cause delays in approval or require parts of the consultation process to be repeated if the evidence provided to OEH does not demonstrate that the consultation process has been fair, equitable and transparent.*

- *Unless OEH is provided with evidence that reasonable attempts have been made to contact the relevant parties associated with the CRs, then OEH will deem that the consultation process has not been complied with.*

Locked Bag 914, Coffs Harbour NSW 2450
Federation House, Level 7, 24 Moonee Street
Coffs Harbour NSW
Tel: (02) 6651 5946 Fax: (02) 6651 6187
ABN 30 841 387 271
www.environment.nsw.gov.au

- OEH considers *evidence of reasonable efforts* to contact relevant parties would *include, but not be limited to, multiple forms of communication*; faxes (with confirmation slips demonstrating successful transmission), an e-mail log, registered post details, copies of letters and a phone call log.

- *Please note in Appendix A of the 2010 CRs contains a map illustrating which regions of OEH that need to be contacted according to which local government area your project falls within.* Full details of the consultation requirements and the relevant Fact Sheets can be located on our website at: http://www.environment.nsw.gov.au/licences/consultation.htm.

- *If you encounter any changes to the contact details of interested Aboriginal parties, or become aware of additional parties, we encourage you to forward this information to OEH so we can update our records.*

- *Consultation must be fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts or all of your project, OEH expects that evidence will be provided to demonstrate the efforts made to find common ground between the two perspectives.*

If you have any further questions regarding this matter, please contact me on (02) 66598221.

Yours sincerely

ROSALIE NEVE
Aboriginal Heritage Planning Officer
Office of Environment and Heritage
Department of Premier and Cabinet

Enclosure:

Maaiangal Aboriginal Heritage,
Carol Ridgeway-Bissett
5 Ondine Close
NELSONS BAY NSW 2315
1. (02) 4984 3113

Mur-Roo-Ma Inc.,
Anthony Anderson
7 Vardon Road
FERN BAY NSW 2295
(02) 4928 1910
2. murroomainc1@gmail.com

Nur-Run-Gee Pty Ltd,
Lea Anderson
22 Popplewell Road
FERN BAY NSW 2295
3. goodman@kooee.com.au

Worimi Aboriginal Community Co-operative,
Cheryl Hendry
17a Wahgunyah Road
NELSON BAY NSW 2315
4. (02) 4981 4559

Worimi Local Aboriginal Land Council,
Andrew Smith
PO Box 56
TANILBA BAY NSW 2319
(02) 4965 1500
(02) 4965 1799
5. worimi@bigpond.com

Garrigal Aboriginal Community Inc.,
Del Arnold
PO Box 182
GLOUCESTER NSW 2422
(02) 6658 8139
6. (02) 4994 7004

Worimi Knowledge Holders AC
PO Box 421
7. TAREE NSW 2430

Do-Wa-Kee
Mick Leon
PO Box 22
TAREE NSW 2430
(02) 65527856
(02) 65527543
0449213802
8. m.leon@tide.org.au

National Native Title Tribunal

New South Wales and Australian Capital Territory Registry
Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2000
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

6 April 2011

Penny McCardle
Principal Archaeologist
McCardle Cultural Heritage Pty Ltd
PO Box 166
ADAMSTOWN NSW 2289

Our Reference: 4200/11KW
Your Reference: Indigenous Archaeological Assessment at Balickera

Dear Ms McCardle

Native Title Search Results of Port Stephens Local Government Area

Thank you for your letter of 4 April 2011.

My search on 6 April 2011 found:

Register Type	NNTT Reference Numbers
National Native Title Register	Nil.
Register of Native Title Claims	Nil.
Unregistered Claimant applications	Nil.
Register of Indigenous Land Use Agreements	Nil.

I have included a NNTT Registers fact sheet to help you understand the search result.

Please note that there may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed in the Federal Court may not appear on the Tribunal's databases.

If you need more information please call me on 1800 640 501.

Yours sincerely

Kimberley Wilson
Search Co-ordinator

Telephone (02) 9235 6328
Facsimile (02) 9233 5613
Email Kimberley.wilson@nntt.gov.au

Encl

Searching the NNTT Registers in New South Wales

Search service
On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?
A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?
If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found
The information you are seeking is held in three registers and on an applications database.

National Native Title Register
The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims
The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements
The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries
An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:
http://www.nntt.gov.au/registers/search.html
This form says how much searches cost.
Mail, fax or email your request to the Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: SydneySearch@nntt.gov.au
Fax: (02) 9233 5613
Address: GPO Box 9973, Sydney NSW 2001
Phone: (02) 9235 6300

Penny McCardle

From: Kyle Finlay [kyle@worimi.org.au]
Sent: Friday, 8 April 2011 1:50 PM
To: Penny McCardle
Subject: RE: letter

Hi Penny,

Please find the details of interested parties below.

- Nur – Run – Gee
  - Lennie or Leanne Anderson
  - 22 Popplewell Road, Fern Bay 2295
  - (02) 4920 1578
  - Mob: 0408 618 874 or 0431 334 365
  - Email: goodman@kooee.com.au

- Mur – roo – ma
  - Anthony Anderson
  - 0402 827 482
  - Murroomainc1@gmail.com

Regards,

Kyle Finlay
Project Coordinator

Worimi Local Aboriginal Land Council
2163 Nelson Bay Rd Williamtown NSW 2318
PO Box 56 Tanilba Bay NSW 2319
Ph: 02 4965 1500 Fx: 02 4965 1799

From: Penny McCardle [mailto:mcheritage@iprimus.com.au]
Sent: Monday, 4 April 2011 4:11 PM
To: Kyle Finlay
Subject: letter

Hi Kyle,

Please see the attached letter.

Thanks
Penny

Penny McCardle
Principal Archaeologist & Forensic Anthropologist

OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

11-13 Mansfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
P. 02 9562 6327 F. 02 9562 6350

Ms Penny McCardle
Principal Archaeologist
McCardle Cultural Heritage Pty Ltd
PO Box 166
Adamstown NSW 2289

12th April 2011

Dear Penny

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 4th April 2011 regarding an Aboriginal Stakeholders at Balickera Port Stephens, NSW.

I have searched the Register of Aboriginal Owners and the subject land is close to the Worimi Conservation Lands (WCL) which has Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983*.

