

APPENDIX
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Aboriginal Cultural Heritage Impact Assessment



Maules Creek Coal Project

Aboriginal archaeological and cultural heritage impact assessment

17 December 2010





Maules Creek Coal Project

Aboriginal archaeological and cultural heritage impact assessment

Prepared for

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Prepared by

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17 December 2010

60156681

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Quality Information

Document Maules Creek Coal Project

Ref 60156681

Date 17 December 2010

Prepared by Luke Kirkwood

Reviewed by Neville Baker

Revision History

| Revision | Revision Date | Details | Authorised | |
|----------|---------------|--------------------------------|----------------------------------------------------------|-----------|
| | | | Name/Position | Signature |
| R1 | 19-Oct-2010 | Draft Review | Neville Baker AECOM Associate Director - Heritage | |
| R2 | 29-Oct-2010 | Client Comments | Neville Baker AECOM Associate Director - Heritage | |
| R3 | 17-Dec-2010 | Stakeholder Review Comments | Andrew Cook AECOM Technical Director - Environment | |
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Executive Summary

AECOM Australia Pty Ltd was commissioned by Hansen Bailey on behalf of Aston Resources Pty Limited to undertake an Aboriginal archaeological and cultural heritage impact assessment for the Maules Creek Coal Project, near Boggabri, NSW. Aston Resources Pty Limited is seeking contemporary Project Approval under Part 3A of the *Environmental Planning and Assessment Act 1979* to allow for the construction and operation of an open cut mine and related surface infrastructure.

Prior to the Aboriginal archaeological and cultural heritage impact assessment, twenty five Aboriginal sites (mostly artefact scatters) had been recorded within the Project Boundary with several more identified in the proximity outside the Project Boundary. Following consultation with 19 registered Indigenous stakeholders, field surveys of the Project Boundary were conducted between August and October 2010 targeting areas within the Project Boundary. A total of 103 Aboriginal sites which included 49 artefact scatters, 28 isolated artefacts, 21 scarred trees and 3 grinding groove sites were identified within the study area. The majority of Aboriginal archaeological sites were located predominantly on soil exposures next to semi-perennial watercourses with larger scatters being identified at the junctions of these intermittent creeks. Sites on elevated landforms or hillslopes occur with less frequency and comprise few artefacts in low density.

Areas of greatest significance occur near areas of permanent and semi-permanent water or significant landform features such as the steep sided gullies. In addition to this, artefacts scatters of greater significance were concentrated at areas between the junctions of two or more intermittent creeks. These sites possess particular heritage value due to the significant research potential of archaeological deposits in the area.

The key Aboriginal heritage values identified within the Project Boundary include:

- pre-contact Aboriginal activity evident in the widespread stone artefact evidence present within the topsoil in close association with intermittent creeks and some nearby slopes;
- a pre-contact landscape of high intensity Aboriginal activity associated with a gully connecting the Namoi River around Boggabri with the upper waters of Maules and Back Creek distinct from low intensity activity in the upper reaches of intermittent creeks where creek margins are more inclined;
- a large pre-contact site associated with a permanent soak in the Leard State Forest with a significantly varied tool assemblage;
- rare evidence of Aboriginal grinding tools in three sites; and
- a number of well preserved scarred trees.

The main potential impacts identified for the proposed development include:

- direct and indirect impacts to stone artefacts (scatters and isolated finds) and scarred trees from the excavation of the open cut mine and use/maintenance of the Northern Overburden Emplacement Area;
- indirect impacts to adjacent archaeological sites through the placement and construction of infrastructure associated with the Mine Infrastructure Area;
- possible indirect impact from the alignment of the water pipeline to a number of significant scarred trees; and
- direct impact to a number of artefact scatters and grinding groove sites (2 portable examples) through the construction of the rail loop and spur (Transport Corridor).

Of the 103 identified archaeological sites, 57 sites (55%) are outside of areas of direct impact. Of the remaining sites, 28 (27%) will be directly impacted while the remaining 18 are at risk from indirect impact. Of the 28 sites that will be impacted by the Project, 7 are rated as being of high scientific significance. The impacts to Aboriginal heritage will be mitigated through salvage excavation of the areas of highest significance within the principle areas of impact and subject to detailed analysis. All other impacted Aboriginal archaeological sites will be subject to a surface collection procedure whereby artefacts will be collected, recorded and analysed.

Glossary of Terms

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alluvial | Pertaining to sediment mass deposited from transport by channelled stream flow or over-bank stream flow. |
| Archaeological potential | The likelihood of undetected surface and/or sub-surface archaeological materials existing at a location. |
| Aboriginal object | <i>'...any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains'</i> (s.5 NPW Act) |
| Aboriginal place | Any place declared to be an Aboriginal place under s.84 of the <i>National Parks and Wildlife Act 1974</i> (NPW Act) because the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects. |
| Aboriginal archaeological site | The present spatial extent of <i>visible</i> Aboriginal archaeological material at a given location. |
| Artefact | Any object which has been physically modified by humans. |
| Angular shatter | Small irregularly shaped fragments of knapped stone interpreted as an undiagnostic 'splinter' fragments. |
| Assemblage | A collection of artefacts |
| Backing | Steep unidirectional or bidirectional retouch that is typically found on one lateral edge of an artefact. |
| Blocky fragment | Large angular fragment of stone that has detached fortuitously during the knapping process. |
| Bondi Point | A flake that has been 'backed' (i.e. retouched) along one lateral margin and comes to a point at its distal end. Bondi points are asymmetrical around their longitudinal axis. |
| Bulb of percussion | A bulge below the striking platform on the ventral surface of a flake. |
| Bulbar scar | A small flake scar on the bulb of percussion that results from a small flake being detached when the main flake is detached. |
| Bulbar fissures | Very fine lines present on the bulb or percussion that radiate out from the point of impact. |
| Burra Charter | The Burra Charter provides guidance for the conservation and management of places of cultural significance Australia. It sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians. The most recent version of the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 26 November 1999. |
| Broken flake | A flake that lacks a termination but retains one or more of the following: platform and/or intact point of impact, bulb of percussion, bulbar scar and lateral fissures. |
| Chalcedony | A semi-transparent cryptocrystalline form of quartz and moganite with a waxy lustre. |

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| Chert | A sedimentary rock “composed primarily of microcrystalline quartz along with lesser amounts of quartz crystals, opal, and impurities” (Luedtke 1992:139). A hard, splintery rock with a conchoidal fracture, chert generally has a vitreous (glassy) lustre. As with chalcedony, chert can be any colour or combinations of colour. |
| Compression waves | Prominent concentric rings on the ventral surface of the flake radiating out from the point of impact. |
| Cortex | An altered, weathered outer surface or ‘rind’ on a piece of rock. |
| Complete flake | Following Holdaway and Stern (2004: 111), a complete flake is a flake that has “a ventral surface that preserves a complete fracture plane, and that have a platform (or impact point), lateral margins and a termination”. |
| Core | “A mass of homogenous lithic material that has had flakes removed from its surface”. (Andrefsky 2005: 14). |
| Country | A term used by Aboriginal people to refer to the land to which they belong. |
| Crest | A landform element that “stands above all, or almost all, points in the adjacent terrain” (Speight 2009: 20). |
| Dorsal surface | The surface of a flake that was originally part of the outer surface of the core. |
| Effective Coverage | A quantifiable estimate of the area in which archaeological materials are “detectable”, i.e. exposed ground surface area. |
| Elouera | A backed, crescent-shaped implement that is symmetrical around its transverse axis but asymmetrical around its longitudinal axis. |
| Exposure | An area of land surface where the ground surface is visible, usually as the result of either thinner vegetation cover, erosive forces or human-caused disturbance. In archaeological surveys, the percentage of ground surface that is visible is recorded. These percentages of exposure are then used to calculate effective coverage. |
| Flake | A sharp-edged sliver of stone that has been detached from a core. Flakes have a number of distinctive features or attributes that allow them to be distinguished from other lithic materials. These include a bulb of percussion, a striking platform, a dorsal surface, a ventral surface, a bulbar scar (also known as an erailure scar), bulbar fissures, lateral fissures or hackles and compression waves. |
| Flake shatter | Any piece of flake debitage with no recognisable striking platform. |
| Flat | “Planar landform element that is neither a crest nor a depression and is level or very gently inclined” (Speight 2009: 22). |
| Fluvial | Pertaining to rivers and streams. Deposits by flowing water. |
| Geometric microlith | A flake that has been ‘backed’ at one or other end, sometimes at both, and sometimes on one lateral margin as well. Geometric microliths are symmetrical around their transverse axis and have a maximum dimension of less than 80 mm. |
| Grinding Groove | A depression formed in rock from the sharpening of a stone hatchet head or use of a muller (topstone). |

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| Ground Surface Visibility | A term used to describe the area of the ground's surface that is visible during archaeological field surveys. |
| Hammerstone | 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. |
| Hearth | Fireplace often recognised archaeologically through the presence of charcoal or burnt ground. Historical hearths are usually associated with a brick or stone structure. |
| Holocene | The geological period covering the last 10,000 years. |
| <i>In Situ</i> | In the natural or original position. Applied to a rock, soil, or fossil when occurring in the situation in which it was originally formed or deposited. |
| Lateral fissures or hackles | Very fine lines present on the lateral margins of a flake. |
| Lithics | Of, or pertaining to, stone. |
| Lower slope | "Slope element not adjacent below a crest or flat but adjacent above a flat or depression" (Speight 2009: 21). |
| Mid-slope | "Slope element not adjacent below a crest or flat and not adjacent above a flat or depression" (Speight 2009: 21). |
| Mudstone | A very fine-grained, hard, cohesive rock which generally has a dull, slightly porous appearance. Mudstone is composed of extremely fine-grained sediments such as rock flour, clay minerals and silt. Mudstone is macroscopically similar to chert but distinguished by its lack of lustre. |
| Pleistocene | The geological period equivalent to the last ice age and preceding the Holocene from about 2 million years to 10,000 years ago. The Late Pleistocene generally refers to the period of time from 40,000 – 10,000 years ago. |
| Quartz | Quartz is one of the most common minerals on earth. A member of the silica family of minerals, quartz can occur in a variety of forms including free-standing crystals, as veins of milky quartz cutting through other rocks, and as tiny irregularly shaped grains that are components of many rocks. |
| Silcrete | Langford-Smith (1978: 3) define silcrete as "a very brittle, intensely indurated rock composed mainly of quartz clasts cemented by a matrix which may well be well-crystallised quartz, cryptocrystalline quartz or opaline silica. The texture of silcrete reflects the host rock and clasts may range in size from very fine grains to boulders". |
| Stone artefact | Any piece of rock modified by human behaviour. |
| Striking platform | More or less planar surface struck to cause flake removal. |
| Survey Coverage | The area of a study area surveyed, usually expressed as a percentage. See also Effective Coverage . |
| Upper slope | "Slope element adjacent below a crest or flat but not adjacent above a flat or depression" (Speight 2009: 21). |
| Ventral surface | The surface of a flake that has broken away from the core. Ventral surfaces are typically smooth and show no evidence of previous flake removals. |

1.0 Introduction and Background

1.1 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Hansen Bailey on behalf of Aston Resources Pty Limited (Aston Resources) to undertake an Aboriginal archaeological and cultural heritage impact assessment for the Maules Creek Coal Project (the Project). The purpose of the assessment is to form part of an Environmental Assessment (EA) being prepared by Hansen Bailey to support an application for a contemporary Project Approval under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to facilitate the development of a 21 year open cut coal mining operation and associated infrastructure.

This report presents the results of the archaeological survey (including Aboriginal consultation) and subsequent heritage assessment of known and newly identified Aboriginal archaeological sites within the proposed Project Boundary and on Aston owned land, conducted from September to October, 2010.

1.2 Assessment Aim and Objectives

The overall aim of this assessment was to identify Aboriginal heritage values and determine conservation and management outcomes within the proposed Project Boundary and on Aston owned land. To achieve these aims the following objectives were established:

- review of previous archaeological studies within and adjacent to the Project Boundary to assess the current status of Aboriginal cultural heritage and to provide a basis for developing a predictive model for site location;
- locate and record Aboriginal objects and sites within proposed Project Boundary to assist in developing suitable heritage management recommendations and nominate areas of potential constraints.;
- locate and record Aboriginal objects and sites within Aston owned land not encompassed by the Project Boundary to assist in developing suitable heritage management recommendations, nominate areas of potential constraints and avenues for conservation.
- record all identified Aboriginal heritage objects and sites with GPS for inclusion in GIS mapping;
- consultation with the relevant Aboriginal community groups;
- assess the heritage values of Aboriginal objects and sites in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b); and
- present recommendations for the management of and/or mitigation of the Projects' impact on the archaeological resource identified.

1.3 Project Team

The Project was managed by Luke Kirkwood (AECOM Archaeologist). Luke coordinated project logistics, conducted heritage assessments of all Aboriginal heritage sites and authored this report. Neville Baker (AECOM Associate Director - Heritage) directed the project, provided technical and QA review and assisted with fieldwork. Rick Bullers and Dee-Anne Goring (AECOM Archaeologists) assisted with background research and fieldwork. Additional background research services were provided by Susan Lampard, Rochelle Coxon, Geordie Oakes and Andrew McLaren (AECOM Archaeologists). Tim Osborne provided mapping support.

1.4 Protocols for Handling Sensitive Information

Some of the information presented within this report may be culturally sensitive. Permission should be sought from the relevant Indigenous communities and Department of Environment, Climate Change and Water (DECCW) before releasing the contents of this report to the general public.

1.5 Limitations

Within this report predictions have been made about the probability of subsurface archaeological materials occurring within the study area based on surface indications and environmental contexts. However, it is possible that materials may occur in areas without surface indications and in any environmental context.

AECOM undertook a search of the Aboriginal Heritage Information Management System (AHIMS) held by DECCW. Register searches are constrained by the amount of data in the register and the quality of that data (for example grid references can be inaccurate). Large areas of NSW may not have been systematically searched and may contain Aboriginal objects and other heritage values not recorded on AHIMS.

A summary of the statutory requirements regarding Aboriginal heritage is provided in Section 3.0. This is provided based on experience with the heritage system in NSW and does not purport to be legal advice. It should be noted that legislation, regulations and guidelines change over time and users of the report should satisfy themselves that the statutory requirements have not changed since the report was written.

1.6 Report Structure

The report is structured as follows:

- **Section 2.0** discusses the background to the Project;
- **Section 3.0** provides the relevant government legislation and policy;
- **Section 4.0** describes the methodology used for consultation with the registered Aboriginal stakeholder groups;
- **Section 5.0** provides environmental context of the study area;
- **Section 6.0** outlines the archaeological contextual information and ethnographic context of the Maules Creek area;
- **Section 7.0** discusses the Project methodology, lists the Aboriginal sites and objects identified in the survey areas, and discusses the results of the field survey;
- **Section 8.0** discusses the significance values of the Aboriginal sites and objects identified in the study area;
- **Section 9.0** discusses the impacts of the proposed works on the heritage values identified in the study area; and
- **Section 10.0** outlines the proposed management recommendations for the identified archaeological sites.

2.0 Background

2.1 Project Description

2.1.1 Study Area

The Project is located approximately 18 km north east of Boggabri within the Narrabri Shire Local Government Area (Figure 1) and is comprised of two main sections. The northern component of the Project Boundary is situated between Back Creek to the north, the Boggabri Coal mining authorities to the south, the Leard State Forest Conservation Area to the west and Leard Forest Road to the east. The southern component of the Project Boundary comprises a transport corridor that closely follows the southern portion of the approved Boggabri Coal Mine haul road and extends in a south-west direction to the Werris Creek – Mungindi Railway. A large proportion of the Project falls within the Leard State Forest, which has a long history of selective logging activities (Figure 2).

A number of existing mining operations are located in the vicinity of the Project and include the Boggabri Coal Mine and Tarrawonga Coal Mine both located south-east of the Project Boundary.

2.1.2 The Project

Aston Resources is seeking contemporary Project Approval under Part 3A of the EP&A Act to allow for the development of a 21 year open cut coal mining operation and associated infrastructure (Figure 3) including:

- The construction and operation of an open cut mining operation extracting up to 13 Million tonnes per annum (Mtpa) Run of Mine (ROM) coal to the Templemore Seam;
- Open cut mining fleet including excavator / shovels and fleet of haul trucks, dozers, graders and water carts utilising approximately 400 permanent employees;
- The construction and operation of a Coal Handling and Preparation Plant (CHPP) with a throughput capacity of 13 Mtpa ROM coal;
- The construction and operation of Tailings Drying Areas;
- The construction and operation of a rail spur, rail loop, associated load out facility and connection to the Werris Creek to Mungindi Railway Line;
- The construction and operation of a Mine Access Road;
- The construction and operation of administration, workshop and related facilities;
- The construction and operation of water management infrastructure including a water pipeline, pumping station and associated infrastructure for access to water from the Namoi River; and
- The installation of supporting power and communications infrastructure.

Aston Resources' current mining authorities include Coal Lease (CL) 375 and Authorisation 346. CL 375 covers approximately 4,200 hectares and has been divided into two portions. In the southern portion it covers mining from the surface to an unlimited depth (approximately 2500 hectares). The northern portion of CL375 (1700 hectares) covers the rights to mine from 20 metres to an unlimited depth. Authorisation 346 consists of approximately 1,700 ha and covers the rights of the northern part of CL 375 from the surface to a depth of 20 m. In addition, Aston Resources' has a Forests NSW Occupation Agreement for activities within CL 375 and an approved Mining Operations Plan (MOP) for exploration activities between 1 April 2010 – 1 April 2012.

2.1.3 Approvals Background

Mining authorities were originally granted in the Maules Creek area in the 1970s, which lead to extensive exploration to determine the local geology and lay out for an open cut mine plan. An Environmental Impact Statement (EIS) was submitted to the Narrabri Shire Council in 1989 to gain preliminary approval. Development Consent was granted on 12 June 1990 for the Maules Creek Coal Mine (DA 85/1819). During this period, three Indigenous cultural heritage assessments were conducted for the project, two by Laila Haglund (1983, 1986) for the main component of the mine and one by Mary Dallas (1986) who surveyed the southern transport corridor.



The original study area used for these three heritage assessments is comparable to the current proposed Project Boundary.

The original approval, included the development of a coal mine within the Leard State Forest, utilising both open cut and underground mining techniques and the construction of mining infrastructure including a rail loop and spur, a CHPP and associated administration and infrastructure. The approval has no sunset clause and is still valid. Works under this consent physically commenced in 1995 with the excavation of the Development Dam.

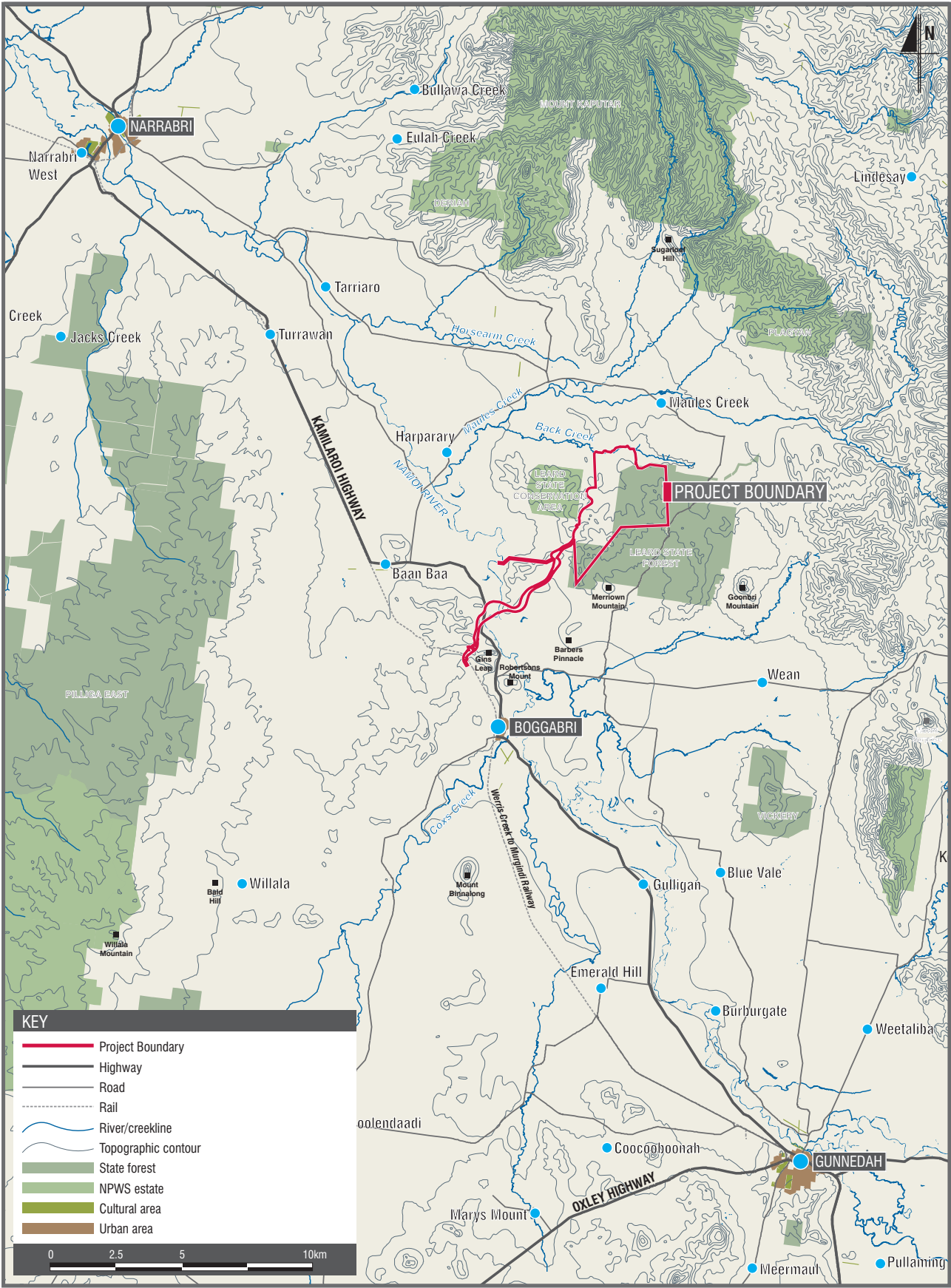
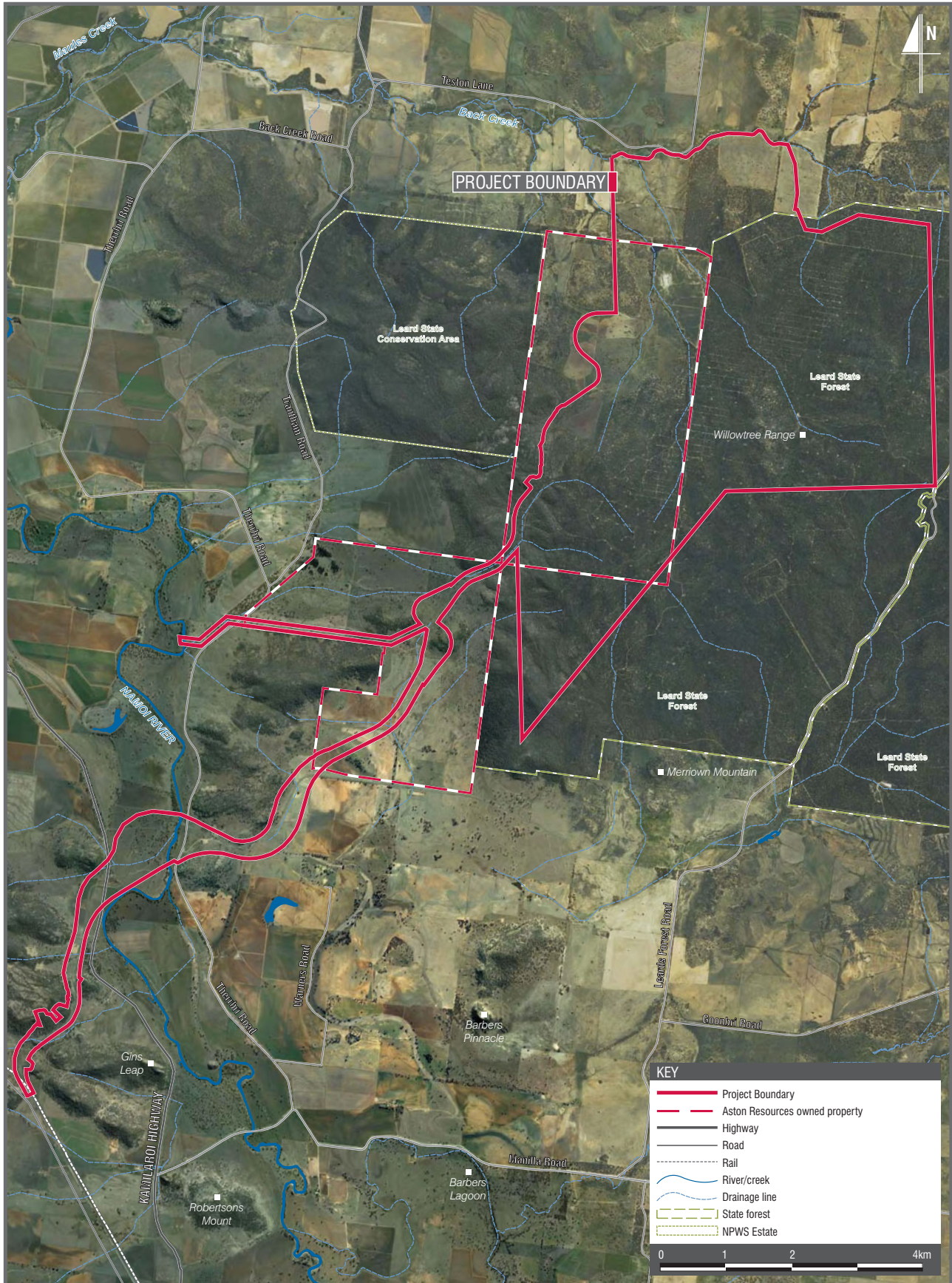