I suggest you contact the Board of Management for the WCL through:

Mr Steve Larkin
Chairperson
Worimi Conservation Lands Board of Management
Locked Mail Bag 99
Nelson Bay NSW 2315

I trust you are also in contact with the Worimi Local Aboriginal Land Council. The land council may able be to assist you with information and contact details for other interested groups.

Yours sincerely

Tabatha Dantoine
Administration Officer
Office of the Registrar, *Aboriginal Land Rights Act* (1983)

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Carol Ridgeway-Bissant
Maaiangal Aboriginal Heritage
5 Ondine Close
Nelson Bay NSW 2315

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Carol,

RE: PROPOSED PROJECT AT BALICKERA

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Orogen Pty Ltd to prepare an Indigenous Archaeological Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 at Balickera. The proposed project is a hard rock quarry and the proponent seeks to extract a minimum of 600,000m3 of quarry resources from the site.

The purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director General of OEH in his or her consideration and determination of the application should an AHIP be required.

This is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation.

As per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), you are advised of the following:

- You are also advised that, unless otherwise specified, if you register your interest your details will be provided to OEH and the LALC.
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Should you wish to register your interest in this project, please register in writing no later than 2 May 2011 to:

Penny McCardle
McCardle Cultural Heritage
PO Box 166
Adamstown NSW 2289

If you register your interest in this project, please also nominate your preferred option to receive the initial information. You may wish to have a non paid meeting and receive an information pack, or receive information packet through the mail, fax or e-mail.

MCH have provided a form attached for your convienience, however if you wish to provide your own registration letter please do so.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Anthony,

RE: PROPOSED PROJECT AT BALICKERA

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Orogen Pty Ltd to prepare an Indigenous Archaeological Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 at Balickera. The proposed project is a hard rock quarry and the proponent seeks to extract a minimum of 600,000m3 of quarry resources from the site.

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Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Lea,

RE: PROPOSED PROJECT AT BALICKERA

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Orogen Pty Ltd to prepare an Indigenous Archaeological Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 at Balickera. The proposed project is a hard rock quarry and the proponent seeks to extract a minimum of 600,000m3 of quarry resources from the site.

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PO Box 166
Adamstown NSW 2289

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Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Cheryl,

RE: PROPOSED PROJECT AT BALICKERA

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McCardle Cultural Heritage
PO Box 166
Adamstown NSW 2289

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Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Kyle Finlay
Worimi LALC
PO Box 56
Tanillba Bay NSW 2319

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Kyle,

RE: PROPOSED PROJECT AT BALICKERA

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for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

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PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Del,

RE: PROPOSED PROJECT AT BALICKERA

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Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist
Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

Sir/Madam
Worimi Knowledge Holders AC
PO Box 421
Taree NSW 2430

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Sir/Madam,

RE: PROPOSED PROJECT AT BALICKERA

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18 April 2011

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ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Mick,

RE: PROPOSED PROJECT AT BALICKERA

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Physical Anthropologist

18 April 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
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Email: mcheritage@iprimus.com.au

Mr Steve Larkin
Chairperson
Worimi Conservation Lands Boards Management
Locked Mail Bag 99
Nelson Bay NSW 2315

MCH Reference: Indigenous Archaeological Assessment at Balikera

Dear Steve,

RE: PROPOSED PROJECT AT BALICKERA

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Penny McCardle
Principal Archaeologist
Physical Anthropologist

Classifieds

p. 131 696 f. 4979 5088 e. classifieds@newcastle.fairfax.com.au

Place and see your classified at www.portstephensexaminer.com.au

INDEX

DEADLINES

Classified Linage Ads..... 12 Noon Tuesday
Classified Display Ads..... 10.00am Tuesday

Call Centre Business Hours

Monday to Wednesday..... 8.00am – 6.00pm
Thursday..... 8.00am – 7.00pm
Friday..... 8.00am – 6.00pm
Saturday.....Closed
Sunday..... 2.30pm – 6.00pm

Credit Cards

Visa, MasterCard, Amex, Diners
Private party advertisers may be required to prepay by credit card or cash

FUNERALS

COLLIS
KEVIN LEONARD
Aged 62 Years
Of Tanilba Bay
Formerly of Metford

Dearly loved husband of SUE, father and father-in-law of MICHELE and JASON PRICE, Poppy of MADELINE, LAUREN and JACK, and loved member of the COLLIS and HEANEY FAMILIES.

Family and Friends are invited to attend the Service to be held in the North Chapel, Newcastle Memorial Park, Anderson Drive, Beresfield on **WEDNESDAY** 27th April, 2011 at 10am.

FRY BROS TONY & LINDSAY 120 Years
4933 6155

DELAPP
JULIE KATHLEEN
16th April 2011
Late of Anna Bay

Dearly loved wife of JOHN. Loving mother and mother-in-law of NICOLE, NATALIE and CRAIG. Loving nanny of KALANI. Loved sister, sister-in-law and aunt.

Aged 63 Years

Funeral Mass for the life of **JULIE KATHLEEN DELAPP** was held on Wednesday 20th April, 2011 at St. Michael's Catholic Church, Nelson Bay.

In the care of

WHITE LADY FUNERALS
Nelson Bay 49843 900
Australian Owned

FUNERALS

HORSBURGH
AUDREY
11th April 2011
Of Fingal Bay
Aged 88 Years

Much loved wife of BOB (dec'd). Loved mother and Nanna of her children, grandchildren and great grandchildren.

AUDREY's Family wish to advise that her Funeral Service was held on Friday 15/4/2011.

France FAMILY FUNERALS
Nelson Bay 4981 4488

Australian Family Owned & Operated
FDA of NSW

MINCHIN
NEVILLE MAURICE
16th April 2011
Of Soldiers Point
Formerly of Mayfield
Aged 86 Years

NEVILLE's Family wish to advise that his Funeral Service was held on Wednesday 20/4/2011.

France FAMILY FUNERALS
Nelson Bay 4981 4488

Australian Family Owned & Operated
FDA of NSW

FUNERALS

POZNAKS
JIMMY
"Wombat" "Mad Dog"
18th April 2011
Of Anna Bay
Aged 65 Years

Much loved family member of the Anna Bay Community. Sadly missed by all.

Family and Friends are invited to attend **JIMMY's** Funeral Service to be held in the France Family Funeral Chapel, 45 Stockton St, Nelson Bay on **WEDNESDAY** 27/4/11 commencing at 10.30am. A private cremation will follow.

France FAMILY FUNERALS
Nelson Bay 4981 4488

Australian Family Owned & Operated
FDA of NSW

SNEDDON
LORELEI VALMAI

Family and Friends are invited to attend a Memorial Service to celebrate **LORELEI's** life at the Medowie Baptist Community Church this **THURSDAY** 21 April, 2011 at 10.30am. **LORELEI** having passed away in New Zealand on 10 April, 2011.

FUNERAL SERVICES

Edstein
Creative Stone
Monumental Masons
Restoration/ Cleaning
Headstones
Monuments
Servicing your local area
1800 621 599

DEATHS

EVANS
DOREEN (Dawsie)
Passed away peacefully
4th April 2011
Late of Buderim Views Nursing Home
Formerly of Main Beach QLD and Nelson Bay
Aged 90 Years

Much loved mother, mother-in-law, nanna and great nanna of the Evans and Dowker Families. Much loved sister to Athol Sproule and Family.

The Family wish to thank Relatives and Friends for your support and attendance at **DAWSIE's** Funeral.

Love Pam, Jules, Phil and Families

MEMORIAL TRIBUTES

THE UNIVERSITY FOUNDATION | THE UNIVERSITY OF NEWCASTLE AUSTRALIA

LEAVE a legacy. Give a gift in your Will to the Uni of Newcastle to fund student scholarships and research.
Call UON Foundation 4921 7453
www.newcastle.edu.au/foundation

RETURN THANKS

SPENCE, Tom.—
13.9.31 - 7.4.11
Tom's family would like to thank the team at Palliative Care, Port Stephens Medical Centre, Eddie Bergsma and the Fingal Bay Surf Club, Rod and Gary from the Country Club and also all of Tom's friends and relatives for their support in our sad loss.

IN MEMORIAM

COOKE, Steven Mark.—
'Ernie'
7.10.61 - 23.4.03
Much loved son, brother and uncle. Never ever forgotten. Love Mum, Tanya, Darren, Glen, Kelly and families.

BIRTHS

BORG.—
Proud parents, Michael and Kohbi, wish to announce the safe arrival of their daughter

DELAINEY COCO
7.4.2011 7lb 14oz

BIRTHDAY GREETINGS

AVA IMBER
24/04/08
Happy 3rd Birthday
Love Mama, Grandpappy, Mum, Dad, Bailey and Brooklyn.

ENGAGEMENTS

I ♥ U
YOUR CELEBRATION WILL STAND OUT WITH OUR COLOUR CLASSIFIEDS
AVAILABLE NOW

NORM LILLEY
Marriage Celebrant
Phone 4987 5652

MARRIAGES

PETER COWLING Celebrant
4984 4607 0417 020 798
HELEN SCOTT Celebrant
4982 1978 0414 424 167

LEGAL NOTICES

IN THE SUPREME COURT OF NEW SOUTH WALES
SYDNEY REGISTRY
EQUITY DIVISION
PROBATE LIST

AFTER 14 days from publication of this notice an application for probate of the Will dated 21st September, 2006 of **BARRY JOHN AGNEW** late of Corlette, Retired, will be made by David Murray Hoadley and Michael Andrew Hoadley. Creditors are required to send particulars of their claims upon his estate to: Steven T. Parrott, Solicitor 1/22 Donald Street Nelson Bay 2315 NSW DX 7363 Nelson Bay Tel: (02) 4984 2442 Ref: STP:JMS8300

IN THE SUPREME COURT OF NEW SOUTH WALES
SYDNEY REGISTRY
EQUITY DIVISION
PROBATE LIST

AFTER 14 days from publication of this notice an application for probate of the Will dated 16th September, 2010 of **DOUGLAS ROYCE BROWN** late of Harbourside Haven Hostel, Shoal Bay Road, Shoal Bay, Retired, will be made by KENNETH JOHN BATES, the Executor named in the said Will. Creditors are required to send particulars of their claims upon his estate to Graham Barrett & Associates 5/33-35 Stockton Street, Nelson Bay, 2315. DX 7369 Nelson Bay. Ph 4981 1177

IN THE SUPREME COURT OF NEW SOUTH WALES

AFTER fourteen days (14) days from publication of this notice and Application for Probate of the Will dated 4th May, 2005 of **GORANKA UREMOVIC** late of Medowie in the State of New South Wales will be made by Marion Elizabeta Armalia Melrose (in the Will called Mirion Elizabeta Armalia Melrose) the second substitute Executor named in the Will, the instituted Executor Miroslav Uremovic having died on 12th September, 2008 and the first substitue Executor, Ljubica Letilovic, having renounced probate.

Creditors are required to send particulars of their claims upon her estate to LEA SMITH SOLICITOR 38C WILLIAM STREET RAYMOND TERRACE NSW 2324 DX 21402 RAYMOND TERRACE

LEGAL NOTICES

IN THE SUPREME COURT OF NEW SOUTH WALES
SYDNEY REGISTRY
EQUITY DIVISION
PROBATE LIST

AFTER 14 days from publication of this notice an application for grant of Probate of the Will dated 25 January 2011 of ADRIAN MARK FEATHERSTON late of Soldiers Point in the State of New South Wales, deceased, will be made by GORDANA DIANNA FEATHERSTON the Executrice named in the will.

Creditors are required to send particulars of their claims upon her Estate to DAVID A VITNELL Solicitor, 1 Teramby Road Nelson Bay 2315 or PO Box 339 Nelson Bay 2315 (DX 7372 Nelson Bay)

IN THE SUPREME COURT OF NEW SOUTH WALES
SYDNEY REGISTRY
EQUITY DIVISION
PROBATE LIST

AFTER 14 days from publication of this notice an application for probate of the Will dated 26th September, 2001 of **VINCENT JAMES KANE** late of Harbouride Haven Hostel, Shoal Bay Road, Shoal Bay, Retired will be made by KEVIN PAUL KANE and KATHLEEN JUDE KANE the Executors named in the said Will. Creditors are required to send particulars of their claims upon his estate to Graham Barrett & Associates, 5/33-35 Stockton Street, Nelson Bay, 2315, DX 7369 Nelson Bay, Ph: 4981 1177

PUBLIC ANNOUNCEMENTS

CRYSTAL WORKSHOP
14th May, 1pm-5pm.
Call Sue 0413 701 408.
sue@divineharmonycentre.com.au

Cultural Heritage Assessment

Registration of interest for Aboriginal people who hold cultural knowledge

Proponent:
Eagleton Quarry

Project:
Proposed Hard Rock Quarry

Location:
Killaloe Lane, Eagleton

The purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director General of DECCW in his or her consideration and determination of the application should an AHIP be required.