FIGURE 1

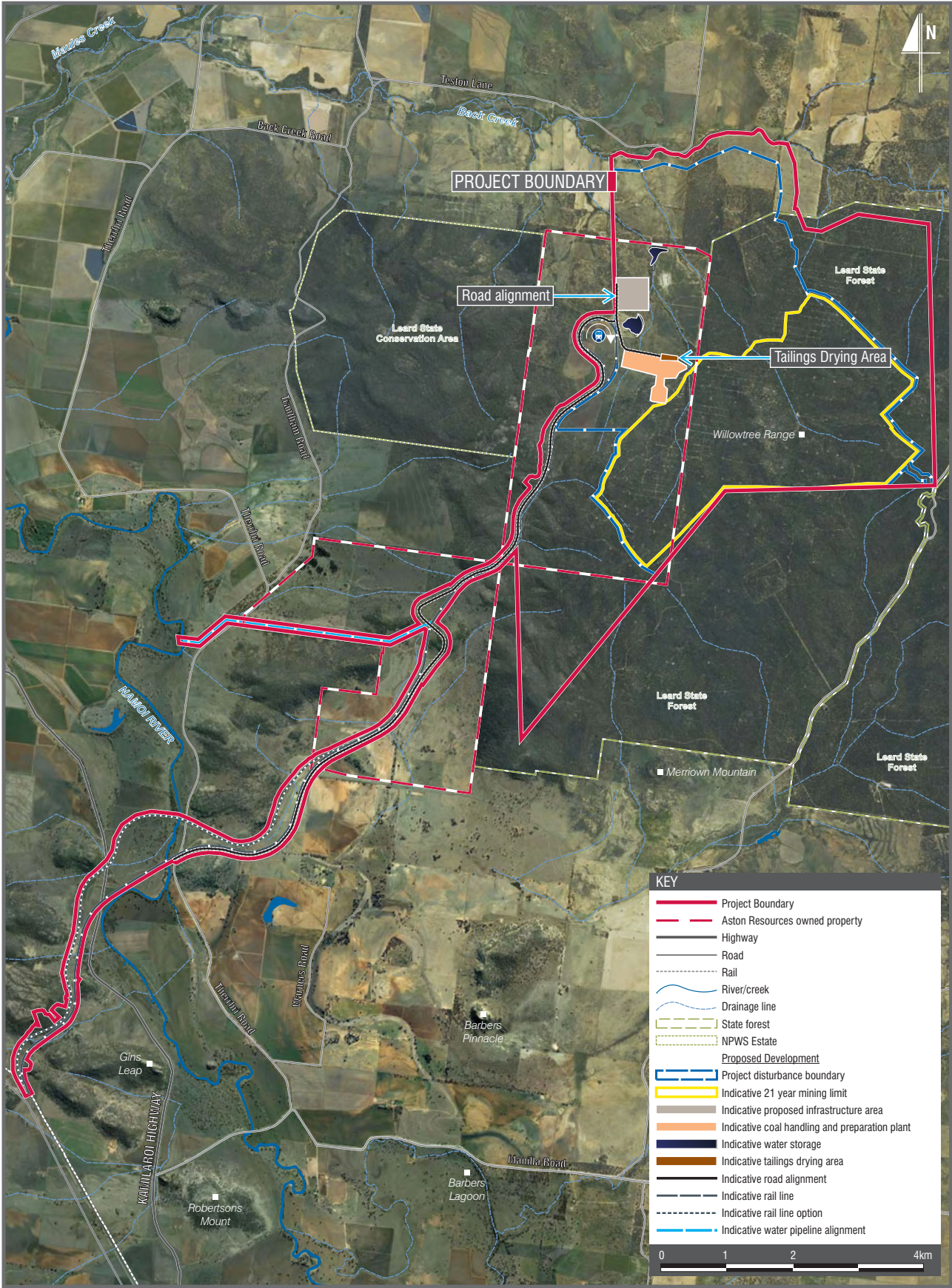


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EXTENT OF STUDY AREA

Maules Creek Coal Project
Maules Creek, New South Wales

FIGURE 2



3.0 Applicable Policy and Legislation

3.1 Commonwealth Legislation

The purpose of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Heritage Protection Act) is the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters that are of particular significance to Aboriginal people in accordance with Aboriginal tradition.

Under the Heritage Protection Act, the responsible Minister can make temporary or long-term declarations to protect areas and objects of significance under threat of injury or desecration. 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 Act is administered by the Department of Sustainability, Environment, Water, Population and Communities (SEWAC). The heritage registers mandated by the EPBC Act have been consulted and there are no Aboriginal heritage items within the precinct on these registers.

3.2 State Legislation

The following New South Wales legislation protects aspects of cultural heritage and is relevant to development activities in the Project Boundary.

3.3 Environmental Planning & Assessment Act 1979

The EP&A Act requires that consideration be given to environmental impacts as part of the land use planning process. In NSW, environmental impacts are interpreted as including cultural heritage impact. Three parts of the EP&A Act are most relevant to Heritage. Part 3 relates to planning instruments, including those at local and regional levels; Part 4 controls development assessment processes; and Part 5 refers to approvals by determining authorities.

Part 3A provides an approvals regime applying to all major projects. Major projects are defined under State Environmental Planning Policy (Major Projects) 2005 (SEPP 2005). It also applies to those projects which the Minister believes are required to deliver particular government plans or programs, known as critical infrastructure projects. Part 3A applies to all projects where the Minister has the approval role. Under Part 3A, the Minister can issue a project approval or a concept approval. Both maintain the requirement for consultation with the community and relevant State Government agencies, however the requirement for certain other permits and licences is removed under Part 3A. Heritage assessments carried out under Part 3A should address the steps outlined in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010) to ensure compliancy with the Act.

Section 75B(2) of the EP&A Act makes provision for 'major projects' to be identified through various means, including by way of declaration as a listed project in SEPP 2005, or by notice in the Gazette.

The Project is classified as a 'major project' under Part 3A of the Act.

3.3.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by DECCW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Director General of DECCW responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- an *Aboriginal object* is any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains).
- an *Aboriginal place* is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them. An Aboriginal Heritage Impact Permit (AHIP) should be obtained if impacts to Aboriginal objects and/or places are anticipated. Following amendments introduced in October 2010, AHIPs are primarily issued under s. 90 of the Act. Consultation with the Aboriginal communities is required under DECCW policy when an application for an AHIP is considered and is an integral part of the process. Project Approvals under Part 3A of the EP&A Act are exempt from the provisions of ss.87 and 90 of the NPW Act.

The Act includes a 'strict liability' offence for harm to Aboriginal objects and places. A strict liability offence does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. The Act also removes reference to s87 and s90 consents, and replaces them with a single AHIP. AHIPs may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons.

S89A of the Act requires notification of the location of sites of Aboriginal objects within a reasonable time, with penalties for non-notification, including daily penalties. S89A is binding in all instances including Part 3A projects.

3.4 Local Government

3.4.1 Narrabri Local Environmental Plan 1992

The Narrabri Local Environment Plan 1992 (LEP) is the comprehensive statutory planning document that applies to the Narrabri LGA. Part 3 of the LEP provides specific provisions for the protection of heritage items and relics within Narrabri LGA. A relic may include any deposit, object or material evidence relating to the settlement (including aboriginal habitation) of Narrabri Shire which is 50 or more years old.

Under Clause 26.1 of the LEP, the following development may only be carried out with development consent:

- (a) demolish or alter a building or work;
- (b) damage or move the relic or excavate for the purpose of exposing or removing the relic;
- (c) damage or despoil the place or tree;
- (d) erect a building on or subdivide land on which the building, work or relic is situated or that comprises the place; or
- (e) damage any tree on land which the building, work or relic is situated or on land which comprises the place, except with the consent of the Council.

Under Clause 25 and 26, the consent authority must, before granting a consent assess, determine:

- the extent to which the carrying out of the proposed development would affect the heritage significance of the item and any stylistic or horticultural features of its setting; and
- the effect the carrying out of that development will have on the heritage significance of the item and its setting.

Schedule 2 of the LEP provides a list of heritage items within Narrabri LGA. There are no Aboriginal heritage items listed in the heritage schedule that fall within the boundaries of the precinct.

4.0 Aboriginal Stakeholder Consultation

Community consultation for the Project was conducted by Hansen Bailey Pty Ltd (Hansen Bailey). The following section has been written by Hansen Bailey.

4.1 Notification and Registration

The Maules Creek Aboriginal Archaeology and Cultural Heritage stakeholder consultation program commenced in accordance with the Department of Environment Climate Change and Water (DECCW) guidelines, '*Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*' (2005), and '*Interim Community Consultation Requirements for Applicants*' (2004). Commencing from 12 April 2010 DECCW released the revised consultation guidelines '*Aboriginal cultural heritage consultation requirements for proponents 2010*' (DECCW 2010). Following the release of the Aboriginal Consultation Guidelines 2010, future consultation was conducted in accordance with its content.

In accordance with Section 4.1.2 of the Aboriginal Consultation Guidelines 2010, to identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of the Project the following organisations were all notified:

- DECCW Dubbo;
- Narrabri Shire Council (NSC);
- National Native Title Tribunal;
- New South Wales Department of Aboriginal Affairs – Office of the Registrar;
- Red Chief Local Aboriginal Land Council (RCLALC);
- Native Title Services Corporation Limited (NTSCORP Limited); and
- Namoi Catchment Management Authority – Tamworth.

All of the above were notified in writing informing them of the Project on 10 June 2010 and requesting information regarding the contact details of known Aboriginal stakeholder groups in the locality who may wish to be included in the consultation program for the Project (Appendix D).

Notification of the Project was provided in local newspapers in order to identify Aboriginal stakeholders who wanted to be consulted in regard to the Aboriginal Archaeological and Cultural Heritage Impact Assessment. Aston Resources placed one identical Public Notice in both the *Namoi Valley Independent* and *The Courier* on the 15 June 2010 seeking registration of interest for participation in the consultation program (Appendix E).

DECCW provided a list of the contact details for nine known Aboriginal stakeholder groups and individuals who may have an interest in the Project on 30 June 2010. A letter was received from NSC on 24 June 2010 providing the contact details for two known Aboriginal stakeholder reference groups including Narrabri Local Aboriginal Land Council (NLALC) and Wiawa Aboriginal Corporation (WAC). An expression of interest letter was faxed and posted to each Aboriginal stakeholder group, as identified by DECCW and NSC who had not already registered an expression of interest in the Project. The expression of interest letter outlined the details of the Project and invited each stakeholder group to participate in the archaeological survey or to be consulted in relation to Aboriginal and Cultural Heritage matters.

Following the newspaper advertisements on the 10 June and the personalised expressions of interest letters sent, a comprehensive list containing the contact details of 19 Aboriginal stakeholder groups who may wish to be consulted in regard to the Aboriginal Archaeological and Cultural Heritage Impact Assessment was developed. A total of 18 groups provided an expression of interest with the exception of WAC. WAC did not respond to any correspondence at this stage, as a result a follow up telephone call was made to Brian Warren (Chairperson) to determine whether or not a representative from his organisation would like to participate in the Aboriginal Archaeological and Cultural Heritage Impact Assessment and associated consultation program. Brian indicated that WAC was in the process of permanently closing down and requested that no further correspondence be sent to WAC in the future.

Each of the 18 remaining groups indicated they would like to participate in both the Cultural Heritage Assessment and archaeological survey aspects of the Project (Appendix D).

A full list of all known Aboriginal stakeholder groups that were consulted with is presented in Table 1.

Table 1 Consulted Aboriginal Stakeholder Groups

| Ref | Name of Group | Primary Contact |
|-----|-------------------------------------------------------|--------------------------|
| 1 | Red Chief Local Aboriginal Land Council (RCLALC) | Robert Horne |
| 2 | Bigundi Biame Traditional People (BBTP) | Wayne Griffiths |
| 3 | Min Min Aboriginal Corporation (MMAC) | Gwen Griffen |
| 4 | Gunida Gunyah Aboriginal Corporation (GGAC) | Jane Bender |
| 5 | Elli Lewis Cultural Heritage Consultants (ELCHC) | Patricia Jean Hands |
| 6 | Cacatua Cultural Consultants (CCC) | Donna Sampson |
| 7 | Gomeroi Narrabri Aboriginal Corporation (GNAC) | Craig Trindall |
| 8 | Aboriginal Native Title Consultants (ANTC) | John & Margaret Matthews |
| 9 | Giwiirr Consultants (GC) | Rodney Matthews |
| 10 | Hunter Valley Culture Consultants (HVCC) | Christine Archbold |
| 11 | Mingga Consultants (MC) | Clifford Matthews |
| 12 | Upper Hunter Heritage and Culture Consultants (UHHCC) | Darrell Matthews |
| 13 | Bullen Bullen Consultants (BBC) | Lloyd Matthews |
| 14 | Narrabri Local Aboriginal Land Council (NLALC) | Edward Trindall |
| 15 | Wee Waa Local Aboriginal Land Council (WWLALC) | Kasey Hilderson |
| 16 | Aboriginal Natural Resource Officer (ANRO) | Jason Wilson |
| 17 | Carrawonga Consultants (CC) | Justin Matthews |
| 18 | Mooki River Consultants (MRC) | Wayne Matthews |
| 19 | Wiawa Aboriginal Corporation (WAC) | Brian Warren |

4.2 Notification of Registration to DECCW and the Local Aboriginal Land Council

In accordance with Section 4.1.6 of the Aboriginal Consultation Guidelines 2010, a copy of the following documentation was provided to DECCW and the RCLALC on 5 August 2010:

- Public notices of assessment in the Namoi Valley Independent and The Courier newspapers on the 15 June 2010,
- The original letter sent to Aboriginal organisations notifying them of the Assessment; and
- A record of the Aboriginal parties for who have registered an expression of interest for the Assessment.

As specified in Section 4.1.5 of the Aboriginal Consultation Guidelines 2010 each of the registered Aboriginal stakeholder groups were afforded the opportunity to withhold their information being provided to DECCW and RLALC. As a result, DECCW and RCLAC were provided the names of thirteen and five registered Aboriginal stakeholder groups respectively.

4.3 Consultation Regarding Survey Strategy and Conservation Values

All Aboriginal groups that provided an expression of interest in the Project were sent a hard copy of the proposed methodology developed by AECOM on the 13th July, 2010. The letter provided a description of the Project and along with the proposed survey methodology. Aboriginal stakeholder group representatives were encouraged to provide comments and raise any concerns they may have in relation to the Project regarding Cultural Heritage or the draft survey methodology.

4.4 Summary of Responses

In total, 18 written responses and acceptances of the proposed methodology were received from the registered Aboriginal groups in response to the proposed survey methodology and fieldwork. All except two groups

(RCLALC and BBTP) accepted the proposed methodology. All written responses and acceptances of the methodology are provided in Appendix D.

RCLALC indicated that while the AHIMS database shows limited cultural heritage items within the Project Boundary the area should not be underestimated for its potential to contain additional items. RCLALC also requested that two representatives be included throughout the duration of the field assessment. BBTP expressed concerns that by having a rotating roster developed for the completion of the field assessment that consistent results would not be achieved. BBTP requested that a representative be present for the duration of the field assessment. No additional concerns or comments were raised by an Aboriginal stakeholder group in relation to the Project or the methodology.

4.5 Planning Meeting

In accordance with Section 4.2.1 of the Aboriginal Consultation Guidelines 2010 a letter was provided on 10 August 2010 to all registered Aboriginal stakeholders inviting all registered Aboriginal stakeholders to attend a Planning Meeting to discuss the various aspects of the Project including the Aboriginal Heritage consultation program, draft methodology and associated fieldwork involvement.

The Planning Meeting was held at the Boggabri RSL Memorial Club on Friday, 13 August 2010 commencing at 10.00 am. In total, 20 Aboriginal stakeholders representing 16 of the 18 registered organisations attended the Planning Meeting. Only representatives from WWLALC and BBTP were unable to attend.

Specifically, items discussed during the Planning Meeting included:

- Background to Aston Resources;
- A discussion of the Maules Creek Coal Project including critical timelines and milestones;
- The Aboriginal Stakeholder Consultation Process;
 - Consultation conducted to date;
 - Proposed timing for field assessment; and
 - Timing for completion and review of the draft report.
- An overview of the draft methodology including a summary of responses received;
- A contact person at Hansen Bailey to discuss any Aboriginal heritage values of the area;
- Field Survey requirements; and
- An open discussion on any aspect of the meeting.

A copy of the presentation provided during the Planning Meeting was sent to all registered Aboriginal stakeholder groups including WWLALC and BBTP on Monday, 16 August 2010.

4.6 Fieldwork Involvement

A total of 18 Aboriginal stakeholder groups registered their acceptance of the methodology and indicated they would like to participate in the fieldwork component of the Aboriginal Archaeology and Cultural Heritage Assessment. On 16 August 2010, a letter was sent to all of the 18 registered groups confirming the dates for the upcoming fieldwork, providing a copy of the presentation depicted during the planning meeting and a request for the provision of the relevant insurances.

As each of the Aboriginal groups provided a copy of their relevant insurances they were included in one of two groups developed for the fieldwork. Aboriginal stakeholder group ANRO declined the invitation to participate in the fieldwork due to other commitments. Jason Wilson from ANRO indicated although he was unable to participate in the field work he would like to continue to be consulted in relation to the Project. All of the remaining 17 Aboriginal groups indicated they would like to have a representative present in the scheduled fieldwork.

The fieldwork was scheduled to be completed over the 15 working days from 23 August to the 10 September 2010. As there was an uneven number of groups and fieldwork days it was necessary that the first eight groups to provide insurances would commence the fieldwork on 23 August and continue for an eight day period. This provided the groups who had not yet provided insurances additional time for the provision of the relevant

documentation. Despite repeated attempts MRC failed to respond to Hansen Bailey's correspondence or provide a copy of the relevant insurances and as a result had to be excluded from the fieldwork.

The second group consisted of the remaining seven registered Aboriginal stakeholder groups and were allocated a successive seven day period following the completion of the first group commencing on the 2 September though to the 10 September 2010.

All land within the Project Boundary was due to be completed during the initial field assessment, however land access for a small portion of privately owned land located in the northern portion of the Project Boundary was not obtained prior to the completion of the field assessment. As such, this area required assessment for cultural heritage at a later date following access arrangements.

The area not surveyed as part of the initial fieldwork assessment was relatively small in size consisting of approximately 220 ha. The supplementary field assessment was conducted over four days generally in accordance with the original methodology developed by AECOM (13 July 2010).

Resulting from the small size of the remaining survey area it was proposed that one archaeologist and four local representatives from the Aboriginal community will be present to conduct this remaining work. The additional work was conducted by Group 3 and consisted of a general cross section of local Aboriginal stakeholder groups including RCLALC, NLALC, BBTP and BBC.

On the 23 September 2010, correspondence was provided to all of the 18 registered Aboriginal stakeholders notifying them if they were or were not required to participate in the remaining portion of fieldwork.

The remaining fieldwork was conducted from the 29 September to the 1 October 2010. Following the completion of this remaining fieldwork all areas within the Project Boundary were assessed for cultural heritage.

At the completion of each group's fieldwork allocation, archaeologists from AECOM discussed the findings with the groups and sought any comments or suggestions in relation to Cultural Heritage significance of the areas surveyed. As a result of these debriefs, it was agreed with Aboriginal representatives that the assessment had been undertaken in accordance with the methodology.

Information regarding the attendance of each Aboriginal stakeholder group and representatives who participated in the archaeological survey is presented in **Table 2**.

Table 2 Registered Aboriginal Stakeholder Groups who Participated in Archaeological Survey

| Fieldwork | Aboriginal Stakeholder Group | Representative |
|-----------------------------------------------|-----------------------------------------------|---------------------------------|
| Group 1 23 August – 1 September 2010 | Red Chief Local Aboriginal Land Council | Peter Beale |
| | Bigundi Biame Traditional People | Gary Griffiths |
| | Cacatua Cultural Consultants | George Sampson |
| | ElliLewis Cultural Heritage Consultants | Stephen Hands |
| | Giwiirr Consultants | Rodney Wortley |
| | Hunter Valley Culture Consultants | Yani Wortley |
| | Bullen Bullen Consultants | Karen Matthews |
| | Carrawonga Consultants | Trent Sciberras & Josh Matthews |
| | Aboriginal Native Title Consultants | Tania Matthews |
| Group 2 2 September – 10 September 2010 | Red Chief Local Aboriginal Land Council | Peter Beale |
| | Min Min Aboriginal Corporation | Allan Talbott |
| | Gomeroi Narrabri Aboriginal Corporation | Mick Trindall |
| | Gunida Gunyah Aboriginal Corporation | Chayne Gardner |
| | Mingga Consultants | Tania Matthews |
| | Upper Hunter Heritage and Culture Consultants | Karen Matthews & Josh Matthews |
| | Narrabri Local Aboriginal Land Council | Raymond Smith |
| | Wee Waa Local Aboriginal Land Council | Josh Trindall |
| Group 3 29 September – 1 October 2010 | Red Chief Local Aboriginal Land Council | Peter Beale |
| | Bullen Bullen Consultants | Tania Matthews |

| Fieldwork | Aboriginal Stakeholder Group | Representative |
|--------------|----------------------------------------|----------------|
| October 2010 | Bigundi Biame Traditional People | Karen Matthews |
| | Narrabri Local Aboriginal Land Council | Raymond Smith |

4.7 Draft Aboriginal Archaeological Assessment Review

The draft report was circulated to stakeholders on the 3rd November 2010.