This is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation.

As per the DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), interested parties are advised of the following:

- unless otherwise specified, if you register your interest your details will be provided to DECCW and the LALC.
- the LALC's who hold cultural knowledge relevant to the proposed project area that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register, must do so as an Aboriginal orginisation not as an individual.
- Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge relevant to the proposed project area (such as a LALC) and that is relevant to determining the significance of Aboriginal objects and/or places within the proposed project area who wish to register, must nominate a contact person and provide written confirmation and contact details of this person or persons.

Should you wish to register your interest in this project, please register in writing no later than 6th May 2011 to:
Penny McCardle
Principal Archeologist
McCardle Cultural Heritage
PO Box 166
Adamstown NSW 2289

If you register your interest in this project, please also nominate your preferred option to receive the initial information. You may wish to attend a non paid meeting and receive an information pack, or receive an information packet through the mail, fax or e-mail.

PUBLIC ANNOUNCEMENTS

NEWCASTLE NEWSPAPERS PTY LIMITED (The Herald, Lakes Mail, Port Stephens Examiner)
GENERAL TERMS AND CONDITIONS FOR COMPETITIONS/ PROMOTIONS

1. Information on how to enter and prizes form part of conditions of entry. Some conditions do apply to particular prizes as specified. Enter as many times as you wish, but each written entry must be in a separate envelope. Original entry forms only no photocopies accepted.
2. When entering competitions via sms, you may enter as many times as you wish.
3. Entry is free and open to all residents. Employees and immediate families of the promoter and its agencies associated with any promotion of Newcastle Newspapers Pty Ltd are ineligible to enter.
4. The promoter is Newcastle Newspapers Pty Limited publisher of The Herald, The Star, Port Stephens Examiner, Lakes Mail, 28 Bolton Street, Newcastle 2300, ABN 46 000 003 967.
5. Winners will be drawn at Newcastle Newspapers Pty Limited, 28 Bolton Street, Newcastle 2300, or as specified. Winners will be notified by telephone or as specified, and names of winners will be published in the next available issues or as advised by either The Herald, The Star, Port Stephens Examiner, Lakes Mail. The judges decision is final and binding on each person who enters. No correspondence will be entered into. No responsibility is taken for late, lost or misdirected mail/sms messages. Prizes are not transferable or redeemable for cash.
6. The promoter shall not be liable for any loss or damage whatsoever suffered (including but not limited to direct or consequential loss) or personal injury sustained or suffered during the course of prize winning trips or in connection with any other prizes.
7. In travel contests, winner must make their own way to and from the carriers nearest departure point. Promoters accept no responsibility for health, luggage, meals, travellers cheques, insurances, travel, accommodation, passports and visa, vaccinations, departure tax, personal expenses and transfers other than specified.
8. Travel prizes may be subject to certain restrictions eg: can not be taken during Australian School Holidays, cancellations fees applies etc. Accommodations and airfares are subject to availability and must be taken before a date specified per promotion. Meals and Transfers not included unless specified.
9. Entries remain the property of Newcastle Newspapers and cannot be returned. The promoter reserves the right to photograph and publish winners.
10. The personal information submitted on entry forms is collected by Newcastle Newspapers and will be used to enter you in competitions and for the distribution of prizes. (It may also be used to send you further information about Newcastle Newspapers products and services). If you are a prize winner, your personal information will be given to the supplier of the relevant prize. If you do not wish your information to be disclosed to our partners or used to inform you of products and services, you will have the option to advise us accordingly. LTPM/09/00687.

Mur-roo-ma Inc

9 Vardon Road Fern Bay
2295 N.S.W Australia

ABN : 978 077 194 84

Phone / Fax : 02 49281910
Mobile : 0402 82 74 82
E-mail : murroomainc1@gmail.com

To MCH

Penny McCardle,

26/4/2011

Re Proposed project at Balickera for Orogen Pty Ltd

Thank you for the opportunity to have an input into this project.

Mur-roo-ma Inc would like to register their interest in the above project for Orogen Pty Ltd Balickera.

We are local Worimi traditional owners with extensive Cultural Knowledge and 20 years experience in sites investigations of our local area

and would like to formally offer our services through our knowledge

holders Mr Anthony Anderson and Mrs Rebecca Young and to share our

knowledge to create the best outcome for all concerned. Mur-roo-ma Inc has relevant insurances which can be forward if requested .

Please don't hesitate to contact me if you need any further information.

Kind regards

Anthony Anderson

Worimi Traditional Custodian

CEO of Mur-roo-ma Inc

Hunter-Central Rivers
CMA CATCHMENT MANAGEMENT AUTHORITY

NSW GOVERNMENT

Ms Penny McCardle
Principal Archaeologist
McCardle Cultural Heritage Pty Ltd
PO Box 166
ADAMSTOWN NSW 2289

Your Ref: Balickera
Our Ref: GOS 0500

Dear Ms McCardle

Re: Indigenous Archaeological Assessment at Balickera

Thank you for your letter dated 4th April 2011 requesting assistance in identifying Aboriginal stakeholder groups or persons who may have an interest in your project at Balickera in the Port Stephens LGA.