Written reviews of the report were provided by 9 of the 18 registered stakeholders. The reviews of the report can be seen in full in Appendix F. A review of each response is provided below. There were no specific comments in relation to individual sites with the majority being in general agreement with the content of the report with a further interest in future consultation and involvement in any salvage excavation and archaeological site management.

Giwirr Consultants (GW) – Agreed with the content of the report and providing no further comments

Ellis Lewis (EL) – Agreed with the findings of the report. They wished it to be known that if artefacts were to be removed that they be placed in safe keeping and that scarred trees be fenced off to protect them from disturbance.

Bullen Bullen Consultants (BCC) – Agreed with most of the content of the report. Emphasised their position that they would like to **protect** (their emphasis) a number of the well preserved scarred trees, grinding grooves and any Aboriginal Ceremony & Dreaming site (Gin's Leap). They would also like to see salvage conducted into the form of a formal archaeological excavation with sieving, along with excavator/grader scrape opportunities.

Cacatua Culture Consultants (CCC) – Agreed that the report is adequate and that they support the current draft. CCC stated that they believed that every effort should be made to include the stakeholders and that they be consulted and involved in the salvage/analysis of any recovered archaeological material in accordance with the relevant guidelines. Reaffirmed their position of their strong ties to traditional lands and their passion for the preservation of cultural heritage within this area.

Carrawonga Consultants (CC) – Agreed with the content of the report. CC stated that they would like to be involved in future work for the Maules Creek Coal Project and that they would also like to have grader scrapes and test excavations as a component of any further works.

Min Min Aboriginal Corporation (MMAC) – Agreed with the content of the report. MMAC reiterated their position that 'whilst we don't agree with the disturbance or removal of any artefacts that are important to Aboriginal people', they also added that the work done to date had met all requirements that were needed. MMAC had no further issues of concern at this time.

Gunida Gunyah Aboriginal Corporation (GGAC) – GGAC stated that they were satisfied with the content and recommendations of the report. GGAC reiterated its position that they do not and cannot support the destruction or removal of significant cultural sites and that it was their role to protect and conserve their culture for the future social, cultural and economic well being of the Aboriginal community. While not supporting the removal of artefacts, they would like a discussion to be held with the key Aboriginal stakeholders as to where the suggested keeping place is going to be located and the method of relocation. GGAC would also like a representative present during any relocation of artefacts.

Bigundi Biame Traditional People (BBTP) – Agreed with the content of the report, noting that it was well detailed, meets all the Aboriginal Culture and Heritage standards and is consistent with their views. BBTP also commended Hansen Bailey on their extensive efforts in ensuring this process was transparent and realistic. BBTP wanted it to be known that the terms 'Cultural Significance' and Aboriginal Heritage Values' could not be easily defined. Cultural Significance was defined by its importance within a community adding that 'wherever ceremonies are held it is accepted as being culturally significant without requiring documentary evidence'. Likewise Aboriginal Heritage Values did not cease once Aboriginal peoples were removed from their traditional lands and their culture disrupted. These values continue to this day and are as important, if not more so. BBTP would also like to be involved and consulted in all aspects of the management process especially the salvage excavation.

Red Chief Local Aboriginal Land Council (RCLALC) – Letter received from RCLALC noting that mitigation and management of Aboriginal heritage does not include the salvage of sites and that RCLALC does not support the destruction of any identified Aboriginal artefact. Red Chief identified that Major Thomas Mitchell moved through

the Leard State Forest while exploring the area prior to European settlement and that they would like to see further information detailing this in the report. It was also noted that future Director-Generals Environmental Assessment Requirements should consider the Aboriginal heritage and social economic impact to the local Aboriginal community including appropriate compensation to an Aboriginal community trust to provide assistance to facilities for tertiary education, training, health, land management and housing along with realistic Aboriginal employment within the mine. These outcomes, it was suggested, should be negotiated prior to the Project being approved. Red Chief would also like DECCW to have a greater capacity to manage Aboriginal objects as part of the Part3A process.

4.8 Summary / Conclusion

Nineteen registered Aboriginal stakeholder groups in the North West NSW Region or other areas that may have an interest in the Project were notified of the Project in accordance with the (DECCW 2010).

After letters were sent inviting all known Aboriginal stakeholder groups to participate in the Archaeological and Cultural Heritage survey, eighteen responses were received indicating a Aboriginal stakeholder group's desire to be consulted with and participate in the assessment. Each of the Aboriginal stakeholder groups who registered an expression of interest in the Project participated in the field survey on seven or more days from the 23 August to the 10 September 2010.

During the initial fieldwork not all of the land within the Project Boundary was able to be completed due to land access negotiations. As such, four groups were selected to participate in the remaining fieldwork between the 29 September to the 1 October 2010.

The consultation log provides a summary of all Aboriginal stakeholder consultation for the Project (up to end the of fieldwork) with further detail provided in Appendix D.

All registered stakeholders reviewed the draft report and these reviews have been incorporated in the final report in Appendix F.

5.0 Existing Environment

5.1 Introduction

The nature and distribution of Aboriginal archaeological sites is connected to the environment in which they occur. Environmental variables such as topography, geology, hydrology, flora and fauna played a critical - though by no means determinative - role in influencing how Aboriginal groups moved within, and utilised a given parcel of land. Therefore any attempt to predict the character and distribution of Aboriginal sites in a given landscape must take environmental factors into account. At the same time, an assessment of historic land use allows predictions to be made concerning the likely presence/absence of sites and, where appropriate, their archaeological integrity.

5.2 Landform & Topography

The land within the Project Boundary can be classified into five distinct landforms (Figure 4):

1. Major Creek/River Floodplain;
2. Flats;
3. Lower Slope;
4. Upper Slope/Ridge and
5. Steep Sided Gully.

Major Creek/River Floodplain are those associated with the Namoi River and its major creeks. These areas tend to be flat and periodically flooded during heavy rainfall events. This is contrasted with the flats landform, which is defined as flat areas not directly impacted by initial flooding events. These areas tend to be located further away from major watercourses and usually raised above the average flood height.

The lower slope category is typified by a gentle rising slope or no more than 5°. It is generally associated with a more pronounced upper slopes/ridge category which are generally characterised as hilly to steep with a slope of more than 8°, but less than 15°. The upper slope category is typical of the Leard State Forest and is the dominant landform there.

The remaining landform category of Steep Sided Gully is associated with a 2 km long gully that connects the southern rail corridor with the main infrastructure in the north. The gully floor is generally flat, but is surrounded on either side by extremely steep slopes and sandstone escarpments. It should be noted that this gully acts as a shortcut between the southern Namoi River plains in the east and the head waters of Back and Maules Creek north of the Project Boundary.

The highest point within the Project Boundary is the Leard Trig Station situated at an elevation of 447 metres. It is located within the western extent of the Project Boundary. The lowest point of 280 metres occurs in the north of the Project Boundary and is associated with the Back Creek system.

5.3 Hydrology

The Project is located within the Namoi River catchment. Two major watercourses dictate the hydrology of the area: the Namoi River (perennial) located approximately 8 km to the west of the proposed mining area and Back Creek (non-perennial) located immediately to the north of the Project Boundary. In addition to these a number of intermittent creek channels are present across the entirety of the Project Boundary. These creek channels only flow following extensive rain events and rarely hold water for more than a few days. Notable exceptions include soaks such as Lawlers Waterhole, a well-known waterhole in the Leard State Forest that was historically used by loggers and cattlemen as a source of water along with occasional temporary water pools along the larger creek gullies.

The intermittent creeks in the north of the Project Boundary tend to flow north towards Back Creek where as those to the south flow directly into the Namoi River. These southern drainage lines are associated with extensive swamplands which have been drained for pasture and cropping purposes.

5.4 Geology

The Project Boundary is located within the major regional geological feature known as the Gunnedah Basin. The Gunnedah Basin is one of the main coal basins within NSW. The target coal seams for the Project occur within the early Permian Maules Creek Formation, which may be up to 800 m thick and sits on the underlying Leard Formation (Hansen Bailey 2010:11).

The Project area's geology is characterised by three main units:

- Boggabri Volcanics – Predominately a feature of the western component of the Project and now recognised as part of the larger Gunnedah Volcanics, this unit is a mix of rhyolitic to dacitic lavas combined with ashflow tuffs laid down during the early Permian. Gin's Leap, a well known local geological landmark visible just north of Boggabri on the Kamilaroi Highway, is an example of this type of formation. The Boggabri Volcanics underlay the Leard Formation and contain no known coal reserves.
- Leard Formation – Localised deposits of colluvial and alluvial deposits of clayey sandstone and poorly bedded conglomerates. This sedimentary formation resulted from the weathering of the overlying Boggabri Volcanics.
- Maules Creek Formation – A Permian in origin alluvial carbonaceous clay sandstone associated with coal deposits that overlays the Leard Formation. A conglomerate component found near the top of the stratigraphic sequence contains small hand sized nodules of silcrete, chalcedony and mudstone.

Because of the poor consolidation of sedimentary layers within both sandstone units, this geology is unsuitable for the formation of sandstone caves or rockshelters.

5.5 Soils

The soils within the Project Boundary are predominantly podsolised yellow/red-brown earths deposited through the decomposition of the surrounding conglomerate sandstone bedrock, with small patches of chocolate black basalt soils (Division of Reconstruction and Development 1952: 14). Shallow soils occur on the steeper parts and there is little soil development with these slopes being predominately scree-like in character.

The yellow/red-brown podsol soils alter with the topography, from the ridges down to the creeks. On the ridges, the profile is mostly yellow loamy sand from decomposing sandstone, although without differentiation. On the lower slopes there is more differentiation between the overlying dark brown gritty sandy loam and the light brown gritty sand occurring at around 300 mm. On the flats, where water accumulates, the colour alters to grey, but the structure remains similar (Division of Reconstruction and Development 1952: 16).

The chocolate soils are mostly found on flat land and are associated with areas of basalt. These soils are found either side of the main gully, which separates the northern and southern portions of the Project Area. The clay component of this soil type tends to create crumbly soil during dryer months and boggy conditions during wetter months.

5.6 Climate and Rainfall

The climate can be described as having moderately warm to warm winters and hot to very hot summers (Division of Reconstruction and Development 1952: 10). January is historically the hottest month of the year, with a mean minimum of 18.3°C and a maximum of 34°C and is also the wettest month, with a mean monthly rainfall of 71.3 mm. July is the coldest month with mean minimum temperature of 3.0°C and a maximum of 16.9°C. The driest month is September with a mean monthly rainfall of 39.8 mm (Hansen Bailey 2010: 10). Winds predominantly blow from the east and south east and to a lesser extent west south-west.

Rainfall averages around 620 mm per year, however, this is highly influenced by the topography, with higher rainfall in elevated areas associated with the nearby Nandewar Ranges.

5.7 Flora and Fauna

The nature of the vegetation within the Project Boundary has been drastically altered through extensive clearing for agricultural purposes and, within the Leard State Forest, through selective logging (Dames and Moore 1983:1). The top-storey is dominated by White Cypress Pine (*Callistris columillaris*) and Black Cypress Pine (*Callistris endlicheri*). These two species appear as almost pure stands or co-dominant with other species. While the White

Cypress prefers light textured soils, the Black Cypress mainly occupies steep slopes with skeletal soils and gravel ridges.

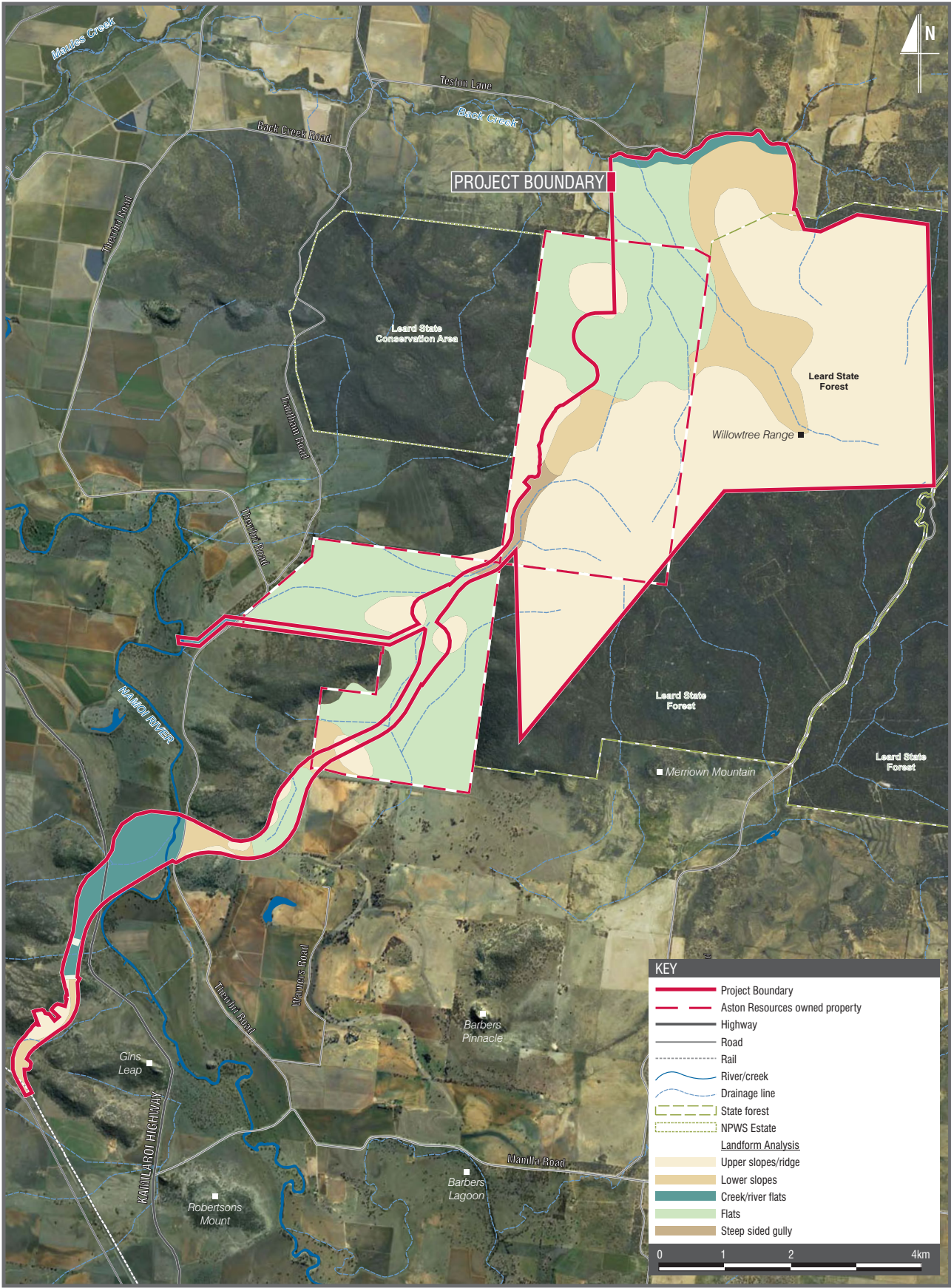
Mingled with the Cypress Pines are Narrow Leaf Ironbark (*Eucalyptus crebra*) on the fertile soils and in sandy loam, together with White Box (*Eucalyptus albens*). In association with the Narrow Leaf Ironbark on more rocky ridges is the Blue Leaf Ironbark (*Eucalyptus melanophoia*).

Overall, the vegetation can be characterised as tall open forest, with the understorey and intermediate layer being determined by logging activity. The understorey includes isolated Kurrajong (*Brachychiton populneum*), which was an important economic resource for Aboriginal people. Haglund (1986:4) suggests these trees maybe present due to Aboriginal activity.

A wide range of vertebrates and invertebrates are known to occur within the Project Boundary, including but not isolated to grey kangaroos, eastern wallaroo, short-beaked echidna, common brush-tailed possum, koala, numerous species of parrots, wedge-tailed eagle, lace monitor, eastern brown snake, carpet python, golden perch, murray cod, catfish and freshwater crayfish. These species all represent prey animals that would have been utilised by Aboriginal peoples in the past.

5.8 Historic Land Use and Disturbance

The majority of the Project is located within the Leard State Forest. The Forest largely remains as remnant vegetation, however, it has been selectively logged and the species represented and their distribution is a function of forestry practices (Dames & Moore 1983:1). Haglund (1983:3) reports extensive disturbance associated with logging activities, including access tracks and log dump areas. The areas outside Leard State Forest have largely been subject to widespread land clearance for agricultural grazing and cropping activities.



6.0 Archaeological & Ethnographic Context

Predicting the nature and distribution of archaeological materials in any given landscape requires a detailed understanding of past human land use practises. Information regarding the way in which land and resources were used by Aboriginal people in pre-contact landscapes is available to archaeologists through two primary sources: ethno-historical literature and archaeological data, and it is the former that is of concern here. Europeans began to document and study Aboriginal culture from the time of the first explorers, with explorers, missionaries, settlers and the like recording their encounters with, and observations of, Aboriginal people and their material culture in letters, journals and official reports. Most of these accounts are overtly Eurocentric in tone and content and the veracity of some is questionable at best. Nonetheless, taken together, they form a valuable source of information on Aboriginal lifeways at the time of European contact.

6.1 The Kamilaroi People

The Project falls within the traditional country of the Kamilaroi (also spelt Gamilaraay or Kamilaraay) language group (also known as the Kamilaroi 'nation'). Kamilaroi territory extends from near Singleton in the Hunter Valley through to the Warrumbungle Mountains in the west and up through the townships of Quirindi, Tamworth, Narrabri, Walgett, Moree and Mungindi in northern New South Wales, to Nindigully in south west Queensland. Key published sources for the Kamilaroi language and people include Fison and Howitt (1967), O'Rourke (1995, 1997), Roworth (2000), Ridley (1866, 1875) Woodgate (1995) and Matthews (1903, 1917). A summary of some key aspects of Kamilaroi society is provided below.

Although difficult to determine with any accuracy, a pre-contact population of c.10,000 Kamilaroi speakers has been suggested, with a large though unquantified number of dialectal sub-groups (O'Rourke 1997: 126). According to O'Rourke (1997), the smallest residential unit within Kamilaroi society was the 'hearth-group', which consisted of up to ten people, typically a man, his wife (or wives) and their dependent children. Larger residential groupings (i.e. 40-60 individuals) termed 'bands' were formed through the regular though temporary aggregation of several 'hearth-groups'. Annual seasonal aggregations of 'bands' resulted in 'communities' (O'Rourke 1997: 130) of 200 or more people. Individual communities are estimated to have occupied territories of more than 2,500 km². The presence of up to eight communities at irregular ceremonial events such as Bora (buurra) assemblies has also been noted (O'Rourke 1997: 130).

The annual subsistence and occupation cycle of Kamilaroi-speaking peoples appears to have been one of summers spent along rivers exploiting a range of terrestrial, avian and aquatic food resources and winters spent in areas away from rivers hunting and/or trapping (predominantly) terrestrial game. Hunting and gathering 'gear' amongst the Kamilaroi is reported to have included wooden spears (at least five types are known), several varieties of boomerangs, digging sticks, nets, stone fish hooks, fibre-based fishing line, ground stone axes and a variety of supplementary chipped stone tools.

As highlighted by Smith (2006) and others (e.g. Roworth 2000; O'Rourke 1997), a wide variety of terrestrial and avian fauna were exploited by the Kamilaroi for food, including (but not limited to): various species of freshwater fish, yabbies, mussels, 'grubs', possums, kangaroos, wallabies, bandicoots, emus, bustards, plains turkey, water fowl, lizards and snakes. Various plant foods were also exploited for food and medicine. Grass-seed, in particular, was a major food source for the Kamilaroi, with seeds ground and cooked in the form of small loaves or cakes (see Mitchell 1848 and Gardner 1846 in O'Rourke 1997: 153-4). Other plant foods noted by early observers include melons, wild potatoes, yams, wild oranges and lemons, 'emu apples' (*Eremophila longifolia*), 'gruie apples' (*Owenia acidula*), quandongs, 'cotton pod' seeds, kurrajongs seeds, water-lily roots, 'mulga apples' (*Acacia aneura*), warrigal cabbages (*Tetragonia tetragonoides*), sorrel sourgrass, trefoil, and the herb crowsfoot (*eleusine indica*).

O'Rourke (1997: 148) has speculated that "summer villages with semi-permanent huts were [likely] a common feature of Aboriginal life on the plains of New South Wales". The observations of early explorers such as Cunningham (1825) and Mitchell (1839) provide some support for this claim. Writing in his journal on 14 May 1825, for example, Cunningham noted 14 huts with bark floors and conical roofs scattered through thick woodland to the west of Cocks Creek near Boggabri. Some of the huts were apparently large enough to accommodate up to six people and appeared to have been designed to resist months of inclement weather. Major Mitchell's (1839) description of the huts in a 'native village' to the south of Moree near the Gwydir River paints a similar picture. According to Mitchell (1839: 76-7), "[e]ach hut was semi-circular, or circular, the roof conical, and from side a flat

roof stood forward like a portico, supported by two sticks” Moreover, “[t]he interior of each looked clean, and to us, passing in the rain, gave some idea, not only of shelter, but even of comfort and happiness” (Mitchell 1839: 76-7).

Social organisation amongst the Kamilaroi was based on complex system of kinship involving, in descending order, ‘moieties’, ‘sections’ and ‘clans’. The Kamilaroi ‘moieties’ were Dhillbay (‘dilbi’) and Gubadhin (‘kupathin’) and, as highlighted by O’Rourke (1997: 159), “a human being or any other living thing belonged to one moiety or the other, never to both”. Each moiety contained two ‘sections’ which took masculine forms for men and boys and feminine forms for women and girls (for details see O’Rourke 1997: 160). Membership of a section was derived or inherited from an individual’s maternal grandmother. ‘Clans’ were notional matrilineal descent lines, with representatives spread throughout Kamilaroi territory. Each clan took its name and identity from a totem, typically an animal or plant species. Large numbers of clans are known to have existed. Matthews (1895, 1897), for example, noted 68 different matri-clans among the northern Kamilaroi.

Spiritual authority in Kamilaroi society was vested in larger number of supernatural beings, chief amongst which was Baiame or Baayama, the ‘Great Shaper’ or ‘Thunder-God’, variously imagined as a half-human, half-crystal being and/or as a giant in human form. Baiame formed the world by shaping the cosmos from a pre-existing primeval void (O’Rourke 1997: 137).

6.1.1 George ‘the Barber’ Clarke and the Major Mitchell’s Kindur River Expedition 1831/1832

Only two ethno historic accounts of Aboriginal people living within the vicinity of the Leard State Forest are known. The first comes from George ‘the Barber’ Clarke, an escaped convict who, having been befriended by a local group of Kamilaroi people, adopted their language, dress and customs, and settled at a lagoon east of Boggabri and directly south of the Leard State Forest (Boyce 1970). The second account comes from Major Mitchell’s (Mitchell 1839) famous account of his expedition into the interior of Australia to determine if accounts by Clarke of a giant inland river called the Kindur were true.

George Clarke escaped from the Hunter Valley in the 1825, making his way west before finally settling near Boggabri at a lagoon now known locally as Barber’s Lagoon or Barber’s Stockyard (AHIMS Site 20-4-0011). Clarke was befriended by the local group of Kamilaroi peoples who gradually initiated him into their tribal life, eventually allowing him to participate in bora ring ceremonies at Terry Hai Hai 70km to the north where he learnt of a giant river known by the local Aborigines as the Kindur (likely the Gwydir River in flood).

Clarke is recorded as having undergone cicatrization, a process of scarring the body that all men and women underwent. A bone knife would be used to cut into the flesh of the shoulder, chest and back and then clay daubed into the scars to make them stand out. In addition to this ritual scarification, Clarke also stained his body with the juices of wild berries along with clay and ochre body markings. During his time with the Kamilaroi, Clarke adopted the dress style of wearing a possum cloak with a string of grass beads around his neck. A belt of twisted human hair was worn around his waist and a headband made of reed used to hold back his hair.

In his notes recorded after his experience, Clarke refers to *taurai*, the traditional hunting and food gathering grounds of each group as having distinct boundaries with his own tribal sub-group occupying the land around the central Namoi River that was notable for being a wide grassy plain with trees being restricted to the more hillier areas. Based around what is now known as Barber’s Lagoon, Clarke built a hut along with cattle stockyards which he filled with cattle stolen from newly settled pastoralists that were encroaching on Kamilaroi territory. He used a prominent hill to the north that was called ‘*Tangulda*’ (now known as Barber’s Pinnacle) as a lookout to survey the surrounding land.

Mitchell’s subsequent expedition to find the Kindur and confirm Clarke’s accounts occurred shortly after Clarke’s voluntary recapture in 1831. Having relocated Barber’s Lagoon in late 1831, Mitchell proceeded to investigate routes to the north through the Leard State Forest and along the Namoi River. At Barber’s Lagoon, Mitchell’s party found Clarke’s stockyard and house still intact as well as a number of *gunyahs* (bark huts), indicating a substantial encampment. However, no individuals were encountered. Mitchell’s Aboriginal guide, Mr Brown, indicated that the bluff now known as Gin’s Leap was called ‘*Bullabalakit*’. Mitchell also commented on the extensive smoke and fire in the area, indicating that this period of the year was likely a time of fire stick farming.

For much of his time within the area of Boggabri and the Leard State Forest, Mitchell encountered frequent evidence of the local Aboriginal population’s existence, but rarely encountered any actual people. Footprints and evidence of stone axes (*mogo*) were frequent in his observations. On December the 19th, Mitchell’s party reached Maules Creek (referred to as Maules River) where they came across a dog. Nearby they found a still burning campfire with a large snake roasting on it, a water vessel on the ground beside it, a headband (*uluguèr*) and a bag apparently dropped by its owner(s) upon hearing the advance of the party. After unsuccessfully investigating a

route through the hills to the north east, on their return to their camp they startled an elderly woman who initially ran away from them in apparent terror. Mitchell recorded that she was naked apart from kangaroo teeth fastened to her hair and a knot of brown feathers tied to her right temple (Mitchell 1839:49).

Further north from the junction of Maules Creek and the Namoi River, the expedition encountered a small band of approximately 30 people that were chopping trees with iron tomahawks. As Mitchell was one of the first Europeans to explore this area, the presence of iron axes suggests links through trade networks with neighbouring tribes with existing links to European settlements.

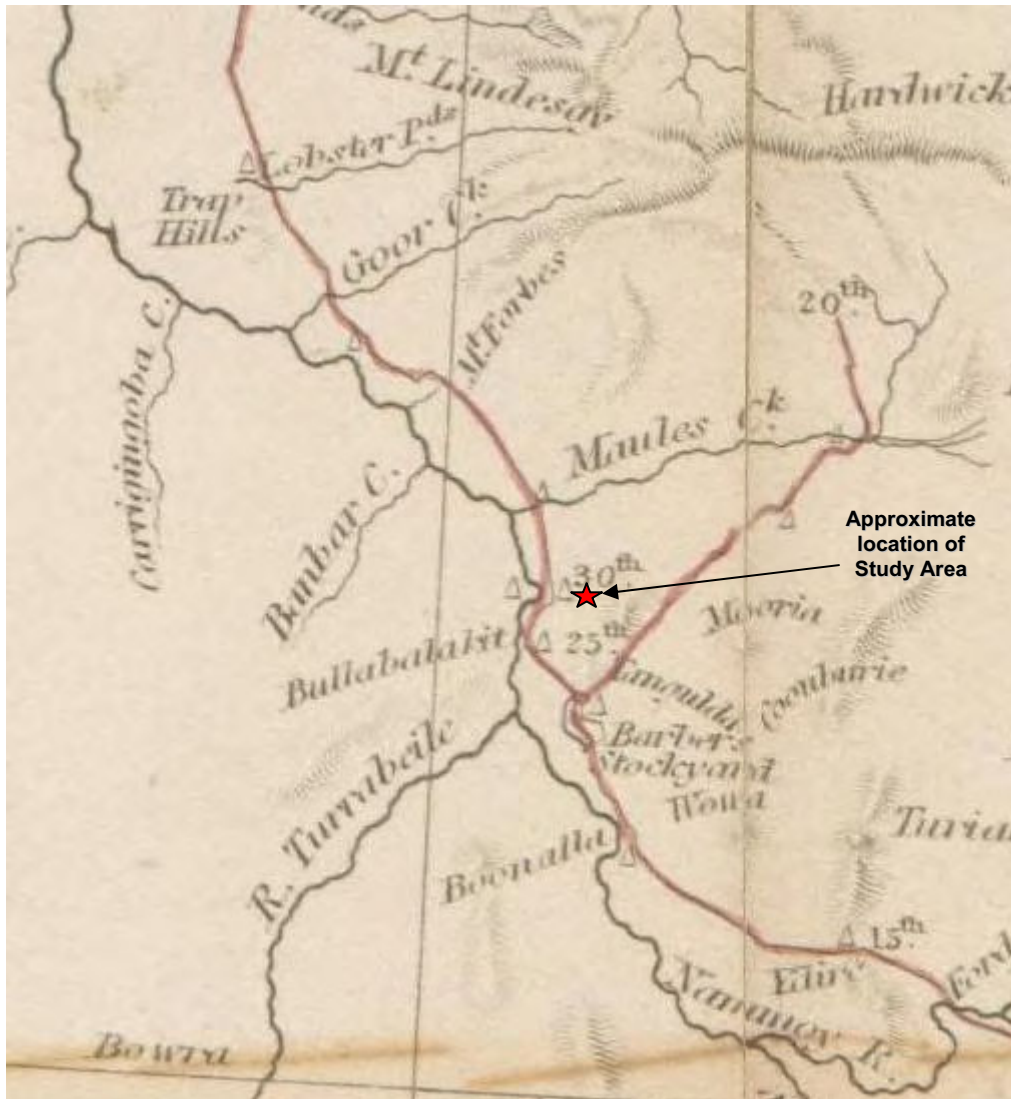


Figure 5 Major Mitchell's Route (red) within the Maules Creek area

A map showing the route of Major Mitchell's Kindur expedition and the approximate location of the Maules Creek Coal Project in relation to this route. Key features on the map include Barber's Stockyard (Barber's Lagoon), Tangulda (Barber's Pinnacle) and Bullabalakit (Gin's Leap). Mitchell's encounters with local Aborigines both occurred within the vicinity of Maules Creek. Dates on map indicate the period between the 15th to 30th of December 1831.

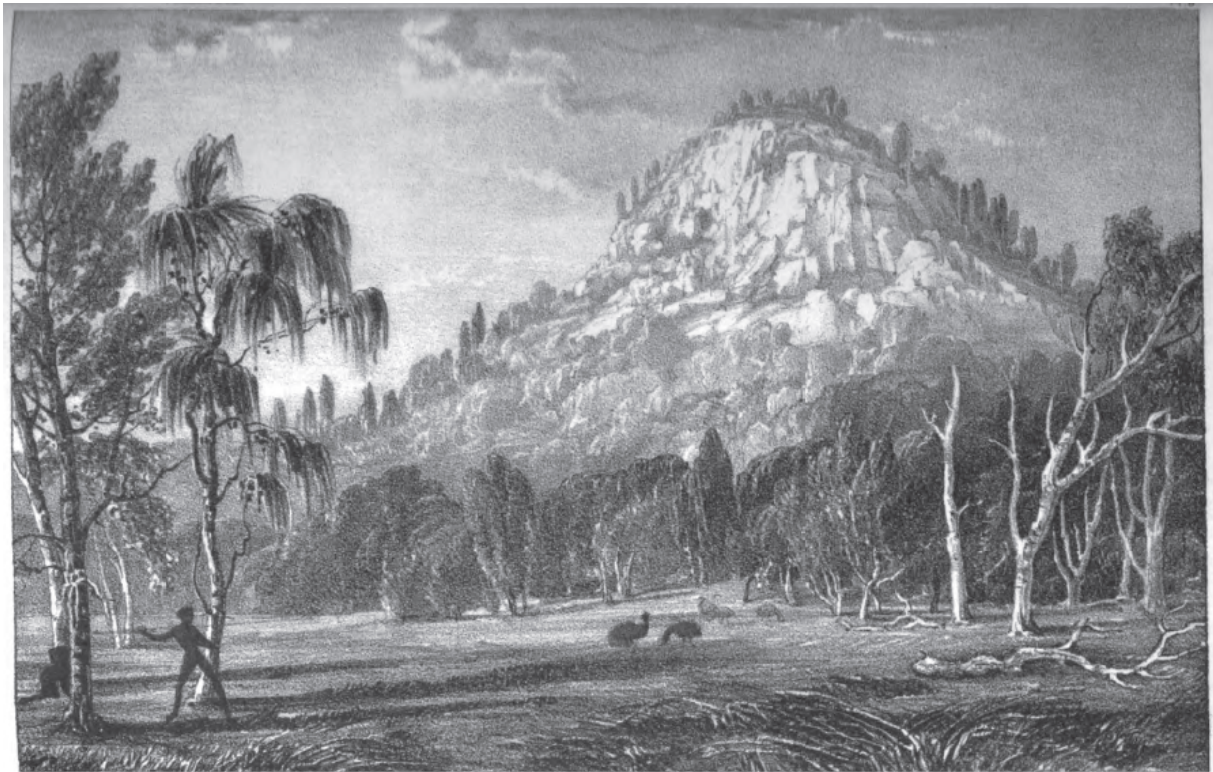


Figure 6 'The pic of Tanguila, from the west' (Mitchell 1839:51).

A drawing of an Aboriginal man attempting to spear an emu at the base of Tanguila/Barber's Pinnacle. The individual represented may be Major Mitchell's Aboriginal guide, Mr. Brown as Mitchell does not indicate encountering any member of the local tribes in this area. The vegetation present in this figure and Mitchell's notes suggest that the area was an open grassed plain with woodland predominately associated with isolated rocky outcrops.

6.2 Desktop Study

The desktop survey methodology comprised:

- a search of the DECCW AHIMS Aboriginal sites database prior to field survey;
- desktop review of previous archaeological and heritage reports relevant to the regional and local area;
- consultation with the local Aboriginal community about heritage values of the land in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010);
- review of landscape character and landuse history which influences patterning of sites; and
- assessment of impacts on the Aboriginal heritage values of the study area.

The AHIMS database was searched on 17 May, 30 June and 5 September 2010 for an area of 15 km x 15 km centred on the study area. These searches identified 130 sites within the search boundaries (see **Table 3**). In addition to these sites, a further 28 unregistered archaeological sites (at the time of writing) were identified from reports of the study area and adjacent projects (**Table 4**).

A breakdown of the combined AHIMS and unregistered records by site type is presented in Table 5. The most common site type registered with AHIMS are artefact scatters and isolated artefacts accounting for 44% and 38% of the total combined records respectively. The next best represented site type is scarred tree. The remaining records comprised a grinding groove, a stone quarry, an Aboriginal ceremony & dreaming site, a rock shelter and an area of Potential Archaeological Deposit (PAD). Within the Project Boundary itself, 35 Aboriginal archaeological sites are present including 24 artefact scatters, 7 isolated artefacts and 4 scarred trees (**Figure 7**).

Table 3 Registered AHIMS Sites.

*Sites within the Project Boundary are highlighted green.

| AHIMS Site ID | AHIMS Site Name | Legacy Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|---------------|-----------------------------------------------------|------------------|-------------------------|--------------------------|---------------------------------------|
| 20-1-0023 | Maules Creek; Mardi Gras; Manilla | MC17 | 219805 | 6622289 | Artefact scatter |
| 20-1-0024 | Maules Creek; Elfins Crossing; Manilla | MC16 | 219805 | 6622989 | Artefact scatter |
| 20-4-0001 | Coutt's Mill; Boggabri | | 216105 | 6599189 | Grinding grooves |
| 20-4-0006 | Boggabri | | 218105 | 6599189 | Scarred tree |
| 20-4-0007 | Boggabri | | 215105 | 6599589 | Scarred tree |
| 20-4-0010 | Gins Leap; Gagabaayindaay | | 216405 | 6604589 | Aboriginal Ceremony and Dreaming site |
| 20-4-0011 | Barbers Stockyard | | 221505 | 6602889 | Scarred tree; Artefact scatter |
| 20-4-0015 | Willow Tree Range | MC6 | 224605 | 6615489 | Artefact scatter |
| 20-4-0016 | Willow Tree Range | MC5 | 224105 | 6616189 | Artefact scatter |
| 20-4-0017 | Nagero Creek | | 225705 | 6608189 | Artefact scatter |
| 20-4-0018 | Driggle Draggie Creek | | 232005 | 6598589 | Scarred tree; Artefact scatter |
| 20-4-0019 | Willow Tree Range | MC4 | 223505 | 6614789 | Artefact scatter |
| 20-4-0020 | Willow Tree Range; Teston; Therribri | MC7 | 222405 | 6613589 | Artefact scatter |
| 20-4-0021 | Willow Tree Range; Tiston; Therribri | MC8 | 222345 | 6613199 | Artefact scatter |
| 20-4-0022 | Willow Tree Range; Tiston; Therribri | MC9 | 222905 | 6613489 | Artefact scatter |
| 20-4-0023 | Willow Tree Range; Tiston ; Therribri | MC10 | 222705 | 6614489 | Artefact scatter |
| 20-4-0024 | Velyama; Manilla | MC11 | 219005 | 6609189 | Artefact scatter |
| 20-4-0025 | Velyama; Manilla | MC12 | 221205 | 6611189 | Artefact scatter |
| 20-4-0026 | Velyama; Manilla | MC13 | 221305 | 6611989 | Artefact scatter |
| 20-4-0027 | Velyama; Manilla | MC14 | 221605 | 6611989 | Artefact scatter |
| 20-4-0028 | Teston; Manilla | MC15 | 224605 | 6614489 | Artefact scatter |
| 20-4-0029 | Willowtree Range; Manilla | MC21 | 224605 | 6614389 | Artefact scatter |
| 20-4-0030 | Back Creek/Stewarts Gull; Manilla | MC18 | 230905 | 6615489 | Artefact scatter |
| 20-4-0031 | Maules Creek; Warriahdool; Manilla | MC19 | 225305 | 6621789 | Artefact scatter |
| 20-4-0032 | Back Creek; Warriahdool; Manilla | MC20 | 225805 | 6618989 | Artefact scatter |
| 20-4-0033 | Willowtree Range; Teston | MC2 | 223405 | 6614589 | Artefact scatter |
| 20-4-0034 | Willowtree Range; Teston | MC3 | 223505 | 6614689 | Artefact scatter |
| 20-4-0035 | Back Creek; Leard State Forest | MC1 | 230805 | 6614789 | Artefact scatter |
| 20-4-0057 | BBS; Red Chief LALC; Gunnedah and Narrabri Rd TSR 1 | | 215390 | 6609118 | Scarred tree |
| 20-4-0058 | BBS; Red Chief LALC; Boggabri TSR 1 | | 213183 | 6613286 | Scarred tree |
| 20-4-0064 | BBS; Red Chief LALC; Iron Bridge ST 2 | | 217708 | 6603554 | Scarred tree |

| AHIMS Site ID | AHIMS Site Name | Legacy Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|---------------|--------------------------------------------|------------------|-------------------------|--------------------------|-------------------|
| 20-4-0068 | BBS; Red Chief LALC; Barkers Lagoon ST 2 | | 224055 | 6600175 | Scarred tree |
| 20-4-0072 | BBS; Red Chief LALC; Iron Bridge ST 1 | | 218543 | 6604084 | Scarred tree |
| 20-4-0073 | BBS; Red Chief LALC; Barkers Lagoon ST 1 | | 224179 | 6600108 | Scarred tree |
| 20-4-0074 | BBS; Red Chief LALC; Daiseymead ST 1 | NV34 | 216907 | 6607786 | Scarred tree |
| 20-4-0075 | BBS; Red Chief LALC; Daiseymead ST 2 | | 216887 | 6607233 | Scarred tree |
| 20-4-0076 | BBS; Red Chief LALC; Leard SF 1 | | 230409 | 6616422 | Scarred tree |
| 20-4-0077 | BBS; Red Chief LALC; Leard SF 4 | | 224961 | 6616244 | Isolated Artefact |
| 20-4-0078 | BBS; Red Chief LALC; Leard SF 3 | | 224811 | 6615266 | Isolated Artefact |
| 20-4-0079 | BBS; Red Chief LALC; Leard SF 2 | | 230842 | 6615440 | Isolated Artefact |
| 20-4-0080 | BBS; Red Chief LALC; Leard SF – Goonbri Ck | | 231946 | 6610233 | Isolated Artefact |
| 20-4-0090 | BBS; Red Chief LALC; Leard SF 5 | | 227451 | 6611075 | Isolated Artefact |
| 20-4-0092 | NAS 1 | | 227359 | 6607672 | Artefact scatter |
| 20-4-0093 | NISO 1 | | 227359 | 6607672 | Isolated Artefact |
| 20-4-0094 | BC-1 | | 226168 | 6611695 | Isolated Artefact |
| 20-4-0096 | BC-2 | | 226011 | 6611602 | Isolated Artefact |
| 20-4-0097 | BC-3 | | 226229 | 6612333 | Isolated Artefact |
| 20-4-0098 | BC-4 | | 227126 | 6611577 | Isolated Artefact |
| 20-4-0099 | BC-5 | | 226989 | 6610613 | Isolated Artefact |
| 20-4-0100 | BC-6 | | 226988 | 6610617 | Isolated Artefact |
| 20-4-0101 | BC-7 | | 227656 | 6611117 | Isolated Artefact |
| 20-4-0102 | BC-8 | | 227855 | 6611113 | Isolated Artefact |
| 20-4-0103 | BC-9 | | 227920 | 6611159 | Isolated Artefact |
| 20-4-0104 | BC-10 | | 227996 | 6611252 | Isolated Artefact |
| 20-4-0105 | BC-11 | | 228231 | 6611286 | Isolated Artefact |
| 20-4-0106 | BC-12 | | 228078 | 6612217 | Isolated Artefact |
| 20-4-0107 | BC-13 | | 227968 | 6611850 | Isolated Artefact |
| 20-4-0108 | BC-14 | | 227512 | 6611198 | Isolated Artefact |
| 20-4-0109 | BC-15 | | 227431 | 6611081 | Isolated Artefact |
| 20-4-0110 | BC-16 | | 228387 | 6611077 | Scarred tree |
| 20-4-0111 | BC17 | | 227644 | 6608315 | Isolated Artefact |
| 20-4-0112 | BC-18 | | 227622 | 6608416 | Isolated Artefact |
| 20-4-0113 | BC-19 | | 227622 | 6608492 | Isolated Artefact |
| 20-4-0114 | BC-20 | | 227531 | 6608729 | Isolated Artefact |
| 20-4-0115 | BC-21 | | 226251 | 6609073 | Isolated Artefact |
| 20-4-0116 | BC-22 | | 227767 | 6608516 | Isolated Artefact |
| 20-4-0117 | BC-23 | | 226605 | 6608460 | Scarred tree |

| AHIMS Site ID | AHIMS Site Name | Legacy Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|---------------|-----------------|------------------|-------------------------|--------------------------|-------------------|
| 20-4-0118 | BC-24 | | 226039 | 6610496 | Isolated Artefact |
| 20-4-0119 | BC-25 | | 226014 | 6610716 | Isolated Artefact |
| 20-4-0120 | BC-26 | | 225879 | 6611038 | Isolated Artefact |
| 20-4-0121 | BC-27 | | 226238 | 6609120 | Isolated Artefact |
| 20-4-0122 | BC-28 | | 226159 | 6609147 | Isolated Artefact |
| 20-4-0123 | BC-29 | | 226090 | 6609164 | Isolated Artefact |
| 20-4-0124 | BC-30 | | 226018 | 6609174 | Isolated Artefact |
| 20-4-0125 | BC-31 | | 225354 | 6609238 | Isolated Artefact |
| 20-4-0126 | BC-32 | | 225147 | 6609354 | Isolated Artefact |
| 20-4-0127 | BC-33 | | 225058 | 6609442 | Isolated Artefact |
| 20-4-0128 | BC-34 | | 225940 | 6611680 | Isolated Artefact |
| 20-4-0129 | BC36 | | 230527 | 6609006 | Isolated Artefact |
| 20-4-0130 | BC37 | | 226785 | 6608396 | Scarred tree |
| 20-4-0131 | BC38 | | 226524 | 6608158 | Artefact scatter |
| 20-4-0132 | BC39 | | 226422 | 6608122 | Isolated Artefact |
| 20-4-0133 | BC40 | | 226468 | 6608332 | Artefact scatter |
| 20-4-0134 | BC42 | | 226309 | 6608430 | Artefact scatter |
| 20-4-0135 | BC41 | | 226333 | 6608273 | Artefact scatter |
| 20-4-0136 | BC43 | | 226155 | 6608455 | Artefact scatter |
| 20-4-0137 | BC44 | | 226186 | 6608185 | Artefact scatter |
| 20-4-0138 | BC45 | | 226282 | 6608124 | Artefact scatter |
| 20-4-0139 | BC46 | | 226098 | 6608743 | Artefact scatter |
| 20-4-0140 | BC47 | | 226105 | 6608889 | Artefact scatter |
| 20-4-0141 | BC48 | | 226105 | 6608889 | Artefact scatter |
| 20-4-0142 | BC49 | | 226105 | 6608889 | Isolated Artefact |
| 20-4-0143 | BC50 | | 226105 | 6608889 | Scarred tree |
| 20-4-0144 | BC51 | | 226105 | 6608889 | Scarred tree |
| 20-4-0145 | BC52 | | 226105 | 6608889 | Scarred tree |
| 20-4-0146 | BC53 | | 226105 | 6608889 | Isolated Artefact |
| 20-4-0147 | BC54 | | 226105 | 6608889 | Artefact scatter |
| 20-4-0148 | BCHR1 | | 225485 | 6608430 | Isolated Artefact |
| 20-4-0149 | BCHR2 | | 225368 | 6608222 | Isolated Artefact |
| 20-4-0150 | BCHR3 | | 224793 | 6608318 | Isolated Artefact |
| 20-4-0151 | BCHR4 | | 224630 | 6608316 | Isolated Artefact |
| 20-4-0152 | BCHR5 | | 224530 | 6608290 | Isolated Artefact |
| 20-4-0153 | BCHR7 | | 219896 | 6608809 | Isolated Artefact |
| 20-4-0154 | BCHR8 | | 215153 | 6605186 | Isolated Artefact |
| 20-4-0155 | BCHR6 | | 223266 | 6608136 | Isolated Artefact |
| 20-4-0156 | NAS2 | | 228888 | 6606030 | Artefact scatter |
| 20-4-0157 | GGOS1 | | 228604 | 6605280 | Artefact scatter |
| 20-4-0158 | GGOS2 | | 228450 | 6604477 | Artefact scatter |
| 20-4-0159 | GGOS3 | | 228397 | 6604477 | Artefact scatter |
| 20-4-0160 | GGOS4 | | 228440 | 6604352 | Artefact scatter |

| AHIMS Site ID | AHIMS Site Name | Legacy Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|---------------|------------------------|------------------|-------------------------|--------------------------|--------------------------------|
| 20-4-0161 | NST1 | | 227553 | 6606696 | Scarred tree |
| 20-4-0196 | Boggabri Coal Pad 1 | | 226020 | 6607460 | PAD |
| 20-4-0198 | BCD1 | | 225453 | 6607535 | Stone quarry; Artefact scatter |
| 20-4-0199 | BCD2 | | 225900 | 6606697 | Artefact scatter |
| 20-4-0200 | BCD3 | | 226322 | 6606222 | Isolated Artefact |
| 20-4-0201 | HR NV64, 66-70 | | 221790 | 6608296 | Artefact scatter |
| 20-4-0203 | HRNV21 | | 218459 | 6608295 | Artefact scatter |
| 20-4-0205 | HRNV34 | | 227321 | 6611700 | Scarred tree |
| 20-4-0208 | HR NV 65 | | 221304 | 6608652 | Artefact scatter |
| 20-4-0209 | HR NV 71-74 | | 221304 | 6608652 | Artefact scatter |
| 20-4-0216 | LFNV1,2,3,4 & 13 | | 223477 | 6609967 | Artefact scatter |
| 20-4-0217 | LFNV5,6,14,15,16,18&19 | | 228350 | 6612270 | Artefact scatter |
| 20-4-0218 | LF NV 7,8,9 | | 227396 | 6612675 | Artefact scatter |
| 20-4-0219 | LF NV10 | | 227341 | 6612386 | Artefact scatter |
| 20-4-0220 | LFNV11 | | 225126 | 6612750 | Isolated Artefact |
| 20-4-0221 | LFNV12 | | 223805 | 6610902 | Isolated Artefact |
| 20-4-0222 | LFNV25,26, 27 | | 225649 | 6610101 | Scarred tree |
| 20-4-0223 | LFNV28,29 & 31 | | 227436 | 6612395 | Scarred tree |
| 20-4-0224 | LF NV, 51-61 & 63 | | 224946 | 6608068 | Artefact scatter |
| 20-4-0225 | LFNV30 | | 227321 | 6611700 | Scarred tree |
| 20-4-0226 | LFNV32 | | 225740 | 6611543 | Scarred tree |
| 20-4-0227 | LFNV33 | | 225971 | 6611066 | Isolated Artefact |
| 20-4-0228 | LFNV 49, 50 & 62 | | 224896 | 6609111 | Artefact scatter |
| 20-4-0229 | LFNV 77, 78 | | 223825 | 6608155 | Artefact scatter |