The Hunter-Central Rivers Catchment Management Authority (CMA) engages with many Aboriginal communities in our region on Natural Resource Management (NRM) projects and initiatives. The *Hunter-Central Rivers Catchment Action Plan 2006-2015* (CAP) contains a number of guiding principles to maintain and improve the culture and heritage values of culturally significant landscapes. The following extracts from the CAP provide you with general guidance on Aboriginal culture and heritage:

- Our association with Aboriginal heritage should be maintained and practiced so that all people in the Hunter-Central Rivers region can respect and understand Aboriginal cultural heritage values. Knowledge of the past, and connecting values with Aboriginal people in the region, can also teach us about what we can provide for our future. It is therefore essential to maintain and improve Aboriginal culturally significant landscapes so that they are maintained for use by present and future generations.
- Aboriginal people should be formally consulted during the planning stages of any activity or development to identify if the proposal will impact negatively on Aboriginal culture and heritage. Some places have gender specific meanings and it may be more appropriate, for example, to consult Aboriginal women rather than men in some circumstances. Consideration should also be given to family hierarchies or responsibilities that prevent some individuals from speaking about certain Aboriginal culture and heritage.
- Any Aboriginal culture and heritage that is identified in an area (by Aboriginal or non-Aboriginal recognition techniques) should be managed through a process of consultation and close collaboration with the relevant traditional owners (where this is not available, the use of respective 'caretakers/guardians' should be adopted). This process should have a formal agreement or plan on the manner, timing, and amount of consultation and involvement of all parties involved in the process.
- The precautionary principle should be used for protecting culture and heritage. Where there is uncertainty about the value of culture and heritage, the management of that place should be limited by any negative impact on the locality.

(Source: *Hunter-Central Rivers Catchment Action Plan 2006-2015)*

Gosford Office – PO Box 1267 Gosford NSW 2250 -
Tel: 02 4324 3844 - Fax: 02 4323 3960 - ABN: 50 602 455 909

The H-CR CMA acknowledges that CMAs have been listed in *Section 4.1.2 (g)* of the *Aboriginal cultural heritage consultation requirements for proponents 2010,* under *Part 6, National Parks and Wildlife Act 1974,* as a source of information to obtain the "names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal *objects* and/or *places*".

However, the CMA is not the primary source for contacting, or managing contact lists of, Aboriginal communities or persons that may hold information to comment on land-use planning issues. In addition, the CMA does not consider cultural heritage issues that relate to land-use planning in general – the CMA only considers culture and heritage issues in the context of natural resource management.

It is recommended that you contact the Department of Environment Climate Change and Water (DECCW) for contact lists of persons and organisations that may want to comment on your proposal.

If you require any further information please do not hesitate to contact Deborah Swan, the CMA's Aboriginal Community Support Officer – on 4337 1204.

Yours sincerely

David Green
Catchment Coordinator for
Fiona Marshall
General Manager

20 April 11

5 May 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Information pack

Dear Anthony,

RE: BALICKERA INFORMATION PACK

I would like to thankyou for registering your interest in this project. MCH sent a letter extending an invitation to register your interest and asking if you would prefer to have a meeting to discuss the project or have an information pack sent to you (as per the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010). MCH did not receive your preferred option and as such are sending you the information pack.

As per the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), please find enclosed an information pack that details the project, the roles and responsibilities of all parties, details of the proposed methodologies and maps showing the location and extent of the study area.

In addition to this, the purpose of the information pack is also to ensure all parties have an understanding of the project, critical time lines, that cultural knowledge is obtained from the appropriate individuals, any issues or concerns can be addressed, the methods of survey are agreed upon and the new guidelines are met.

In line with the OEH requirements, we ask that you provide the required information **no later than 26 May 2011.** However, a quicker response would be appreciated. MCH have also included a selection of pro formes that ensure all the required information is obtained to meet the OEH requirements. You may wish to utilise the forms attached for your convenience or use of your own forms are encouraged.

As stated in the OEH requirements, advertisement for this project and letter if invitation to register for this project, registration for this project is for Aboriginal people who hold cultural knowledge (passed down in the traditional manner) relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation. To this end, as stated in the OEH requirements you must nominate the contact person(s) who hold the cultural knowledge and provide written confirmation and contact details of this person or persons whom you represent. If it is you that holds traditional knowledge, please provide the same details.

Please note that failure to provide the required information by the date provided will result in a missed opportunity for you or knowledge holders to contribute to your cultural heritage and the project will proceed.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist

5 May 2011

McCardle Cultural Heritage Pty Ltd

PO Box 166
ADAMSTOWN NSW 2289

Mobile: 0412 702 396
Fax: 4952 5501
Email: mcheritage@iprimus.com.au

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

MCH Reference: Information pack

Dear Lea,

RE: BALICKERA INFORMATION PACK

I would like to thankyou for registering your interest in this project. MCH sent a letter extending an invitation to register your interest and asking if you would prefer to have a meeting to discuss the project or have an information pack sent to you (as per the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010). MCH did not receive your preferred option and as such are sending you the information pack.

As per the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), please find enclosed an information pack that details the project, the roles and responsibilities of all parties, details of the proposed methodologies and maps showing the location and extent of the study area.

In addition to this, the purpose of the information pack is also to ensure all parties have an understanding of the project, critical time lines, that cultural knowledge is obtained from the appropriate individuals, any issues or concerns can be addressed, the methods of survey are agreed upon and the new guidelines are met.

In line with the OEH requirements, we ask that you provide the required information **no later than 26 May 2011. .** However, a quicker response would be appreciated. MCH have also included a selection of pro formes that ensure all the required information is obtained to meet the OEH requirements. You may wish to utilise the forms attached for your convenience or use of your own forms are encouraged.

As stated in the OEH requirements, advertisement for this project and letter if invitation to register for this project, registration for this project is for Aboriginal people who hold cultural knowledge (passed down in the traditional manner) relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation. To this end, as stated in the OEH requirements you must nominate the contact person(s) who hold the cultural knowledge and provide written confirmation and contact details of this person or persons whom you represent. If it is you that holds traditional knowledge, please provide the same details.

Please note that failure to provide the required information by the date provided will result in a missed opportunity for you or knowledge holders to contribute to your cultural heritage and the project will proceed.

Yours sincerely,
for McCardle Cultural Heritage Pty Ltd

Penny McCardle
Principal Archaeologist

As per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), MCH would like to provide the following information in relation to the Archaeological investigation at Balickera.

1 OVERVIEW

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Orogen Pty Ltd to prepare an Indigenous Archaeological Assessment for the proposed hard rock quarry at Lot 2 DP 1108702 at Balickera.

The assessment will determine the potential impacts upon the indigenous cultural heritage within the development area. It is intended that any areas of indigenous cultural heritage value will be identified and appropriate management recommendations will be established through consultation with the registered Aboriginal parties.