Table 4 Unregistered AHIMS Archaeological Sites

*Sites within the Project Boundary are highlighted green.

| Report Author | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|----------------|-----------|-------------------------|--------------------------|-------------------|
| Dallas (1986) | MC22 | 214965 | 6604749 | Rock shelter |
| Dallas (1986) | MC23 | 215215 | 6606169 | Artefact scatter |
| Dallas (1986) | MC24 | 215405 | 6606489 | Artefact scatter |
| Dallas (1986) | MC25 | 215855 | 6607289 | Artefact scatter |
| Bessant (2010) | NV20 | 217315 | 6607905 | Artefact Scatter |
| Bessant (2010) | NV21 | 218459 | 6608295 | Artefact Scatter |
| Bessant (2010) | NV22 | 217588 | 6607848 | Artefact Scatter |
| Bessant (2010) | NV23 | 215017 | 6605133 | Artefact Scatter |
| Bessant (2010) | NV35 | 215619 | 6607338 | Scarred Tree |
| Bessant (2010) | NV36 | 215647 | 6607336 | Scarred Tree |
| Bessant (2010) | NV37 | 215541 | 6607376 | Scarred Tree |
| Bessant (2010) | NV38 | 215511 | 6607407 | Isolated Artefact |
| Bessant (2010) | NV39 | 215342 | 6607421 | Artefact Scatter |

| Report Author | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type |
|----------------|-----------|-------------------------------|--------------------------------|-------------------|
| Bessant (2010) | NV40 | 215209 | 6607087 | Artefact Scatter |
| Bessant (2010) | NV41 | 215177 | 6606688 | Isolated Artefact |
| Bessant (2010) | NV42 | 215206 | 6606618 | Isolated Artefact |
| Bessant (2010) | NV43 | 215205 | 6606338 | Artefact Scatter |
| Bessant (2010) | NV44 | 215253 | 6606444 | Isolated Artefact |
| Bessant (2010) | NV45 | 215339 | 6605495 | Isolated Artefact |
| Bessant (2010) | NV46 | 215158 | 6605133 | Isolated Artefact |
| Bessant (2010) | NV47 | 215091 | 6605058 | Artefact Scatter |
| Bessant (2010) | NV48 | 214606 | 6604800 | Artefact Scatter |
| Bessant (2010) | NV71 | 219975 | 6608835 | Isolated Artefact |
| Bessant (2010) | NV72 | 219620 | 6608878 | Isolated Artefact |
| Bessant (2010) | NV73 | 219494 | 6608900 | Artefact Scatter |
| Bessant (2010) | NV74 | 219106 | 6608955 | Isolated Artefact |
| Bessant (2010) | NV75 | 217277 | 6607988 | Isolated Artefact |
| Bessant (2010) | NV76 | 216773 | 6607827 | Scarred Tree |

Table 5 Summary of Previously Identified Aboriginal Archaeological Sites

| Site Type | Number | % |
|---------------------------------------|------------|------------|
| Artefact Scatter | 70 | 44% |
| Isolated Artefact | 60 | 38% |
| Scarred Tree | 27 | 14% |
| Grinding Grove | 1 | 0.66% |
| Aboriginal Ceremony and Dreaming Site | 1 | 0.66% |
| Scarred Tree & Artefact Scatter | 1 | 0.66% |
| PAD | 1 | 0.66% |
| Stone Quarry | 1 | 0.66% |
| Rock Shelter | 1 | 0.66% |
| Total | 158 | 100 |



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6.2.1 Previous Archaeological Surveys and Excavations

Searches of DECCW's AHIMS database and Catalogue of Archaeological Reports indicate that relatively few Aboriginal heritage assessments incorporating archaeological survey and/or test excavations have taken place in the greater Boggabri area over the past three decades.

Table 6 summarises the results of previous archaeological investigations within and adjacent to the Project.

Table 6 Summary of previous research

* Reports highlighted green indicate those that have surveyed all or part of the Project Area.

| Researchers | Assessment Type | Locality | Distance to Project | Key Predictions/ Findings |
|-----------------|-----------------|-------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kamminga (1977) | Survey | Boggabri | 20km | No archaeological sites identified. The "forested hills" of the Leard State Forest are unlikely to contain rockshelters because the conglomerate rock exposures and weather in the area largely preclude shelter formation. |
| Thompson (1981) | Survey | Between Boggabri and Gunnedah | 20-70km | 29 'sites' and 11 'isolated finds' recorded. Site types included artefact scatters, axe grinding grooves, scarred trees, and a single mythological site. There is a close spatial association between sites and water sources. |
| Haglund (1983) | Survey | Maules Creek Coal Project | The Study Area | A total of 13 sites identified: 6 artefact scatters and 7 isolated finds. Retouched flakes, cores, and flakes were the most common artefact types. Recorded sites should not be regarded as separate occurrences, but as part of a general scatter of stone artefacts on and in most flat and/or gently sloping surfaces in the vicinity of temporary water sources. Lack of sites above the 340m contour interpreted as a product of generally unfavourable environmental conditions for occupation, including a lack of surface water and the prevalence of steep, stony surfaces. |
| Balme (1986) | Survey | The Pilliga sand region and the Pilliga State Forests | 40km | Open campsites the dominant site type, typically identified on erosion surfaces in valleys, alongside streamlines. Most sites were small – between 20-50 artefacts. Quartz was the dominant raw material type. Silcrete, quartzite, jasper, fine-grained volcanic and chert were also used. Evidence for intensive Aboriginal occupation of the Pilliga Forests in prehistory is poor. The lack of variety of alternative resources, such as permanent waterholes, may explain why there is an absence of sites from the Pilliga. |

| Researchers | Assessment Type | Locality | Distance to Project | Key Predictions/ Findings |
|-----------------------------------------------------------------|-----------------|-------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dallas (1986) | Survey | Maules Creek Coal Project | The Study Area – transport corridor | Surveyed rail loop and coal haul route. Identified four sites along or adjacent to the haul route, no sites were identified on the rail loop. Three were open artefacts scatters, numbering 2, 11 and 14 artefacts. Artefact material included quartz, mudstone, siltstone, agate, volcanic, chalcedony and silcrete. The fourth site was a rock shelter with one identified stone artefact on the floor of the shelter and three artefacts between the shelter and the creek. The artefact scatters were within the haul route, while the rock shelter was adjacent. Dallas recommended a 20m buffer around the identified sites. |
| Haglund 1986 | Survey | Maules Creek Coal Project | The Study Area | Haglund resurveyed the areas covered in the original 1983 survey combined with additional properties to the south. She identified an additional 8 stone artefact scatters primarily within the steep sided gully. Haglund recommended test excavation to determine the extent of each site should any sites be impacted by the proposed coal mine. She also developed a series of research questions to use as the basis for further work. |
| Roberts (1991) | Survey | The Pilliga Forests | 40km | A total of 89 sites identified: 24 open campsites, 62 scarred trees, and 3 rockshelters. Quartz was the dominant raw material type. Burial sites are unlikely to occur in the Pilliga Forests due to unfavourable soil conditions. Rock engravings and paintings will be rare in the area. Poor ground surface visibility away from water sources prohibits an effective assessment of the relationship between water sources and the extent of Aboriginal activities in the forest. Aboriginal people may have utilised the forests' creeks as 'corridors' for movement. The distribution of scarred trees likely reflects post-contact European activity. |
| NSW National Parks and Wildlife Service (Philip Purcell) (2002) | Survey | Brigalow Belt South Bioregion | 40km | A total of 311 sites identified in the Liverpool Plains, 303 in the Pilliga Outwash, and 609 in the Pilliga forests. Sites frequently occurred in the Alluvial Group, where 668 sites were identified in total. This is likely due to the association of the group with water features. Across 1,940 sites, 17 site types were recorded. The most prolific site types recorded were open camp sites and isolated finds. 90% of the sites recorded were located within 200-300m of water. Access to water is the dominant factor in regard to site location. |

| Researchers | Assessment Type | Locality | Distance to Project | Key Predictions/ Findings |
|---------------------------------------------------|-----------------|--------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R.W. Corkery & Co. Pty Ltd (2005a) | Survey | East Boggabri | 20km | A total of 4 Aboriginal sites were identified: 1 possible scarred tree, 2 low density artefact scatters, and 1 isolated artefact. The isolated artefact comprises a probable basalt axe head made from a river cobble. |
| R.W. Corkery & Co. Pty Ltd (2005b) | Survey | East Boggabri | 20km | A total of 4 Aboriginal sites were identified along the transport corridor. All sites comprised chipped stone artefact scatters, with artefact totals ranging from 5-20. |
| Archaeological Surveys and Reports Pty Ltd (2009) | Survey | Narrabri | 18km | A total of 121 sites were recorded. Low density artefact scatters and isolated finds were the dominant site types. The majority were assessed as having low scientific significance. |
| Besant (2010) | Survey | Boggabri Coal Mine & Haul Road | Covers part of the southern transport corridor. | A total of 104 sites identified in the area. 77 previously unrecorded 'archaeological loci' including 67 lithic artefact sites. 10 scarred trees, and one possible stone cairn. Proposed there may be a continuous artefact scatter. Elevated landforms appear to have greater site preservation, dependant on soil depth and previous land use. The Leard State Forest known to contain open sites. The potential for subsurface artefacts in the Leard State Forest is considered to be high, and it is possible that expansive sites could be located on the lower and upper slopes around the forest. The sites in the Leard State Forest were assessed as being of high scientific significance at a local level, as they are relatively rare in their regional context. 63 sites would be impacted by the development. Recommended salvage under Part 3A. |

6.2.2 Archaeological Predictions

Consideration of the archaeological and environmental context of the precinct allows a series of predictions to be made concerning the character and distribution of archaeological sites within it.

Stone Artefact Scatters

Stone artefact scatters are scatters of chipped stone artefacts consisting of more than one stone artefact. These types of sites are normally associated with stone tool production, camping sites and resource gathering sites. The types of artefacts found within these sites may include flakes of stone, cores (flakes are removed from the stone cores) or tools.

Artefact scatters are one of two dominant archaeological sites identified as having the potential to occur in the vicinity of the Maules Creek area. Therefore it can be expected that there is a high potential for the detection of unidentified stone artefact scatters within the Project Boundary.

Isolated Artefacts

Isolated artefacts refer to a single stone artefact. These artefacts are found in many environmental contexts and are generally thought to be the result of accidental loss or discard after use. It should be noted that this site type may also represent surface expression of a larger sub-surface archaeological deposits.

Isolated artefacts represent the second most common site type as having the potential to occur the general vicinity of the Maules Creek area. It is considered likely that isolated artefacts will be identified within the Project Boundary.

Scarred Trees

Scarred trees are trees that have scars present on their trunk that are associated with the production of cultural items/implements such as coolamons, shields and canoes. It is the removal of bark that causes the scar to develop on the trunk over time. Generally these scars are of particular shapes and dimensions to enable easy recognition, however over time accurate identification can become difficult to discern from natural scarring events such as fire or a branch fall.

Despite extensive logging in the Leard State Forest and land clearance by farmers, a large number of scarred trees have been identified within the Maules Creek area, particularly within Travelling Stock Routes (TSR) that contain a number of mature trees. It is considered likely that additional scarred trees have the potential to occur within the Project Boundary.

Aboriginal Quarries

Stone quarries were used to procure the raw material for making stone tools. Quarries are rocky outcrops that usually have evidence of scars from flaking, crushing and battering the rock. There may be identifiable artefacts such as unfinished tools, hammer stones, anvils and grinding stones. No Aboriginal quarry sites are known to exist within the Project Boundary, however there remains the potential for previously unidentified quarry sites to exist.

Aboriginal Burials

Aboriginal communities strongly associate burial sites with a connection to country and are opposed to disturbance of burials or their associated sites. General considerations for the presence of burial sites are the suitability of sub-surface deposits for digging purposes; with soft soil and sand being the most likely. They are more likely near watercourses or in dunes near old lake beds. No burial sites have been recorded within 15km of the Project Boundary, however there remains the potential for burial sites to occur along major watercourses.

7.0 Archaeological Survey

7.1 Aims and Objectives

The overarching aim of the survey undertaken was to identify, record and map Aboriginal heritage values within the Project Boundary. These values include both the tangible remains of past Aboriginal activity (i.e. archaeological evidence) as well as intangible cultural values. More specific survey objectives were as follows:

1. To re-locate and re-record all AHIMS registered Aboriginal archaeological sites within the Project Boundary;
2. To sample - by way of targeted pedestrian transects - all landform types within the Project Boundary;
3. To achieve a survey coverage that adequately reflects the variable archaeological potential of differing landform types within the Project Boundary;
4. To inspect, where appropriate, areas of known or potential Aboriginal cultural value, as identified by Aboriginal stakeholder representatives; and
5. To provide sufficient data to facilitate the development and determine suitable management options for the Project.

7.2 Survey Strategy

Prior to survey, six key influences on the sampling strategy to be developed were identified. These comprised:

1. The demonstrably large size of the Project Boundary approximately 3,550 ha;
2. The rugged landscape that covers the majority of the Project Boundary;
3. Poor to non-existent Ground Surface Visibility (GSV) across the vast majority of the Project, owing to recent heavy rains in the region promoting significant vegetation growth;
4. The need to sample all landform types within the Project Boundary;
5. The need to concentrate survey on landform types known to have higher archaeological potential; and
6. The known Aboriginal archaeology of the Project and its environs.

Accordingly, prior to entering the field, it was decided that a targeted survey strategy involving the division of the Project Boundary into its constituent landform types (**Figure 7, Table 5**) and a proportional field emphasis on those considered to have higher archaeological potential (i.e. creek/river flats) would be adopted, with 'potential' defined on both practical and archaeological grounds. At the same time, in recognition of the above-mentioned access, disturbance and visibility issues, it was decided that decisions concerning the number, placement and length of transects would be made in the field.

7.3 Survey Methodology

The field survey was conducted over 18 days between August and October 2010 by teams of three AECOM archaeologists, one Hansen Bailey representative and varying number of Aboriginal stakeholder representatives per rostered team (as discussed in **Section 3.0**). The survey was broken up into two main survey periods. The first survey period from 23 August 2010 to 10 September 2010 covered the majority of the survey area with the Project Boundary including the Leard State Forest, Aston owned farming land and the proposed Rail Loop and Spur corridor. In addition to these, areas outside the Project Boundary but within Aston owned lands were surveyed to identify sites adjacent to the Project Boundary and areas for potential conservation. The second survey was conducted from 29 September 2010 to 1 October 2010 and covered a relatively small area of land consisting of 220 ha in the north of the Project Boundary that was not accessible during the first survey period.

The survey was conducted on foot within a typical linear transect width of 50 m. The location of all transects was recorded using a hand held Trimble differential Global Positioning System (GPS), with additional transect data (e.g. landform, exposure, GSV, land use and disturbance) recorded separately. The principal environmental characteristics of each transect and other pertinent features (i.e. erosion scalds etc) were also photographed. All

mature trees were inspected for cultural scarring. Likewise, all areas for potential rock shelter formation were investigated.

All Aboriginal archaeological sites identified during the survey were recorded to the standard required by the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010). For each site located or re-visited, individual artefact locations were captured by differential GPS. Associated site data (e.g. location, type, content) was documented using AECOM's standard open site recording form. As a minimum, information recorded on stone artefacts included raw material, type and size (i.e. maximum length, width and thickness). Where more than 50 artefacts were identified within a site, recording was limited to a sample of 25 artefacts. Photographic records of each site were also taken. Finally, where provided, information concerning the cultural value(s) of recorded sites and their associated environmental characteristics was noted.

7.4 Results

7.4.1 Transect

The survey involved a total of 74 transects covering approximately 107 km in linear distance the Project Boundary (Figure 8). While survey participant numbers varied within each survey team, in general a 50m transect was assessed targeting areas of moderate to high ground surface visibility including all surface exposures. All landforms were assessed. The details of each transect are summarised in Appendix B.

Table 7 Summary of Transects

| Landform Unit | Landform area (sq m) | Area Effectively Surveyed | % of Landform Effectively Surveyed | Number of Sites | Number of artefacts or features |
|-------------------|----------------------|---------------------------|------------------------------------|-----------------|---------------------------------|
| Creek Flats | 245.6 | 43.12 | 17.56 | 32 | 110 |
| Upper Slope | 2381 | 117.3 | 4.93 | 13 | 31 |
| Flats | 1437 | 277.427 | 19.31 | 35 | 179 |
| Lower Slope | 534.8 | 88.76 | 16.60 | 16 | 361 |
| Steep Sided Gully | 39.24 | 10.693 | 27.25 | 6 | 362 |
| Total | 4637.64 | 537.3 | 85.64 | 102 | 1043 |

7.4.2 Survey Constraints

Constraints for archaeologists include the extent to which human activity is represented by preserved evidence, the degree to which post-depositional processes have affected the archaeological record, the extent to which land-use (e.g. cultivation or development) has altered the archaeological landscape, the landforms present within the study area, the time of year and the conditions under which a survey is conducted. The major constraints for this survey were areas of rugged terrain with limited archaeological potential (particularly within the Leard State Forest and poor ground surface visibility due to heavy rains and the breaking of the drought over NSW in 2010. A consequence of the good rains in the area also meant that survey had to take into account the significant rise in snake population. All these factors were taken into consideration when designing the survey methodology. Transects where possible targeted all areas of surface exposure where ground surface visibility was limited.

7.4.3 Aboriginal Archaeological Sites

A total of 97 Aboriginal sites were identified during the field survey, including 38 previously recorded sites (Registered AHIMS and published sites) and an additional 59 new sites (Table 8 & Figure 9). Of these, 78 occur within the Project Boundary, with 19 sites occurring outside on Aston owned land. The majority of Aboriginal sites located during the survey were stone artefact sites (n=47) with 25 isolated artefacts also identified. In addition to these, 21 scarred trees were identified within the Project Boundary with the majority having been identified adjacent to the Namoi River within the proposed pipeline corridor. Three grinding groove sites were also identified including one fixed groove in sandstone bedrock and 2 portable grinding stones. All grinding groove sites were identified within the Steep Sided Gully landform. The remaining site type is a rock shelter previously identified but not registered with AHIMS. This site is located outside of the Project Boundary and will not be affected by the Project.

The most significant site identified was Leard SF AS1, an artefact scatter of approximately 320 artefacts located near a well know soak (Lawler's Waterhole) within the Leard State Forest. In relatively close proximity to Lawler's Waterhole several large artefact scatters were identified associated with the junctions of intermittent creeks. These sites are best able to demonstrate the variety of tool and technological types, as well as raw materials which suggest patterns of procurement local raw materials. The remaining artefact scatters and isolated artefacts are nearly always found in association with the many intermittent creeks within the Project Boundary.