1.1 STUDY AREA

The study area is defined by the proponent and includes Lot 2 DP 1108702 which is located off Italia Rd at Balickera. The location and extent of the study area is illustrated in *Figures 1.1* to *1.3*.

1.2 OUTLINE OF THE PROJECT

The proposed project is a hard rock quarry and the proponent seeks to extract a minimum of 600,000m^3 of quarry resources from the site.

1.2.1 Impacts

Extraction of the resource from the site will require the removal of approximately 28 ha of vegetation. Initial investigations indicate that there may be sufficient surplus land available within the site to provide for the offsetting of this vegetation at a ratio at or close to 2:1. Following this, extraction of the resource will follow.

Following completion of the project, the site could potentially be used for waste management (clean fill/putrescible waste/waste transfer station) or returned to its existing use of landscape supplies business. It may also have potential for use in industrial agricultural operations (e.g. intensive poultry farming) or other uses permissible in the zone.

1.2.2 Critical archaeological timelines

The following Table indicates the timelines critical for the archaeological assessment. However, please note that consultation may be increased or decreased depending on response times and knowledge sharing.

MCH:

Source: 1:100 000 Topo Series: Newcastle

Figure 1.1 Regional location of the study area

MCH:

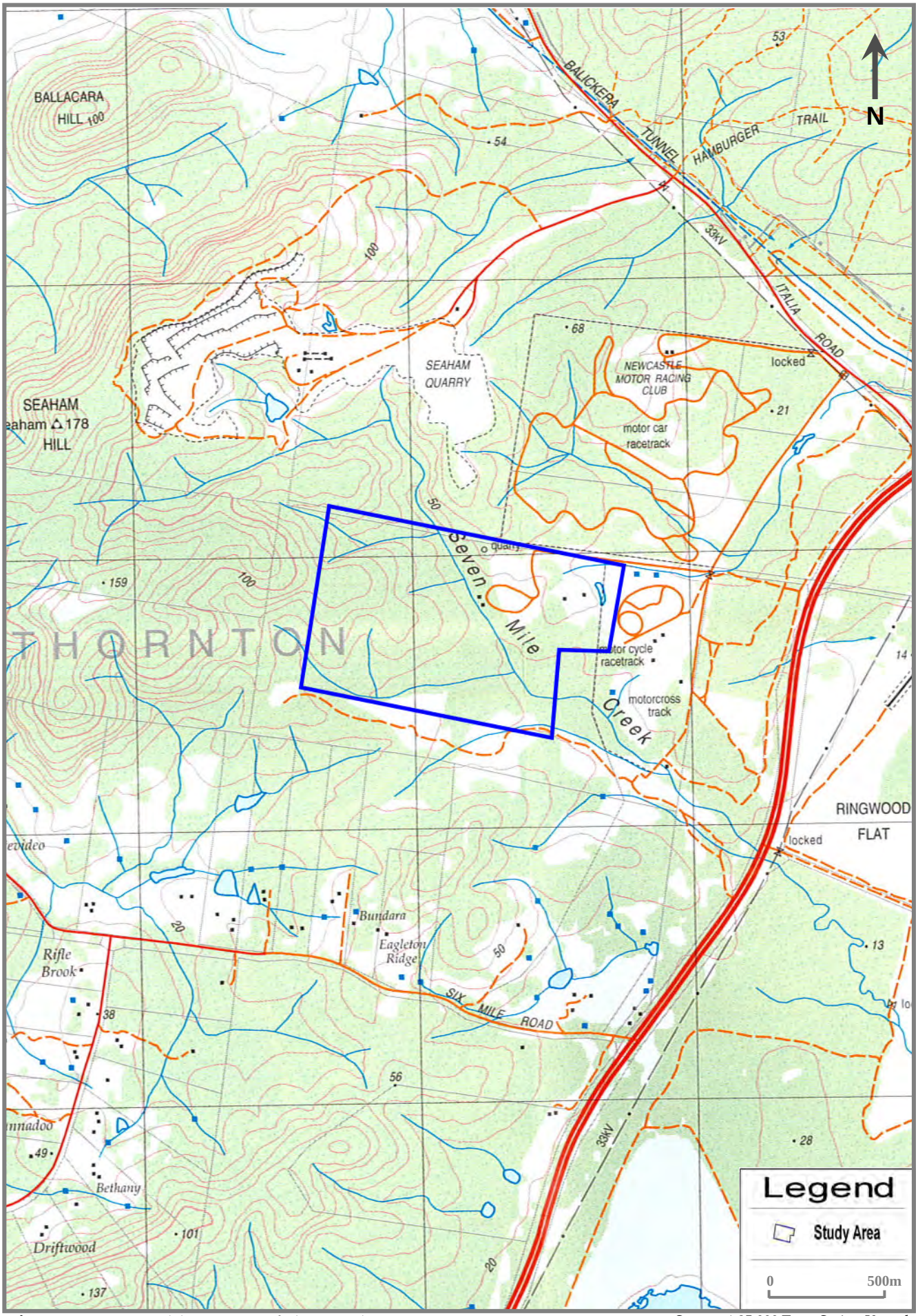

Figure 1.2 Local location of the study area

Source: 1:25 000 Topo Series: Karuah

Table 1. Project schedule

Stages	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Stage 1: consultation										
Stage 2:survey										
Stage 3: reporting										
Stage 4: finalisation										

1.3 METHODS OF INVESTIGATION

There are two methods of investigation including the gathering of cultural significance knowledge and archaeological assessment. These are briefly outlined below.

Gathering of information of cultural significance

MCH and the proponent understand that unlike the written word, Aboriginal cultural knowledge is not static, but responds to change through absorbing new information and adapting to its implications. Aboriginal cultural knowledge is handed down through oral tradition (song, story, art, language and dance) from generation to generation, and preserves the relationship to the land (DECCW 2010).

Specific details and parts of cultural knowledge are usually held and maintained by individuals or within particular family groups. Although the broader community may be aware of the general features of that knowledge, it is not a common practice within Aboriginal society for detailed cultural knowledge to be known in the broader community or within Aboriginal community organisations. However, it at times it may be these organisations that defer to particular individuals or family groups as being the knowledge-holders of particular sets of cultural knowledge about places or the environment (DECCW 2010).

In some cases the information provided may be sensitive and MCH and the proponent will not share that information with all registered Aboriginal parties or others without the express permission of the individual.

MCH and the proponent would like to develop and implement appropriate protocols for sourcing and holding cultural information. To this end, MCH and the proponent would like to extend an invitation to provide any cultural knowledge you have and any restrictions you would like to place on your information, as well as your preferred method of providing that information.

Archaeological assessment:

This entails an archaeological assessment of the proposed project area. It includes the gathering of both environmental and archaeological information to gain an understanding of the environment, disturbances and provide a predictive model for the proposed project area.

Following the completion of the survey, a report that includes detailed environmental and archaeological background, results, discussion, the cultural significance as determined by the registered Aboriginal parties and mitigation measures will be provide to all registered parties for their review. This will also include opportunities for the registered Aboriginal parties to provide feedback on any management or mitigation recommendations.

All registered parties will also be required to provide their own report/letter within a specified time and a copy of the final report will be provided to all parties.

1.3.1 Survey methodology

The entire study area will be surveyed on foot in transects of approximately 5-10 metres apart. This will ensure the entire study area has been covered and any evidence of past occupation, Potential Archaeological Deposits (PADs) and disturbances will be identified.

1.4 ROLES, RESPONSIBILITIES AND FUNCTIONS OF PARTIES

The roles, responsibilities and functions of all parties are outlined below and is taken from DECCW (2010).

Office of Environment and Heritage (OEH), (formerly DECCW):

The Director General of OEH is the decision-maker who decides to grant or refuse an Aboriginal Heritage Impact Permit (AHIP) application. If an AHIP is issued, conditions are usually attached and OEH is responsible for ensuring the AHIP holder complies with those conditions. When considering an application under Part 6 of the NPW Act, the Director General will review the information provided by proponents in line with its internal policies and procedures to assess potential or actual harm to Aboriginal objects or places.

The Environment Protection and Regulation Group (EPRG) of OEH is responsible for administering the regulatory functions under Part 6 of the NPW Act.

OEH expects that proponents and Aboriginal people should:

- be aware that Part 6 of the NPW Act establishes the Director General or delegate of OEH as the decision-maker
- recognise that the Director General's (or delegates) decisions may not be consistent with the views of the Aboriginal community and/or the proponent. However, OEH will take into account all relevant information it receives as part of its decision-making process.

Proponent:

All proponents operate within a commercial environment which includes:

- strict financial and management issues, priorities and deadlines

- the need to gain community support in order to secure any necessary approval/consent/licence/permit to operate
- the need for clearer processes and certainty of outcomes
- the need for suitable access to land for the purpose of their development project
- the need to work efficiently within the project's time, quality and cost planning and management parameters
- the need for culturally appropriate assessment findings relevant to their project.

Under these requirements, proponents should undertake the following:

- bring the registered Aboriginal parties or their nominated representatives together and be responsible for ensuring appropriate administration and management of the consultation process
- consider the cultural perspectives, views, knowledge and advice of the registered Aboriginal parties involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal object(s) and/or place(s)
- provide evidence to OEH of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the registered Aboriginal parties
- accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report

<u>Registered Aboriginal parties:</u>

The interests and obligations of Aboriginal people relate to the protection of Aboriginal cultural heritage. It is only Aboriginal people who can determine who is accepted by their community as being authorised to speak for Country and its associated cultural heritage. Where there is a dispute about who speaks for Country, it is appropriate for Aboriginal people, not DECCW or the proponent, to resolve this dispute in a timely manner to enable effective consultation to proceed.

Aboriginal people who can provide information about cultural significance are, based on Aboriginal lore and customs, the traditional owners or custodians of the land that is the subject of the proposed project area. Traditional owners or custodians with appropriate cultural heritage knowledge necessary to make informed decisions who wish to register as an Aboriginal party are those people who:

- continue to maintain a deep respect for their ancestral belief system, traditional lore and customs
- recognise their responsibilities of their community, knowledge and obligations to protect and conserve their culture and heritage and to care for their traditional lands or country

- have the trust of their community, knowledge and understanding of their culture and permission to speak about it

The registered Aboriginal parties should undertake the following;

- ensure the appropriate cultural knowledge holder is providing the appropriate information
- uphold and respect the traditional rights, obligations and responsibilities of Aboriginal people within their own boundaries and not to infringe in other areas or Aboriginal people outside their own boundaries
- consider and provide the proponent the cultural perspectives, views, knowledge and advice during the consultation process, assessing cultural significance and developing any heritage management outcomes for Aboriginal object(s) and/or place(s)
- need to work efficiently within the project's time and provide feedback in a timely manner

Local Aboriginal land Councils:

The NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs) have statutory functions relevant to the protection of Aboriginal culture and heritage under the NSW Aboriginal Land Rights Act 1983. These requirements do not extend the role of NSWALC and LALCs in the significance assessment process. That is, these requirements do not provide NSWALC and/or LALCs any additional or specific decision-making role in the assessment of significance of Aboriginal object(s) and/or place(s) that are subject to an AHIP application under Part 6 of the NPW Act.

LALCs may choose to register an interest to be involved in the consultation process, or may assist registered Aboriginal parties to participate in the consultation process established by these requirements. In order to ensure effective consultation and the subsequent informed heritage assessment, LALCs are encouraged to identify and make contact with Aboriginal people who hold cultural knowledge in their area.

1.5 CONSULTATION NOT EMPLOYMENT

The following is taken from DECCW (2010).

Consultation with registered Aboriginal parties involves obtaining the views of, and information from, Aboriginal parties and reporting on these. It should not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring.

Aboriginal people may provide services to proponents through a contractual arrangement, however, this is separate from consultation. The proponent may reimburse Aboriginal people for any demonstrated reasonable out-of-pocket

expenses directly incurred in order to participate in the consultation process. A demonstrated reasonable expense would include documented loss of wages caused by the need to take time from paid employment to participate in meetings.

The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities (i.e. pay disputes) for Aboriginal people.