Table 8 Summary of identified Aboriginal archaeological sites

*Sites highlighted green occur inside the Project Boundary

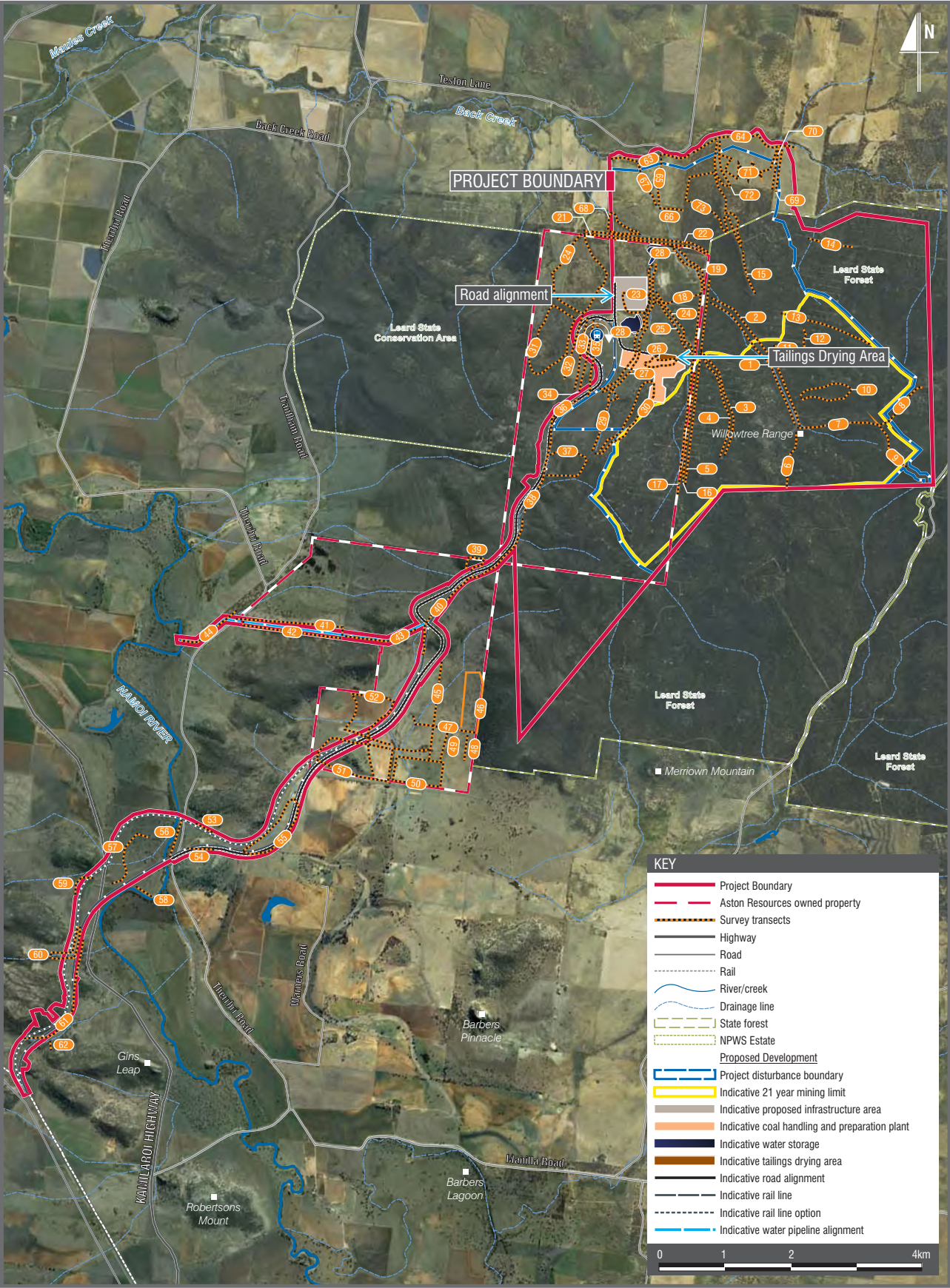
| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|-----------|---------------------------------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------|-------------------------------------------------|
| 20-4-0015 | Willow Tree Range (MC6) | 224665 | 6615317 | AS | 5 | 0 | | Flats | Yes |
| 20-4-0016 | Willow Tree Range (MC5) | 224147 | 6616149 | AS | 7 | 29 | 6814 | Flats | Junction |
| 20-4-0019 | Willow Tree Range (MC4) | 223550 | 6614793 | AS | 45 | 2 | 79 | Flats | Yes |
| 20-4-0020 | Willow Tree Range; Teston; Therribri (MC7) | 222508 | 6613511 | AS | 40 | 97 | 21839 | Lower Slope | Yes |
| 20-4-0021 | Willow Tree Range; Teston; Therribri (MC8) | 222320 | 6613198 | AS | 40 | 13 | 489 | Steep Sided Gully | Yes |
| 20-4-0022 | Willow Tree Range; Teston; Therribri (MC9) | 222989 | 6613482 | AS | 9 | 1 | | Lower Slope | Yes |
| 20-4-0023 | Willow Tree Range; Teston; Therribri (MC10) | 222819 | 6614537 | AS | 30 | 8 | 3927 | Lower Slope | Yes |
| 20-4-0024 | Velyama; Manilla (MC11) | 219001 | 6609239 | AS | 5 | 4 | 2303 | Lower Slope | No |
| 20-4-0025 | Velyama; Manilla (MC12) | 221327 | 6611226 | AS | 4 | 10 | 3959 | Lower Slope | Junction |
| 20-4-0026 | Velyama; Manilla (MC13) | 221292 | 6611969 | AS | 40 | 55 | 32410 | Steep Sided Gully | Yes |
| 20-4-0027 | Velyama; Manilla (MC14) | 221646 | 6612032 | AS | 80 | 249 | 12593 | Steep Sided Gully | Yes |
| 20-4-0028 | Teston; Manilla | 224752 | 6615016 | AS | 20 | 25 | 8656 | Flats | Yes |

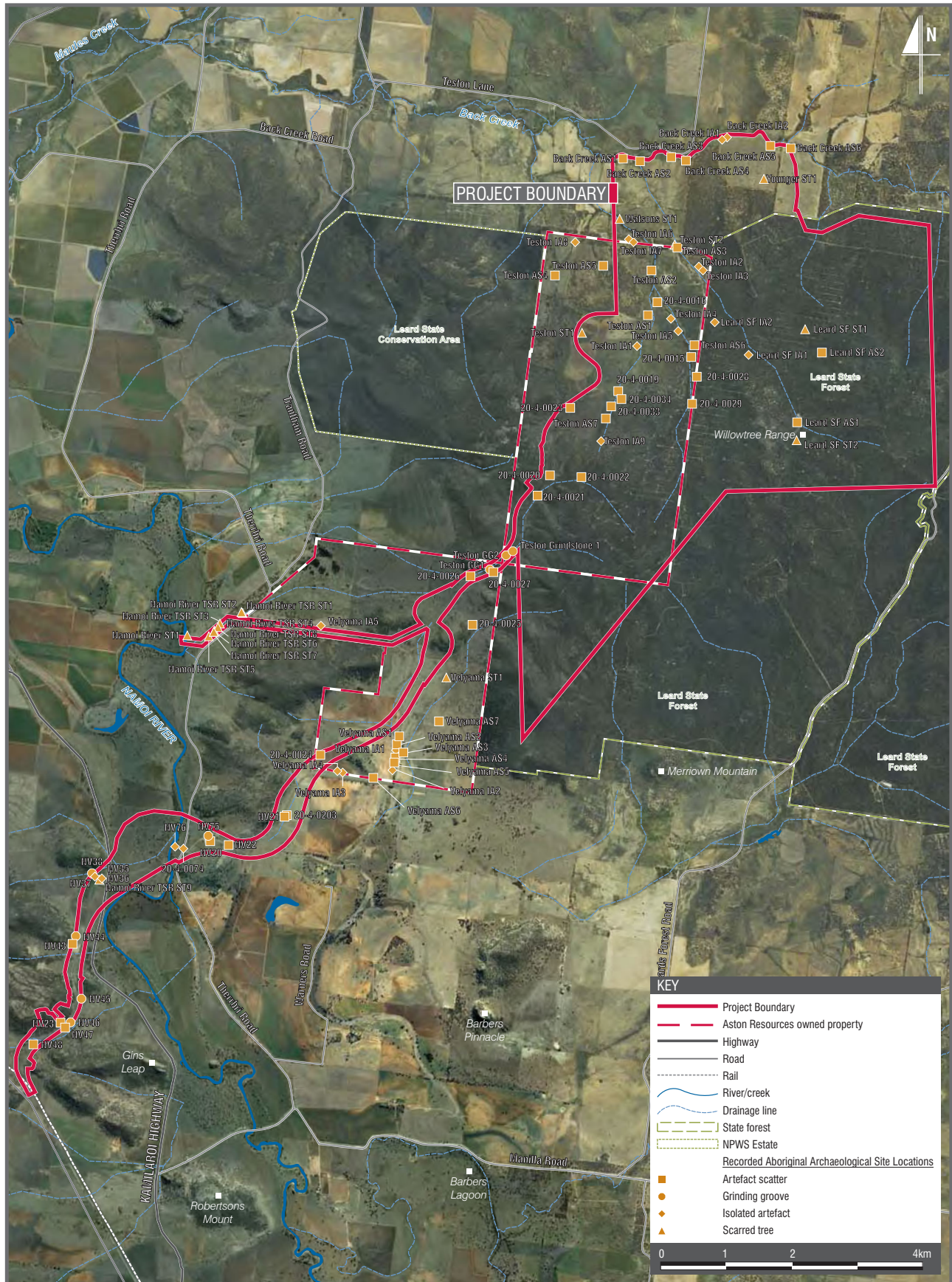
| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|-----------|------------------------------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------|-------------------------------------------------|
| | (MC15) | | | | | | | | |
| 20-4-0029 | Willowtree Range; Manilla (MC21) | 224679 | 6614603 | AS | 30 | 10 | 1550 | Lower Slope | Yes |
| 20-4-0033 | Willowtree Range; Teston (MC2) | 223443 | 6614561 | AS | 4 | 1 | | Lower Slope | Yes |
| 20-4-0034 | Willowtree Range; Teston (MC3) | 223598 | 6614673 | AS | 7 | 1 | 78 | Lower Slope | Yes |
| 20-4-0074 | BBS; Red Chief LALC; Daiseymead ST 1 (NV34) | 216907 | 6607786 | ST | 1 | 1 | | Major Creek/Riv er Flat | Yes |
| 20-4-0077 | BBS; Red Chief LALC; Leard SF 4 | 224961 | 6616244 | IA | 1 | 0 | | Flats | Yes |
| 20-4-0078 | BBS; Red Chief LALC; Leard SF 3 | 224811 | 6615266 | IA | 1 | 0 | | Flats | Yes |
| 20-4-0154 | BCHR8 | 215153 | 6605186 | IA | 1 | 0 | | Lower Slope | Yes |
| 20-4-0203 | HRNV21 | 218488 | 6608317 | AS | 8 | 7 | 2376 | Flats | Yes |
| | MC22 | 214965 | 6604749 | RS | 4 | 0 | | Steep Sided Gully | Yes |
| | MC23 | 215215 | 6606169 | AS | 2 | 0 | | Major Creek/Riv er Flat | Yes |
| | MC24 | 215405 | 6606489 | AS | 11 | 0 | | Major Creek/Riv er Flat | Yes |
| | MC25 | 215855 | 6606489 | AS | 71 | 0 | | Major Creek/Riv er Flat | Yes |
| | Back Creek AS1 | 223621 | 6618342 | AS | N/A | 14 | 528 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS2 | 223882 | 6618305 | AS | N/A | 10 | 201 | Major Creek/Riv er Flat | Junction |
| | Back Creek AS3 | 224360 | 6618368 | AS | N/A | 30 | 3032 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS4 | 224584 | 6618315 | AS | N/A | 4 | 81 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS5 | 225871 | 6618537 | AS | N/A | 6 | 63 | Major Creek/Riv | Yes |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------|-------------------------------------------------|
| | | | | | | | | er Flat | |
| | Back Creek AS6 | 226184 | 6618503 | AS | N/A | 33 | 5951 | Major Creek/Riv er Flat | Yes |
| | Back Creek IA1 | 225135 | 6618633 | IA | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Back Creek IA2 | 225211 | 6618669 | IA | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Leard SF AS1 | 226284 | 6614316 | AS | N/A | 320 | 59824 | Flats | Junction |
| | Leard SF AS2 | 226658 | 6615384 | AS | N/A | 4 | 132 | Lower Slope | Yes |
| | Leard SF IA1 | 225541 | 6615348 | IA | N/A | 1 | | Flats | No |
| | Leard SF IA2 | 225023 | 6615846 | IA | N/A | 1 | | Flats | No |
| | Leard SF ST1 | 226403 | 6615738 | ST | N/A | 1 | | Lower Slope | No |
| | Leard SF ST2 | 226273 | 6614045 | ST | N/A | 1 | | Flats | Yes |
| | Namoi River ST1 | 216971 | 6611063 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST1 | 217817 | 6611408 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST2 | 217800 | 6611420 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST3 | 217469 | 6611246 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST4 | 217437 | 6611193 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST5 | 217300 | 6611054 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST6 | 217375 | 6611118 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST7 | 217374 | 6611117 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST8 | 217386 | 6611137 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | NV20 | 217315 | 6607905 | AS | | 2 | | Lower Slope | Yes |
| | NV22 | 217588 | 6607848 | AS | | 7 | | Lower Slope | No |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|----------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------|-------------------------------------------------|
| | NV23 | 215017 | 6605133 | AS | | 2 | | Lower Slope | Yes |
| | NV35 (Namoi River TSR ST9) | 215619 | 6607338 | ST | 1 | 1 | | Major Creek/Riv er Flat | Yes |
| | NV36 | 215647 | 6607336 | ST | | 1 | | Major Creek/Riv er Flat | Yes |
| | NV37 | 215541 | 6607376 | ST | | 1 | | Major Creek/Riv er Flat | No |
| | NV43 | 215253 | 6606444 | AS | | 2 | | Major Creek/Riv er Flat | Yes |
| | NV44 | 215339 | 6605495 | IA | | 1 | | Major Creek/Riv er Flat | Yes |
| | NV45 | 215158 | 6605133 | IA | | 1 | | Lower Slope | No |
| | NV46 | 215091 | 6605058 | IA | | 1 | | Lower Slope | Yes |
| | NV47 | 215091 | 6605058 | AS | | 2 | | Lower Slope | Yes |
| | NV48 | 214606 | 6604800 | AS | | 14 | | Lower Slope | Yes |
| | NV75 | 217277 | 6607988 | IA | | 1 | | Lower Slope | No |
| | NV76 | 216773 | 6607827 | ST | | 1 | | Major Creek/Riv er Flat | Yes |
| | Teston AS1 | 224005 | 6615953 | AS | N/A | 9 | 800 | Flats | Yes |
| | Teston AS2 | 224058 | 6616636 | AS | N/A | 7 | 2 | Flats | Yes |
| | Teston AS3 | 224455 | 6616988 | AS | N/A | 8 | 5 | Flats | Yes |
| | Teston AS4 | 222585 | 6616561 | AS | N/A | 10 | 9 | Flats | Yes |
| | Teston AS5 | 223322 | 6616707 | AS | N/A | 2 | 12 | Flats | Yes |
| | Teston AS6 | 224714 | 6615494 | AS | N/A | 3 | 6 | Flats | Yes |
| | Teston AS7 | 223363 | 6614378 | AS | N/A | 5 | 73 | Flats | Yes |
| | Teston GG1 | 221590 | 6612073 | GG | N/A | 1 | | Steep Sided Gully | Yes |
| | Teston GG2 | 221838 | 6612286 | GG | N/A | 1 | | Steep Sided Gully | Yes |
| | Teston Grindstone 1 | 221942 | 6612352 | GG | N/A | 1 | | Steep Sided Gully | Yes |
| | Teston IA1 | 223836 | 6615484 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA2 | 224781 | 6616695 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA3 | 224846 | 6616638 | IA | N/A | 1 | | Flats | Yes |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|----------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|----------------|-------------------------------------------------|
| | Teston IA4 | 224353 | 6615901 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA5 | 224466 | 6615712 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA5 | 223288 | 6614031 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA6 | 223710 | 6617113 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA7 | 223783 | 6617070 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA8 | 222894 | 6617066 | IA | N/A | 1 | | Flats | Yes |
| | Teston ST1 | 222999 | 6615685 | ST | N/A | 1 | | Lower Slope | No |
| | Teston ST2 | 224413 | 6617032 | ST | N/A | 1 | | Flats | Yes |
| | Velyama AS1 | 220207 | 6609523 | AS | N/A | 2 | | Flats | Yes |
| | Velyama AS2 | 220172 | 6609400 | AS | N/A | 4 | 118 | Flats | Yes |
| | Velyama AS3 | 220269 | 6609278 | AS | N/A | 2 | 35 | Flats | Yes |
| | Velyama AS4 | 220150 | 6609200 | AS | N/A | 8 | 311 | Flats | Yes |
| | Velyama AS5 | 220129 | 6609122 | AS | N/A | 3 | 5 | Flats | Yes |
| | Velyama AS6 | 219812 | 6608891 | AS | N/A | 5 | 249 | Flats | No |
| | Velyama AS7 | 220814 | 6609752 | AS | N/A | 3 | 6 | Flats | No |
| | Velyama IA1 | 220156 | 6609314 | IA | N/A | 1 | | Flats | Yes |
| | Velyama IA2 | 220106 | 6609009 | IA | N/A | 1 | | Flats | No |
| | Velyama IA3 | 219344 | 6608973 | IA | N/A | 1 | | Flats | No |
| | Velyama IA4 | 219264 | 6608993 | IA | N/A | 1 | | Flats | No |
| | Velyama IA5 | 219012 | 6611213 | IA | N/A | 1 | | Flats | Yes |
| | Velyama ST1 | 220926 | 6610422 | ST | N/A | 1 | | Flats | Yes |
| | Watsons ST1 | 223575 | 6617425 | ST | N/A | 1 | | Flats | Yes |
| | Younger ST1 | 225772 | 6618035 | ST | N/A | 1 | | Lower Slope | No |





8.0 Significance Assessment

8.1 Defining Cultural Significance

Heritage sites, objects and places hold value for communities in many different ways. The many heritage values are summed up in an assessment of “cultural significance”.

The primary guide to management of heritage places is the Australia ICOMOS Burra Charter 1999. Article 1.2 of the Burra Charter defines cultural significance as follows:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

Places may have a range of values for different individuals or groups.

This assessment has sought to identify Aboriginal heritage objects and sites within the Project Boundary and obtain enough information to allow the values of those objects and sites to be determined.

8.1.1 Scientific Value

Scientific value refers to the contribution that the heritage resource (i.e. an Aboriginal site or archaeological distribution) can make to knowledge and understanding of the past. It is assessed according to the rarity, representativeness or research potential of a site. These factors are inter-related. The degree to which the heritage resource can contribute to knowledge is summed up in the notion of significance. Significance increases according to the degree of research potential, rarity of a site or area.

Research potential or demonstrated research importance is considered according to the contribution that a heritage site can make to present understanding of human society and the human past. Heritage sites, objects or places of high scientific significance are those that provide an uncommon opportunity to inform us about the specific age of people in an area, provide a rare glimpse of artistic endeavour or provide a rare chronological record of changing life through deep archaeological stratigraphy.

The capacity of a site to address research questions is predicated on a definition of what the key research issues are for a region. Sites with certain backed implements from the Holocene are very common, but sites with definite Pleistocene evidence are extremely rare, and hence of extremely high significance if found.

Some archaeologists suggest that the value of a place/object can be judged by answering the following questions:

- can the site contribute knowledge which no other resource can?
- is the knowledge relevant to general questions about human history or other substantive subjects?

Rarity and representativeness are related concepts. The comparative rarity of a site is a consideration in assessing scientific significance; a certain site type may be “one of a kind” in one region, but very common in another. Artefacts of a particular type may be common in one region, but outside the known distribution in another.

The integrity of a site is also a consideration in determining scientific significance. While disturbance of a topsoil deposit with artefacts does not entirely diminish research value, it may limit the types of questions that may be addressed. A heavily cultivated paddock may be unsuited to addressing research questions of small-scale site structure, but it may still be suitable for answering more general questions of implement distribution in a region and raw material logistics.

To adequately assess significance, evidence is required which includes information about the presence of subsurface deposits, integrity of these deposits, nature of site contents and extent of the site. A review of information about 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, which are so rare or unique that the loss of the site would affect our ability to understand aspects of past Aboriginal use/occupation for 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. Archaeological sites considered to be of high significance within the Project Boundary include large artefact scatters with unique and varied assemblages, scarred trees with well formed/preserved scars and grinding stones/grooves

- Moderate significance can be attributed to sites which provide information on an established research question. Medium density scatters and those scarred trees with poorly preserved scars are considered to be of moderate scientific value.
- Low significance is attributed to sites which 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. Small artefact scatters and isolated common types of stone artefacts are generally classed as being of low significance.

8.1.2 Social/Cultural Value

Social value refers to the importance of the heritage resource to a particular social group. When referring to the value of heritage sites and places to the Aboriginal community the term cultural value is also used. Long-standing attachment to places due to traditional stories or ceremonial significance attached to a place can give rise to strong social significance. Social values may be derived from attachment or engagement with a place due to the embodiment of traditional character and identity in the evidence of past life. Often social values stem from the archaeological evidence and the attachment that community members feel for the evidence of past Aboriginal lives and activity.

8.2 Aboriginal Heritage Values

Aboriginal heritage values identified to date within the study area are derived from the physical evidence of past Aboriginal activity.

Aboriginal heritage values identified within the Project Boundary include:

- pre-contact Aboriginal activity evident in the widespread stone artefact evidence present within the topsoil in close association with creeks and some nearby slopes;
- a pre-contact landscape of high intensity Aboriginal activity associated with a gully connecting the Namoi River around Boggabri with the upper waters of Maules and Back Creek distinct from low intensity activity in the upper reaches of intermittent creeks where creek margins are more inclined;
- a large pre-contact site associated with a permanent soak in the Leard State Forest with a significantly varied tool assemblage;
- rare evidence of Aboriginal grinding tools in three sites; and
- a number of well preserved scarred trees.

The scientific aspects of heritage also have cultural value to the local Aboriginal community through their strong interest in the tangible connection that it represents with pre-European Aboriginal cultural life and land use. No other Aboriginal social values have been identified by the Aboriginal community groups consulted through this project. Requests have been made to the Aboriginal community for confirmation of the Aboriginal community heritage values.

8.3 Assessment of Significance

The significance of Aboriginal heritage material within the study area can be made on two levels: 1) a site by site basis, and 2) an archaeological distribution basis. The majority of Aboriginal sites identified within the Project Boundary are stone artefact scatters and isolated stone artefacts. However a number of scarred trees are also present particularly in association with the Namoi River landform. Relevant considerations in assessing the level of significance are the assemblage content and whether the landscape pattern differs from that already established.

Using previous assessments as a guide to help assist in determining appropriate levels of significance, we can make a number of points:

- Aboriginal sites occur in all parts of the landscape;
- Aboriginal sites differ in the density of artefacts within exposures – more being found closer to intermittent creek beds;
- a greater concentration of stone artefacts may be anticipated closer to high order creeks;
- artefact densities in surface exposures are a poor guide to buried content and hence detailed comparison of surface densities can provide an inaccurate picture of the heritage resource;
- artefacts generally co-occur within exposures associated with intermittent creek junctions, in contrast to areas more than 100 m from creeks where exposures without artefacts are more abundant, reflecting isolated artefact discard in these locations;
- Aboriginal site content includes mostly flakes and broken flakes of chalcedony, indurated mudstone/tuff and silcrete with minor proportions of quartz, igneous stone, petrified wood and quartzite; and
- abraded artefacts such as stone hatchet heads, grindstones and mullers are rare.

The sites found within the Project Boundary are assessed as to how they fit this pattern. Aboriginal sites considered in isolation within the study area are generally of a low or moderate significance with the following exceptions:

- Artefact scatters with more than 25 artefacts and/or artefact scatters possessing unique or rare artefact types
- Scarred trees with well formed scars or rare scar shapes (circular)
- Unique or rare isolated artefacts
- Grinding grooves

21 sites of high significance were identified in the survey. The majority of these (13) were excellent examples of scarred trees, particularly within the Namoi River TSR. The remaining sites include 6 large artefact scatters (including the major camping site Leard SF AS1); and 2 examples of portable grinding grooves (both located within the steep sided gully). The bulk of moderate sites included small artefact scatters; poorly preserved scarred trees and one poorly defined grinding groove. The remaining sites were mostly isolated flakes and cores.