1.6 EMPLOYMENT

The proponent may engage a number of Aboriginal representatives from the registered parties (based on the size and nature of the project) to participate and assist in the fieldwork component of this project. If you would like to be considered for field work please answer the selection criteria attached and ensure you attach certificates of currency for the relevant insurances, CV(s), any certificates and references. MCH will then pass this information onto the proponent for their consideration to make the selection for fieldwork participants should they wish to do so.

MCH will ensure all Aboriginal parties are invited to participate in fieldwork, however paid participation is determined by the proponent.

1.7 FORMS

You will find a number of forma attached for your connivance. However, if you prefer to use your own please feel free to do so. Please ensure that these are either filled out in full or your own forms/letters answer all the questions and return to MCH no later than **23 May 2011** .

Forms attached:

1) Register of cultural knowledge holder
2) Cultural significance
3) Comments on proposed methodology
4) Field work selection criteria

COMMENTS ON PROPOSED METHODOLOGY

Balickera

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete the appropriate box, sign and return to MCH (Fax: 4952 5501).

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **agree to the methodology** outlined by MCH in relation to the proposed project.

Additional comments:

_____

_____

_____

Signed: _____ Date: _____

Position within organisation: _____

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **do not agree to the methodology** outlined by MCH in relation to the proposed

Project for the following reasons (*please explain your reasons for disagreeing):*

_____

_____

I would like to suggest the following (please provide your reasoning):_____

_____

_____

Signed: _____ Date: _____

Position within organisation: _____

CULTURAL SIGNIFICANCE

Balickera

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete the appropriate box, sign and return to MCH, (Fax: 4952 5501).

As per the DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), the proponent seeks information on the following:

1) *are there Aboriginal objects of cultural value in the proposed project area?*

2) *Are there Aboriginal places of cultural value to the Aboriginal people in the area of the proposed project? This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.*

3) *Is there any other cultural information in relation to the proposed project area?*

4) *MCH and the proponent would like to develop and implement appropriate protocols for sourcing and holding cultural information. Please provide your preferred method of providing detailed information on the above (e.g. written, verbal, this form) and any restrictions you would like to place on your information.*

REGISTER OF CULTURAL KNOWLEDGE HOLDER

Balickera

MCH and the proponent would like to facilitate a process whereby all registered Aboriginal parties are provided the opportunity to contribute to culturally appropriate information gathering, provide information that will enable the cultural significance of Aboriginal sites/places on the project area to be determined, and have input into the development of any cultural heritage management options. To enable this to occur, it is necessary to consult with the cultural knowledge holder(s).

To this end, as per the DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), you are required to provide details of the individual(s) who hold cultural knowledge (according to traditional lore) relevant to the project area. If your groups has no knowledge holders, this is important information too.

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form. However, should you wish to use this form, please complete the appropriate box, sign and return to MCH, (Fax: 4952 5501).

Please fill in the following information for cultural knowledge holder(s:. If there are more than three in your organisation please feel free to attach another sheet. If there are no knowledge holders in your group please send back blank.

*Name:*____

*Address:*______________________________________

*Phone:*__________________ *Mobile:*__________________

*Fax:*__________________ *E-mail:*__________________

*Name:*____

*Address:*______________________________________

*Phone:*__________________ *Mobile:*__________________

*Fax:*__________________ *E-mail:*__________________

*Name:*____

*Address:*______________________________________

*Phone:*__________________ *Mobile:*__________________

*Fax:*__________________ *E-mail:*__________________

ABORIGINAL COMMUNITY SELECTION CRITERIA FOR FIELDWORK

Balickera

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete and return to MCH (Fax: 4952 5501).

Ability to assist in communicating the results of the fieldwork back to the registered Aboriginal parties for the assessment of cultural significance and returning advice on their response to MCH.
Please provide details on your ability to discuss results of field work, ability to effectively provide a cultural heritage report in an appropriate time frame.

Experience in field	
Please nominate at least two individuals who will be available and fit for work (physically able to undertake field work) who may participate in the field work and their relevant experience (please attach CV's, certificates and references)	
Name	
Experience	
Name	
Experience	

Price Per person (experienced person)		
Hour	$	inc GST & travel
Half day	$	inc GST & travel
Full day	$	inc GST & travel
Price Per person (inexperienced/trainee)		
Hour	$	inc GST & travel
Half day	$	inc GST & travel
Full day	$	inc GST & travel
Please note that the actual rate of pay for field work may or may not be your preferred rates, this is dependant on the set development budget.		

Insurances		
Public Liability	Expiry date:	(attach certificate of currency)
Worker Compensation	Expiry date: :	(attach certificate of currency)
Failure to provide up to date Certificate of Currencies will prevent you participating in any fieldwork.		

Occupational Health & Safety (OH&S)

All participants are required to comply with MCH and the proponents OH&S requirements. This includes high visibility clothing, hat, sunscreen and steel caped boots. You will be advised of any additional requirements.

Failure to comply will prevent you from participating in the field work.

COMMENTS ON PROPOSED METHODOLOGY

Balickera

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete the appropriate box, sign and return to MCH (Fax: 4952 5501).

I, Loanne Anderson (*please insert your name*) of Nur-Run-Cee P/L (*please insert the name of your group*), **agree to the methodology** outlined by MCH in relation to the proposed project.

Additional comments:

Signed: [signature] Date: 20/5/11

Position within organisation: Aboriginal Sites officer Director

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), do not agree to the methodology outlined by MCH in relation to the proposed Project for the following reasons (*please explain your reasons for disagreeing):*

I would like to suggest the following (please provide your reasoning):

Signed: _____ Date: _____

Position within organisation: _____

CULTURAL SIGNIFICANCE
Balickera

MCH would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the current form.

However, should you wish to use this form, please complete the appropriate box, sign and return to MCH, (Fax: 4952 5501).

As per the DECCW Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), the proponent seeks information on the following:

1) *are there Aboriginal objects of cultural value in the proposed project area?*

All Items to be discussed on site or to contact
Mr Lennie Anderson 0431 334 365

2) *Are there Aboriginal places of cultural value to the Aboriginal people in the area of the proposed project? This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance.*

3) *Is there any other cultural information in relation to the proposed project area?*

4) *MCH and the proponent would like to develop and implement appropriate protocols for sourcing and holding cultural information. Please provide your preferred method of providing detailed information on the above (e.g. written, verbal, this form) and any restrictions you would like to place on your information.*

Preferred method is verbal