Table 9 Summary of Archaeological Scientific Significance.

| Significance | Site Name | AHIMS ID | Site Type |
|--------------|---------------------------------------------|----------------|------------------|
| High | Back Creek AS3 | | Artefact Scatter |
| | Back Creek AS6 | | Artefact Scatter |
| | BBS; Red Chief LALC; Daiseymead ST 1 (NV34) | 20-4-0074 | ST |
| | Leard SF AS1 | | Artefact Scatter |
| | Leard SF ST1 | | ST |
| | MC25 | Not Registered | Artefact Scatter |
| | Namoi River ST1 | | ST |
| | Namoi River TSR ST1 | | ST |
| | Namoi River TSR ST2 | | ST |
| | Namoi River TSR ST3 | | ST |
| | Namoi River TSR ST4 | | ST |
| | Namoi River TSR ST5 | | ST |
| | Namoi River TSR ST6 | | ST |
| | Namoi River TSR ST7 | | ST |
| | Namoi River TSR ST8 | | ST |
| | NV35 (Namoi River TSR ST9) | | ST |

| Significance | Site Name | AHIMS ID | Site Type |
|-----------------|--------------------------------------------|----------------|------------------|
| | Teston GG2 | | GG |
| | Teston Grindstone 1 | | GG |
| | Velyama ST1 | | ST |
| | Velyama; Manilla (MC13) | 20-4-0026 | Artefact Scatter |
| | Velyama; Manilla (MC14) | 20-4-0027 | Artefact Scatter |
| Moderate | Back Creek AS1 | | Artefact Scatter |
| | Back Creek AS2 | | Artefact Scatter |
| | Leard SF ST2 | | ST |
| | MC22 | Not Registered | RS |
| | NV36 | | ST |
| | NV76 | | ST |
| | Teston AS4 | | Artefact Scatter |
| | Teston GG1 | | GG |
| | Teston ST1 | | ST |
| | Teston ST2 | | ST |
| | Teston; Manilla (MC15) | 20-4-0028 | Artefact Scatter |
| | Velyama; Manilla (MC12) | 20-4-0025 | Artefact Scatter |
| | Watsons ST1 | | ST |
| | Willow Tree Range (MC4) | 20-4-0019 | Artefact Scatter |
| | Willow Tree Range (MC5) | 20-4-0016 | Artefact Scatter |
| | Willow Tree Range; Teston; Therribri (MC7) | 20-4-0020 | Artefact Scatter |
| | Willow Tree Range; Teston; Therribri (MC8) | 20-4-0021 | Artefact Scatter |
| | Willowtree Range; Manilla (MC21) | 20-4-0029 | Artefact Scatter |
| | Younger ST1 | | ST |
| Low | Back Creek AS4 | | Artefact Scatter |
| | Back Creek AS5 | | Artefact Scatter |
| | Back Creek IA1 | | IA |
| | Back Creek IA2 | | IA |
| | BBS; Red Chief LALC; Leard SF 3 | 20-4-0078 | IA |
| | BBS; Red Chief LALC; Leard SF 4 | 20-4-0077 | IA |
| | BCHR8 | 20-4-0154 | IA |
| | HRNV21 | 20-4-0203 | Artefact Scatter |
| | Leard SF AS2 | | Artefact Scatter |
| | Leard SF IA1 | | IA |
| | Leard SF IA2 | | IA |
| | MC23 | Not Registered | Artefact Scatter |
| | MC24 | Not Registered | Artefact Scatter |
| | NV20 | | Artefact Scatter |
| | NV22 | | Artefact Scatter |
| | NV23 | | Artefact Scatter |
| | NV43 | | Artefact Scatter |
| | NV44 | | IA |
| | NV45 | | IA |
| | NV46 | | IA |

| Significance | Site Name | AHIMS ID | Site Type |
|--------------|---------------------------------------------|-----------|------------------|
| | NV47 | | Artefact Scatter |
| | NV48 | | Artefact Scatter |
| | NV75 | | IA |
| | Teston AS1 | | Artefact Scatter |
| | Teston AS2 | | Artefact Scatter |
| | Teston AS3 | | Artefact Scatter |
| | Teston AS5 | | Artefact Scatter |
| | Teston AS6 | | Artefact Scatter |
| | Teston AS7 | | Artefact Scatter |
| | Teston IA1 | | IA |
| | Teston IA2 | | IA |
| | Teston IA3 | | IA |
| | Teston IA4 | | IA |
| | Teston IA5 | | IA |
| | Teston IA5 | | IA |
| | Teston IA6 | | IA |
| | Teston IA7 | | IA |
| | Teston IA8 | | IA |
| | Teston IA9 | | IA |
| | Velyama AS1 | | Artefact Scatter |
| | Velyama AS2 | | Artefact Scatter |
| | Velyama AS3 | | Artefact Scatter |
| | Velyama AS4 | | Artefact Scatter |
| | Velyama AS5 | | Artefact Scatter |
| | Velyama AS6 | | AS |
| | Velyama AS7 | | AS |
| | Velyama IA1 | | IA |
| | Velyama IA2 | | IA |
| | Velyama IA3 | | IA |
| | Velyama IA4 | | IA |
| | Velyama IA5 | | IA |
| | Velyama; Manilla (MC11) | 20-4-0024 | AS |
| | Willow Tree Range (MC6) | 20-4-0015 | AS |
| | Willow Tree Range; Teston; Therribri (MC10) | 20-4-0023 | AS |
| | Willow Tree Range; Teston; Therribri (MC9) | 20-4-0022 | AS |
| | Willowtree Range; Teston (MC2) | 20-4-0033 | AS |
| | Willowtree Range; Teston (MC3) | 20-4-0034 | AS |
| TBD | NV37 | | ST |

8.4 Social/Cultural Values Identified

Consultation with Aboriginal community groups has suggested that there is a common interest in the well-being of Aboriginal sites. Although AECOM has not received feedback on specific cultural heritage values on individual archaeological sites from the Aboriginal community, the general consensus received from consultation is that all archaeological sites have social/cultural values to the registered stakeholders adding that cultural values could not be easily defined. Bigundi Biame representative Mr. Wayne Griffiths, emphasised this point by stressing that

"A true definition of culture cannot be provided by such means. Cultural significance cannot simply be defined by physical or documented evidence, it is defined by its importance within a community, the historical significance, a link to ancestors through gathering where previous generations have. A religious community are not required to explain the cultural significance of religious ceremonies, whether they be held in a church field or river. Wherever ceremonies are held it is accepted as being culturally significant without requiring documentary evidence..... The values did not cease, although the continuance of significant culture and Heritage may have been forced to change at the insistence of the government of the day, or may have taken on a more clandestine nature, no the less the value is as important now, if not more so."

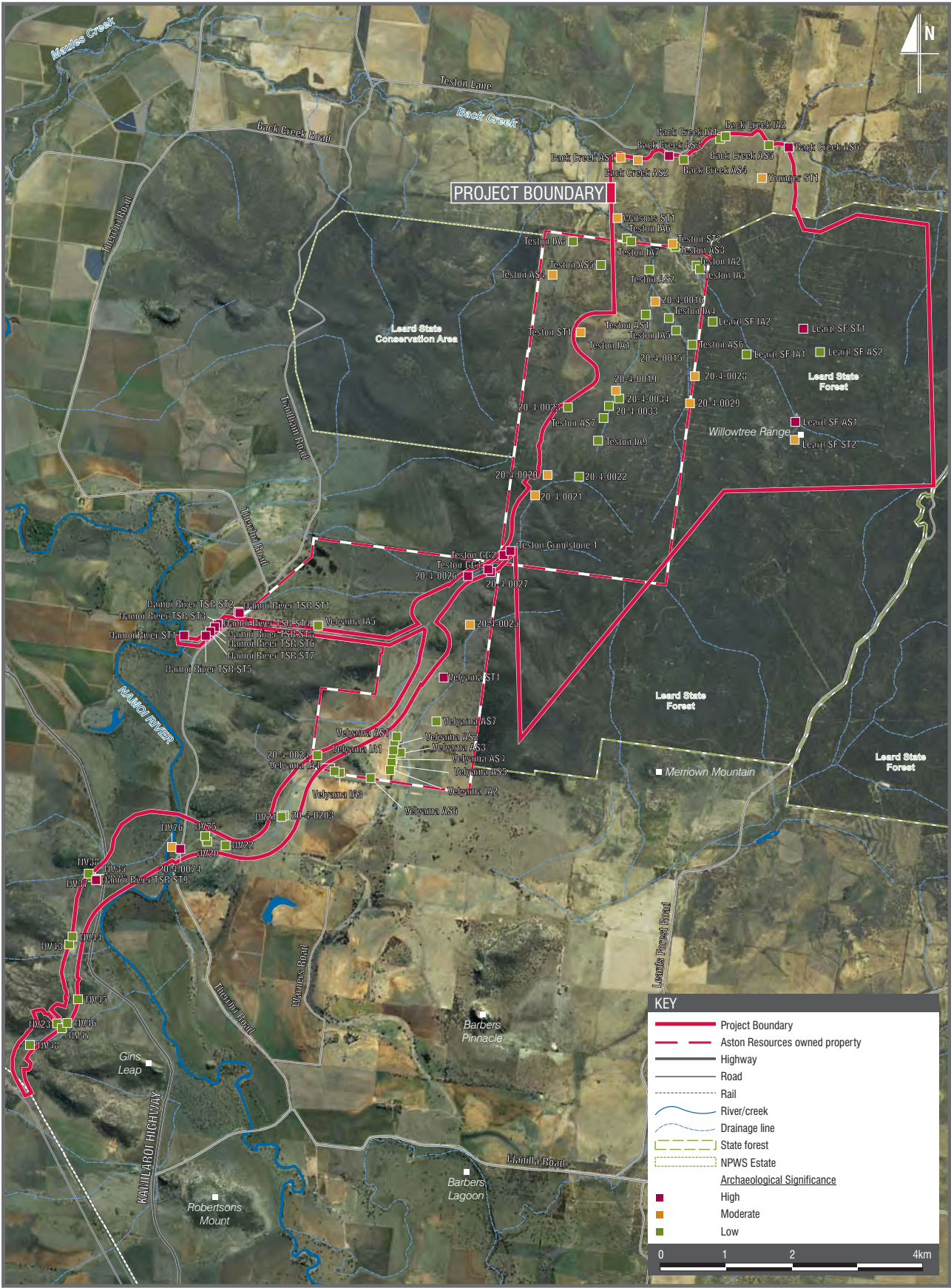
This point stresses that cultural values should be viewed not as individual sites but rather of how those sites are part of a wider landscape which in turn is part of an ongoing dynamic process of how modern Aboriginal people engaged directly and indirectly with their traditional lands.

All registered stakeholders stated an interest in being consulted over the management of Aboriginal sites and find value in engaging directly with the heritage through field inspections, salvage excavations and surface collections.

8.5 Summary of Aboriginal Cultural Heritage Values and Significance

In summary, the heritage values within the Project Boundary include:

- pre-contact Aboriginal activity evident in the widespread stone artefact evidence present within the topsoil in close association with intermittent creeks and some nearby slopes;
- a pre-contact landscape of high intensity Aboriginal activity associated with a gully connecting the Namoi River around Boggabri with the upper waters of Maules and Back Creek distinct from low intensity activity in the upper reaches of intermittent creeks where creek margins are more inclined;
- a large pre-contact site (Leard SF AS1) associated with a permanent soak in the Leard State Forest with a significantly varied tool assemblage;
- evidence of Aboriginal grinding tools in three sites; and
- a number of well preserved scarred trees.



9.0 Impact Assessment

9.1 Summary of Impacting Development

In summary, possible impacts to Aboriginal heritage may derive from five aspects of the proposed development:

1. the open cut mine and Northern Overburden Emplacement Area (OEA);
2. the Project Disturbance Boundary;
3. the water pipeline; and
4. the Rail Loop and Spur.

The potential impacts to Aboriginal heritage are further discussed below while measures to mitigate impacts and manage Aboriginal heritage are discussed in **Section 10.0**. Impacts are summarised in **Table 10**.

9.2 Potential Impacts to Aboriginal Heritage

Sixty five of the 103 recorded archaeological sites (63%) will not be directly impacted through the construction of the Project. Artefact scatters account for the bulk of archaeological sites that will not be impacted along with twelve scarred tree and one rock shelter (Table 10).

9.2.1 The Open Cut Mine and Northern OEA;

The open cut mine and Northern OEA are to be located in the northern portion of the Project Boundary and is mostly confined to the Leard State Forest. Areas within the Project Disturbance Boundary will be heavily impacted as mining commences. The Project Disturbance Boundary includes a number of intermittent creek beds known to possess culturally sensitivity items based on the location. Seven sites will be potentially impacted by the Project including the large Leard SF AS1 artefact scatter and two scarred trees. Eleven sites are located within the extent of the Northern OEA. The majority of these sites are isolated artefacts and small non-significant artefact scatters. The Project will avoid impacting the more significant artefacts along Back Creek through the creation of a buffer intended to protect the ecological and cultural heritage sensitive values of this watercourse.

9.2.2 Project Disturbance Boundary

The Project Disturbance Boundary encompasses all potential areas of disturbance in the northern component of the Project Boundary and includes the Open Cut Mine, Northern OEA, CHPP, associated stockpile and Mine Infrastructure Area. It is noted that the impact footprint of the CHPP, stockpile and Mine Infrastructure Area within the Project Disturbance Boundary may vary slightly depending on engineering considerations. As such these areas are treated as one larger impact zone. Eleven sites of moderate to low significance including artefact scatters, isolated artefacts and one scarred tree have the potential to be impacted by all additional disturbances within this boundary.

9.2.3 Water Pipeline

A water pipeline will be expected to connect the Namoi River to the Project by following an easterly path from the Namoi River through the access point for the Velyama property and continuing up to the mine infrastructure and dams along the rail spur. Six scarred trees have the potential to be impacted through the development of this pipeline.

9.2.4 Mine Access Road, Rail Loop and Spur

This will involve the construction of a approximately 16 km long Rail Spur and Loop from the existing Werris Creek to Mungindi Railway Line to the Project Infrastructure Area. In addition a Mine Access Road will be required on a similar alignment to connect the Maules Creek Coal Mine to Therribri Road. Pending final engineering design specifications twelve sites have the potential to be impacted through the construction of the proposed Mine Access Road and Rail Spur and Loop. The most significant of these are those located within the Steep Sided Gully landform. Because of the limited options in moving the rail corridor to another location or realigning the track some impacts to these sites will be unavoidable.

Table 10 Summary of potential impacts to known Aboriginal archaeological sites

| Impact | Site Name | AHIMS ID | Significance |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------|--------------|
| Open Pit – Direct Impact <u>Significance Tally</u> High – 2 Moderate – 3 Low – 2 | Leard SF AS1 | | High |
| | Leard SF AS2 | | Low |
| | Leard SF IA1 | | Low |
| | Leard SF ST1 | | High |
| | Leard SF ST2 | | Moderate |
| | Teston; Manilla (MC15) | 20-4-0028 | Moderate |
| | Willowtree Range; Manilla (MC21) | 20-4-0029 | Moderate |
| | | | |
| Overburden Area – Direct Impact <u>Significance Tally</u> High – 0 Moderate – 3 Low – 8 | BBS; Red Chief LALC; Leard SF 4 | 20-4-0077 | Low |
| | Leard SF IA2 | | Low |
| | Teston AS3 | | Low |
| | Teston AS6 | | Low |
| | Teston IA2 | | Low |
| | Teston IA3 | | Low |
| | Teston IA4 | | Low |
| | Teston IA5 | | Low |
| | Teston ST2 | | Moderate |
| | Willow Tree Range (MC5) | 20-4-0016 | Moderate |
| | Younger ST1 | | Moderate |
| | | | |
| Project Disturbance Boundary – Direct & Indirect Impacts <u>Significance Tally</u> High – 0 Moderate – 2 Low – 10 | BBS; Red Chief LALC; Leard SF 3 | 20-4-0078 | Low |
| | Teston AS1 | | Low |
| | Teston AS2 | | Low |
| | Teston IA1 | | Low |
| | Teston IA6 | | Low |
| | Teston IA7 | | Low |
| | Teston AS7 | | Low |
| | Watsons ST1 | | Moderate |
| | Willow Tree Range (MC6) | 20-4-0015 | Low |
| | Willow Tree Range (MC4) | 20-4-0019 | Moderate |
| | Willowtree Range; Teston (MC2) | 20-4-0033 | Low |
| | Willowtree Range; Teston (MC3) | 20-4-0034 | Low |
| | | | |
| | | | |
| Rail spur – Direct Impact <u>Significance Tally</u> High – 3 Moderate – 1 Low – 4 | MC23 | | Low |
| | MC24 | | Low |
| | NV37 | | TBD |
| | NV23 | | Low |
| | Teston Grindstone 1 | | High |
| | Teston ST1 | | Moderate |
| | Velyama; Manilla (MC11) | 20-4-0024 | Low |
| | Velyama; Manilla (MC13) | 20-4-0026 | High |
| | Velyama; Manilla (MC14) | 20-4-0027 | High |
| | | | |
| Rail spur – Indirect Impact (Proximity) - preventative action required | Teston GG1 | | Moderate |
| | Teston GG2 | | High |
| | Willow Tree Range; Teston; Therribri (MC10) | 20-4-0023 | Low |

| Impact | Site Name | AHIMS ID | Significance |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------|--------------|
| <u>Significance Tally</u> High – 1 Moderate – 2 Low – 1 | Willow Tree Range; Teston; Therribri (MC8) | 20-4-0021 | Moderate |
| Rail spur option – Indirect Impact (Proximity) – preventative action required if option chosen <u>Significance Tally</u> High – 1 Moderate – 1 Low – 1 | BBS; Red Chief LALC; Daiseymead ST 1 (NV34) | 20-4-0074 | High |
| | HRNV21 | 20-4-0203 | Low |
| | Willow Tree Range; Teston; Therribri (MC7) | | Moderate |
| | | 20-4-0020 | |
| Water Pipeline - Indirect Impact (Proximity) - preventative action required <u>Significance Tally</u> High – 6 Moderate – 0 Low – 0 | Namoi River TSR ST3 | | High |
| | Namoi River TSR ST4 | | High |
| | Namoi River TSR ST5 | | High |
| | Namoi River TSR ST6 | | High |
| | Namoi River TSR ST7 | | High |
| | Namoi River TSR ST8 | | High |
| Not Impacted <u>Significance Tally</u> High – 8 Moderate – 7 Low – 29 | Back Creek AS1 | | Moderate |
| | Back Creek AS2 | | Moderate |
| | Back Creek AS3 | | High |
| | Back Creek AS4 | | Low |
| | Back Creek AS5 | | Low |
| | Back Creek AS6 | | High |
| | Back Creek IA1 | | Low |
| | Back Creek IA2 | | Low |
| | MC22 | | Moderate |
| | MC25 | | High |
| | Namoi River ST1 | | High |
| | Namoi River TSR ST1 | | High |
| | Namoi River TSR ST2 | | High |
| | NV20 | | Low |
| | NV22 | | Low |
| | NV35 (Namoi River TSR ST9) | | High |
| | NV36 | | Moderate |
| | NV43 | | Low |
| | NV44 | | Low |
| | NV45 | | Low |
| | NV46 | | Low |
| | NV47 | | Low |
| | NV48 | | Low |
| | NV75 | | Low |
| | NV76 | | Moderate |
| | Teston AS4 | | Moderate |
| | Teston AS5 | | Low |
| | Teston IA8 | | Low |

| Impact | Site Name | AHIMS ID | Significance |
|-----------------------------------|--------------------------------------------|-----------|--------------|
| | Teston IA9 | | Low |
| | Velyama AS1 | | Low |
| | Velyama AS2 | | Low |
| | Velyama AS3 | | Low |
| | Velyama AS4 | | Low |
| | Velyama AS5 | | Low |
| | Velyama AS6 | | Low |
| | Velyama AS7 | | Low |
| | Velyama IA1 | | Low |
| | Velyama IA2 | | Low |
| | Velyama IA3 | | Low |
| | Velyama IA4 | | Low |
| | Velyama IA5 | | Low |
| | Velyama ST1 | | High |
| | Velyama; Manilla (MC12) | 20-4-0025 | Moderate |
| | Willow Tree Range; Teston; Therribri (MC9) | 20-4-0022 | Low |
| <i>Previously Salvaged</i> | BCHR8 | 20-4-0154 | Low |

10.0 Management Recommendations

10.1 Principles

The management of cultural heritage is determined in accordance with the cultural significance of the heritage site, place or heritage resource. This assessment has identified Aboriginal sites and potential archaeological deposit of high significance which will be impacted by the proposed development.

The options for repositioning aspects of the development to avoid impacts are limited (in the case of the mine infrastructure & coal mine open pit) or non-existent (in the case of the transport corridor). These commitments respond to the significance of the identified Aboriginal heritage and limited capacity to modify development footprint within current landform constraints and to allow the most effective extraction of the known coal reserves. A summary of the proposed management recommendations for each site is provided for in Table 11.

The following actions should be detailed in an Aboriginal Heritage Management Plan (AHMP). The commitment for the development of an AHMP should be addressed in the EA.

10.1.1 Sites to be Fenced and Avoided

All artefact scatters and scarred trees that will not be directly impacted are to be fenced and avoided during construction and operation of the Project. An appropriate buffer suitable to the site type (20 metre for artefact scatters or 5 metres + the dripline extent for scarred trees) is to be developed based on the scientific significance assessment. Fencing can be comprised of star pickets and high visibility construction fencing (or similar suitable materials) unless alternative fencing arrangements are determined through consultation with community.

10.1.2 Collection and Set-Aside of Impacted Aboriginal Sites

Surface collection of low significance artefact scatters, isolated artefacts and unique stone artefacts (grinding stones) that are to be impacted by the development is to be undertaken. Recovered artefacts will be subject to appropriate forms of analysis and managed in accordance with *Code of Practice for Archaeological Investigation for Aboriginal Objects in New South Wales* (DECCW 2010). The community is to be involved in the collection of surface artefacts. Collected Aboriginal heritage material will be stored in a manner that ensures future generations can access and enjoy the material. The material will be stored in an appropriate keeping place in the Boggabri district or within the Australian Museum.

10.1.3 Removal of Scarred Trees

Five scarred trees identified will be directly impacted by the proposed Project with a further eight requiring management for indirect impacts (precautionary fencing). All scarred trees directly impacted in final mine plan are to be removed and stored in a keeping place agreed to by community. The methodology employed to remove trees should be agreed to in consultation with the Aboriginal community, a qualified archaeologist and a qualified arborist.

10.1.4 Grinding Groove Site - Teston GG1

Teston GG1 is a poorly defined single grinding groove located in sandstone bedrock on the bed of an intermittent creek within the steep sided gully landform. Detailed inspection revealed a number of irregular natural depressions within this sandstone block caused by water erosion and tree branches. Because of its poor preservation and poor representativeness this site was determined to be of moderate scientific significance.

The site has the potential to be indirectly impacted by the construction of the proposed Rail Spur which is located 40 metres to the east of the site. This site should be fenced. Because of its location within the narrow gully, alternative rail alignment options that meet engineering and safety standards are not feasible. Should construction require impacting this site, further community consultation is recommended

10.1.5 Salvage Excavation

Salvage excavation is recommended for all sites of high significance (20-4-0026, 20-4-0027, and Leard SF AS1) that will be directly impacted by the Project. The salvage methodology may include a number of excavation methods and will be limited to the development impact area. The salvage will include as a minimum at excavations by hand of all highly significant sites identified as having more than 25 surface artefacts, with wet sieving to 3 mm screen. The Aboriginal community will be involved in the salvage excavations.

The salvage methodology shall be detailed in a research design documented within an AHMP prepared in consultation with the Aboriginal community and DECCW and to the satisfaction of the DoP. The research design document will set out the number and placement of various pits and open areas. The scale and number of excavations shall be justified by reference to current research questions and evidence required to adequately address those research questions.

Recovered artefacts will be subject to appropriate forms of analysis and reported in accordance with relevant guidelines. Salvaged Aboriginal heritage material will be stored in a manner that ensures future generations can access and enjoy the material. The material will be stored in an appropriate keeping place in the Boggabri district or within the Australian Museum until a suitable keeping place is available.

10.1.6 Further Considerations

A small number of previously recorded and/or AHIMS registered sites within the Project Boundary were not relocated due to poor ground surface visibility (cropping, pasture) or because they were unknown to the survey as they were not yet registered with the AHIMS database. These sites and their extents should be further investigated prior to impacts and may be done as part of any recommended salvage program. Field representatives of the Aboriginal community involved in salvage would be employed as part of any relocation efforts.

Table 11 Summary of Management Mitigation Measures

| Management Mitigation Measures | AHIMS ID | Site Name |
|---------------------------------|-----------|--------------------------------------------|
| Salvage Excavation | 20-4-0026 | Velyama; Manilla (MC13) |
| | 20-4-0027 | Velyama; Manilla (MC14) |
| | | Leard SF AS1 |
| Surface Collection of Artefacts | 20-4-0021 | Willow Tree Range; Teston; Therribri (MC8) |
| | 20-4-0024 | Velyama; Manilla (MC11) |
| | 20-4-0077 | BBS; Red Chief LALC; Leard SF 4 |
| | 20-4-0078 | BBS; Red Chief LALC; Leard SF 3 |
| | | Leard SF AS2 |
| | | Leard SF IA1 |
| | | Leard SF IA2 |
| | | NV23 |
| | | Teston AS1 |
| | | Teston AS3 |
| | | Teston AS6 |
| | | Teston GG2 |
| | | Teston Grindstone 1 |
| | | Teston IA1 |
| | | Teston IA2 |
| | | Teston IA3 |
| | | Teston IA4 |
| | | Teston IA5 |
| | | Teston ST2 |
| | 20-4-0028 | Teston; Manilla (MC15) |
| | 20-4-0029 | Willowtree Range; Manilla (MC21) |
| | 20-4-0016 | Willow Tree Range (MC5) |
| | 20-4-0020 | Willow Tree Range; Teston; Therribri (MC7) |
| Removal of scarred tree | | Leard SF ST1 |
| | | Leard SF ST2 |
| | | Teston ST1 |

| Management Mitigation Measures | AHIMS ID | Site Name |
|-----------------------------------------------|-----------|---------------------------------------------|
| | | Watsons ST1 |
| | | Younger ST1 |
| Community Consultation if impacted | | Teston GG1 |
| Inspection during salvage to determine extent | | MC23 |
| | | MC24 |
| | | NV37 |
| Site to be fenced | 20-4-0023 | Willow Tree Range; Teston; Therribri (MC10) |
| | 20-4-0074 | BBS; Red Chief LALC; Daiseymead ST 1 (NV34) |
| | 20-4-0203 | HRNV21 |
| | | Back Creek AS1 |
| | | Back Creek AS5 |
| | | Back Creek AS6 |
| | | Back Creek IA2 |
| | | Namoi River TSR ST3 |
| | | Namoi River TSR ST4 |
| | | Namoi River TSR ST5 |
| | | Namoi River TSR ST6 |
| | | Namoi River TSR ST7 |
| | | Namoi River TSR ST8 |
| | | Teston AS2 |
| | | Back Creek AS2 |
| | | Back Creek AS3 |
| | | Back Creek AS4 |
| | | Back Creek IA1 |
| No Impact - No further requirements | 20-4-0015 | Willow Tree Range (MC6) |
| | 20-4-0019 | Willow Tree Range (MC4) |
| | 20-4-0022 | Willow Tree Range; Teston; Therribri (MC9) |
| | 20-4-0025 | Velyama; Manilla (MC12) |
| | 20-4-0033 | Willowtree Range; Teston (MC2) |
| | 20-4-0034 | Willowtree Range; Teston (MC3) |
| | 20-4-0154 | BCHR8 |
| | | MC22 |
| | | MC25 |
| | | Namoi River ST1 |
| | | Namoi River TSR ST1 |
| | | Namoi River TSR ST2 |
| | | NV20 |
| | | NV22 |
| | | NV35 (Namoi River TSR ST9) |
| | | NV36 |
| | | NV38 |
| | | NV39 |
| | | NV40 |
| | | NV41 |

| Management Mitigation Measures | AHIMS ID | Site Name |
|--------------------------------|----------|-------------|
| | | NV42 |
| | | NV43 |
| | | NV44 |
| | | NV45 |
| | | NV46 |
| | | NV47 |
| | | NV48 |
| | | NV75 |
| | | NV76 |
| | | Teston AS4 |
| | | Teston AS5 |
| | | Teston AS7 |
| | | Teston IA5 |
| | | Teston IA6 |
| | | Teston IA7 |
| | | Teston IA8 |
| | | Velyama AS1 |
| | | Velyama AS2 |
| | | Velyama AS3 |
| | | Velyama AS4 |
| | | Velyama AS5 |
| | | Velyama AS6 |
| | | Velyama AS7 |
| | | Velyama IA1 |
| | | Velyama IA2 |
| | | Velyama IA3 |
| | | Velyama IA4 |
| | | Velyama IA5 |
| | | Velyama ST1 |

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12.0 List of Plates

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|  |  |
| <p>Plate 1 – An elevated view of the Maules Creek Coal Project looking north west from a steep ridge within the Leard State Forest overlooking the proposed location of the Mine Infrastructure Area. Landforms visible include: upper slope/ridges and lower slope.</p> | <p>Plate 2 –The Namoi River and associated creek/river floodplain landform. Photo taken at western boundary of proposed pipeline alignment looking north.</p> |
|  |  |
| <p>Plate 3 – An example of the 'flats' landform in the north of the Project Boundary. Note heavily grassed areas with lack of ground surface visibility.</p> | <p>Plate 4 – An example of the 'flats' landform in the central component of the Project Boundary. Note presence of crops with lack of ground surface visibility.</p> |
|  |  |
| <p>Plate 5 – An example of the 'lower slopes' landform in the south of the Project. Note gentle slope leading to the foot of established hills.</p> | <p>Plate 6 – Typical vegetation found on ridgelines and upper slopes within the Leard State Forest. Note the predominance of young trees, a direct result of logging through the forest.</p> |



Plate 7 – Typical sandstone outcrop found in steep sections of the Leard State Forest and adjoining properties. The sandstone within the Project Boundary was found to be unsuitable for the formation of rockshelters or caves.



Plate 8 – A typical scree slope within the Leard State Forest. Poor soil formation occurs in these landform features with the continual breakdown of the mother sandstone bedrock leaving small fist sized cobbles strewn across the ground surface.



Plate 9 – Leard SF AS1 – A highly significant large artefact scatter located within the Leard State Forest adjacent to Lawlers Waterhole. A total of 320 artefacts were identified on the surface of this site, predominately in areas of high ground surface visibility. Recorded raw materials include chalcedony, mudstone, silcrete.



Plate 10 – Leard SF AS1 – A selection of carefully prepared flakes made predominately from fine grained indurated mudstones and chert. Note consistent linear scar configuration, suggestive of blade production.



Plate 11 – 20-4-0027 – Velyama; Manilla (MC14) – A large and extensive artefact scatter of approximately 249 artefacts located on the southern bank at the southern end of the steep sided gully. This site will be directly impacted by the placement of the Rail Spur. Significant erosion has occurred at the margins of the site, however there remains the potential for extensive sub-surface deposits.



Plate 12 – 20-4-0027 – Velyama; Manilla (MC14) – A selection of some of the diverse raw material and artefact types present with this site.


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| <p>Plate 13 – Leard SF ST1 – An exemplary example of a scarred tree identified during preliminary due diligence surveys. Located within the Leard State Forest and within the Project Disturbance Boundary, this tree is of high significance and will be subject to removal. This bark removed from this scar would have been likely used for a shield or a similar shaped object.</p> | <p>Plate 14 – Leard SF ST1 – A close up of the bottom portion of the scar with a rare example of an axe mark located 10 cm from the base of the visible scar.</p> |
|  |  |
| <p>Plate 15 – Namoi River TSR ST3 – A large scarred tree (height of scar 1600mm) present within the travelling stock route (TSR) adjacent to the Namoi River and located within the proposed pipeline alignment corridor. This tree should be fenced and all efforts made to avoid indirect impacts.</p> | <p>Plate 16 – Namoi River TSR ST6 - A large scarred tree (height of scar 880mm) present within the TSR adjacent to the Namoi River and located within the proposed pipeline alignment corridor. This tree should be fenced and all efforts made to avoid indirect impacts.</p> |
|  |  |
| <p>Plate 17 – 20-4-0074 Daiseymead ST1 – A large and highly significant double scarred tree (second scar on opposite side of trunk). Located near the Namoi River and the Daiseymead property, this site will be indirectly impacted by the Rail Spur alignment. Therefore this tree should be fenced and all efforts made to avoid indirect impacts. L to R: Tania Matthews (Aboriginal Native Title Consultants; Mingga Consultants; Bullen Bullen Consultants), Kimberley Wilkinson (Hansen Bailey) and Peter Beale (Red Chief LALC).</p> | <p>Plate 18 – Teston ST1 – A thin and long scar located on a dead tree trunk in the northern component of the Project Boundary. This scar may have been used for a coolamon (shallow multipurpose carrying vessel) or a woomera (a spear throwing device). This tree will be directly impacted by construction of the Rail Loop. Removal is recommended.</p> |



Plate 19 – Teston GG1 – A single poorly defined grinding groove located on a large sandstone block forming the bed of an intermittent creek at the southern end of the steep sided gully (see photograph scale).



Plate 20 – Teston GG1 – Close up of grinding groove showing the symmetry and water retention of the groove.



Plate 21 – Back Creek AS 3 – A rare grinding stone for processing plants such as grass seeds identified within a larger artefact scatter adjacent to Back Creek. Ground face showing. While this site is not directly impacted by the Project, it is recommended that this artefact be collected as part of salvage for future study.



Plate 22 – Back Creek AS 3 – A side on shot of the rare grinding stone showing the ground edge. While this site is not directly impacted by the Project, it is recommended that this artefact be collected as part of salvage for future study.



Plate 23 – Teston GG2 – A small portable grinding groove made of medium grain sandstone with two grooves present on its dorsal side. Located on the opposite bank to 20-4-0027. Recommended for collection.



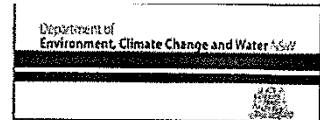
Plate 24 – Teston Grindstone 1 – A small piece of coarse grained white sandstone with a concave groove present running along the longest dimension. Possibly used to grind ochre as indicated by reddish colouring. Further analysis post surface collection is recommended.



Appendix A



Aboriginal Heritage Information Unit
 43 Bridge Street Hurstville NSW
 PO Box 1967, Hurstville NSW 2220
 Tel: (02) 95856345 Fax: (02) 95856094
 ABN 30 841 387 271
www.environment.nsw.gov.au



Your reference : [Unknown]
 Our reference : AHIMS #31009

AECOM Australia Pty Ltd (also know as Aecom Pymble/Gordon)
 level 817 York Street
 SYDNEY NSW 2000

Wednesday, 30 June 2010

Attention: Luke Kirkwood

Dear Sir or Madam:

Re: AHIMS Search for the following area at E:207000-237000;N:6597000-6642000 + 6627000

I am writing in response to your recent inquiry in respect to Aboriginal objects and Aboriginal places registered with the NSW Department of Environment, Climate Change and Water (DECCW) at the above location.

A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) has shown that ~~at~~ Aboriginal objects and Aboriginal places are recorded in or near the above location. Please refer to the attached report for details.

The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.

The following qualifications apply to an AHIMS search:

- AHIMS only includes information on Aboriginal objects and Aboriginal places that have been provided to DECCW;
- Large areas of New South Wales have not been the subject of systematic survey or recording of Aboriginal history. These areas may contain Aboriginal objects and other heritage values which are not recorded on AHIMS;
- Recordings are provided from a variety of sources and may be variable in their accuracy. When an AHIMS search identifies Aboriginal objects in or near the area it is recommended that the exact location of the Aboriginal object be determined by re-location on the ground; and
- The criteria used to search AHIMS are derived from the information provided by the client and DECCW assumes that this information is accurate.

All Aboriginal places and Aboriginal objects are protected under the *National Parks and Wildlife Act 1974* (NPW Act) and it is an offence to destroy, damage or deface them without the prior consent of the DECCW Director-General. An Aboriginal object is considered to be known if:

- It is registered on AHIMS;
- It is known to the Aboriginal community; or
- It is located during an investigation of the area conducted for a development application.

If you are considering undertaking a development activity in the area subject to the AHIMS search, DECCW would recommend that an Aboriginal Heritage Assessment be undertaken. You should consult with the relevant consent authority to determine the necessary assessment to accompany your development application.

Yours Sincerely



Freeburn, Shannon
Administrator
Aboriginal Heritage Information Unit
Information Systems and Assessment Section
Aboriginal Heritage Operation Branch
Culture and Heritage Division
Department and Environment, Climate Change and Water (DECCW)
Phone: 02 9585 6471
Fax: 02 9585 6094



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Eastings | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|----------------------------------------------|-------|------|----------|----------|-----------|------------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-1-0023</u> | <u>Maules Creek;Mardi Gras;Manilla;</u> | AGD | 56 | 219700 | 6622100 | Open Site | AFT : - | Open Camp Site | Haglund | 3554 | NRS/17798/1/69 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-1-0024</u> | <u>Maules Creek;Elfins Crossing;Manilla;</u> | AGD | 56 | 219700 | 6622800 | Open Site | AFT : - | Open Camp Site | Haglund | 3554 | NRS/17798/1/69 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0001</u> | <u>Coutt's Mill;Boggabri;</u> | AGD | 56 | 216000 | 6599000 | Open Site | GDG : - | Axe Grinding Groove | McBryde | | NRS/17798/1/70 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0006</u> | <u>Boggabri;</u> | AGD | 56 | 218000 | 6599000 | Open Site | TRE : - | Carved Tree | Bell | | NRS/17798/1/70 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0007</u> | <u>Boggabri;</u> | AGD | 56 | 215000 | 6599400 | Open Site | TRE : - | Scarred Tree | Bell | | NRS/17798/1/70 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0010</u> | <u>Gins Leap;Gagabaayindaay;</u> | AGD | 56 | 216300 | 6604400 | Open Site | ACD : - | Natural Mythological (Ritual) | Flick | | NRS/17798/1/70 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0011</u> | <u>Barbers Stockyard;</u> | AGD | 56 | 221400 | 6602700 | Open Site | AFT : -, TRE : - | Open Camp Site, Scarred Tree | Flick | | NRS/17798/1/70 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0015</u> | <u>Willow Tree Range</u> | AGD | 56 | 224500 | 6615300 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|-------------|--------------------------------------------|-------|------|---------|----------|-----------|------------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| • 20-4-0016 | <u>Willow Tree Range</u> | AGD | 56 | 224000 | 6616000 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| 20-4-0017 | <u>Nagero Creek;</u> | AGD | 56 | 225600 | 6608000 | Open Site | AFT : - | Open Camp Site | Flick | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| 20-4-0018 | <u>Driggle Draggale Creek;</u> | AGD | 56 | 231900 | 6598400 | Open Site | AFT : -, TRE : - | Open Camp Site, Scarred Tree | Flick | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • 20-4-0019 | <u>Willow Tree Range;</u> | AGD | 56 | 223400 | 6614600 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • 20-4-0020 | <u>Willow Tree Range;Tiston;Therribri;</u> | AGD | 56 | 222300 | 6613400 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • 20-4-0021 | <u>Willowtree Range;Tiston;Therribri;</u> | AGD | 56 | 222240 | 6613010 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • 20-4-0022 | <u>Willow Tree Range;Tiston;Therribri;</u> | AGD | 56 | 222800 | 6613300 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • 20-4-0023 | <u>Willowtree Range;Tiston;Therribri;</u> | AGD | 56 | 222600 | 6614300 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|--------------------|-------------------------------------------|-------|------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0024</u> | <u>Velyama;Manilla;</u> | AGD | 56 | 218900 | 6609000 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0025</u> | <u>Velyama;Manilla;</u> | AGD | 56 | 221100 | 6611000 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0026</u> | <u>Velyama;Manilla;</u> | AGD | 56 | 221200 | 6611800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0027</u> | <u>Velyama;Manilla;</u> | AGD | 56 | 221500 | 6611800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • <u>20-4-0028</u> | <u>Teston;Manilla;</u> | AGD | 56 | 224500 | 6614300 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| • <u>20-4-0029</u> | <u>Willowtree Range;Manilla;</u> | AGD | 56 | 224500 | 6614200 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0030</u> | <u>Back Creek/Stewarts Gully;Manilla;</u> | AGD | 56 | 230800 | 6615300 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0031</u> | <u>Maules Creek;Warriahdoot;Manilla;</u> | AGD | 56 | 225200 | 6621600 | Open Site | AFT : - | Open Camp Site | Haglund | 3554 | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |

Number of Sites :115

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List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------------------------------------------------------|-------|------|---------|----------|----------------------------------|---------------|---------------------------------------------|---------------------------------------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0032</u> | <u>Back Creek;Warriahdool;Manilla;</u> | AGD | 56 | 225700 | 6618800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0033</u> | <u>Willowtree Range;Teston;</u> | AGD | 56 | 223300 | 6614400 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0034</u> | <u>Willow Tree Range;Teston;</u> | AGD | 56 | 223400 | 6614500 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0035</u> | <u>Back Creek;Leard State Forest;</u> | AGD | 56 | 230700 | 6614600 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0057</u> | <u>BBS; Red Chief LALC; Gunnedah & Narrabri Rd TSR 1</u> | AGD | 56 | 215285 | 6608929 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0058</u> | <u>BBS; Red Chief LALC; Boggabri TSR 1</u> | AGD | 56 | 213078 | 6613097 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0064</u> | <u>BBS; Red Chief LALC; Iron Bridge ST 2</u> | AGD | 56 | 217603 | 6603365 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0068</u> | <u>BBS; Red Chief LALC; Barkers Lagoon ST 2</u> | AGD | 56 | 223950 | 6599986 | Open Site | TRE : - | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |

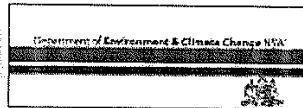


List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000. Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|-------------------------------------------------|-------|------|---------|----------|----------------------------------|---------------|----------------------------------------------|---------------------------------------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0072</u> | <u>BBS; Red Chief LALC; Iron Bridge ST 1</u> | AGD | 56 | 218438 | 6603895 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0073</u> | <u>BBS; Red Chief LALC; Barkers Lagoon ST 1</u> | AGD | 56 | 224074 | 6599919 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0074</u> | <u>BBS; Red Chief LALC; Daiseymead ST 1</u> | AGD | 56 | 216802 | 6607597 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0075</u> | <u>BBS; Red Chief LALC; Daiseymead ST 2</u> | AGD | 56 | 216782 | 6607044 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0076</u> | <u>BBS; Red Chief LALC; Leard SF 1</u> | AGD | 56 | 230304 | 6616233 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0077</u> | <u>BBS; Red Chief LALC; Leard SF 4</u> | AGD | 56 | 224856 | 6616055 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0078</u> | <u>BBS; Red Chief LALC; Leard SF 3</u> | AGD | 56 | 224706 | 6615077 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0079</u> | <u>BBS; Red Chief LALC; Leard SF 2</u> | AGD | 56 | 230737 | 6615251 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |





List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|-------------|--------------------------------------------|-----------------|-------|---------|----------|----------------------------------|---------------|---------------------------------------------|---------------------------------------------------------------------|-------------------------------|---------------------------------------------|
| 20-4-0080 | BBS: Red Chief LALC; Leard SF - Goonbri Ck | AGD | 56 | 231841 | 6610044 | Open Site | AFT :- | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |
| • 20-4-0090 | BBS: Red Chief LALC; Leard SF 5 | AGD | 56 | 227346 | 6610886 | Open Site | AFT : 1 | None | Archaeological Surveys & Salvage , Red Chief LALC - BBS Survey Team | 99031 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | Red Chief LALC - BBS Survey Team | | | Permit(s) | | |
| 20-4-0092 | NAS 1 | AGD | 56 | 227254 | 6607483 | Open Site | AFT : 4 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) 2312 | | |
| 20-4-0093 | NISO 1 | AGD | 56 | 227254 | 6607483 | Open Site | AFT : 1 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) 2312 | | |
| • 20-4-0094 | BC-1 | AGD | 56 | 226063 | 6611506 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) 2369, 2370 | | |
| • 20-4-0096 | BC-2 | GDA | 56 | 226011 | 6611602 | Open Site | AFT : 1 | None | Giles Hamm Archaeology | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0097 | BC-3 | GDA | 56 | 226229 | 6612333 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0098 | BC-4 | GDA | 56 | 227126 | 6611577 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|-------------|-----------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| • 20-4-0099 | BC-5 | GDA | 56 | 226989 | 6610613 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0100 | BC-6 | GDA | 56 | 226988 | 6610617 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0101 | BC-7 | GDA | 56 | 227656 | 6611117 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0102 | BC-8 | GDA | 56 | 227855 | 6611113 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0103 | BC-9 | GDA | 56 | 227920 | 6611159 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0104 | BC-10 | GDA | 56 | 227966 | 6611252 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0105 | BC-11 | GDA | 56 | 228231 | 6611286 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| 20-4-0106 | BC-12 | GDA | 56 | 228078 | 6612217 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

Number of Sites :115

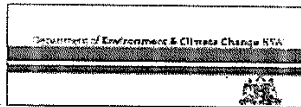
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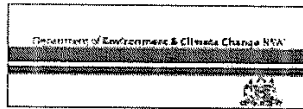




List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|-------------|-----------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| • 20-4-0107 | BC-13 | GDA | 56 | 227968 | 6611850 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0108 | BC-14 | GDA | 56 | 227512 | 6611198 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0109 | BC-15 | GDA | 56 | 227431 | 6611081 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • 20-4-0110 | BC-16 | GDA | 56 | 228387 | 6611077 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| 20-4-0111 | BC-17 | GDA | 56 | 227644 | 6608315 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| 20-4-0112 | BC-18 | GDA | 56 | 227622 | 6608416 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| 20-4-0113 | BC-19 | GDA | 56 | 227622 | 6608492 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| 20-4-0114 | BC-20 | GDA | 56 | 227531 | 6608729 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|--------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0115</u> | <u>BC-21</u> | GDA | 56 | 226251 | 6609073 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0116</u> | <u>BC-22</u> | GDA | 56 | 227767 | 6608516 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0117</u> | <u>BC-23</u> | GDA | 56 | 226605 | 6608460 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • <u>20-4-0118</u> | <u>BC-24</u> | GDA | 56 | 226039 | 6610496 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • <u>20-4-0119</u> | <u>BC-25</u> | GDA | 56 | 226014 | 6610716 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| • <u>20-4-0120</u> | <u>BC-26</u> | GDA | 56 | 225879 | 6611038 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0121</u> | <u>BC-27</u> | GDA | 56 | 226238 | 6609120 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0122</u> | <u>BC-28</u> | GDA | 56 | 226159 | 6609147 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

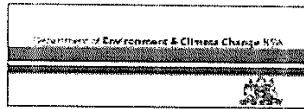
| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|-------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0123</u> | <u>BC29</u> | GDA | 56 | 226090 | 6609164 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0124</u> | <u>BC30</u> | GDA | 56 | 226018 | 6609174 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0125</u> | <u>BC31</u> | GDA | 56 | 225354 | 6609238 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0126</u> | <u>BC32</u> | GDA | 56 | 225147 | 6609354 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0127</u> | <u>BC33</u> | GDA | 56 | 225058 | 6609442 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0128</u> | <u>BC34</u> | GDA | 56 | 225940 | 6611680 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0129</u> | <u>BC36</u> | GDA | 56 | 230527 | 6609006 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0130</u> | <u>BC37</u> | GDA | 56 | 226785 | 6608396 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

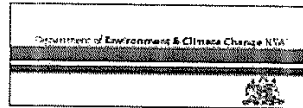
| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0131</u> | <u>BC38</u> | GDA | 56 | 226524 | 6608158 | Open Site | AFT : 144 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0132</u> | <u>BC39</u> | GDA | 56 | 226422 | 6608122 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0133</u> | <u>BC 40</u> | GDA | 56 | 226468 | 6608332 | Open Site | AFT : 10 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0134</u> | <u>BC 42</u> | GDA | 56 | 226309 | 6608430 | Open Site | AFT : 6 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0135</u> | <u>BC 41</u> | GDA | 56 | 226333 | 6608273 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0136</u> | <u>BC 43</u> | GDA | 56 | 226155 | 6608455 | Open Site | AFT : 15 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0137</u> | <u>BC 44</u> | GDA | 56 | 226186 | 6608185 | Open Site | AFT : 4 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0138</u> | <u>BC 45</u> | GDA | 56 | 226282 | 6608124 | Open Site | AFT : 4 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0139</u> | <u>BC 46</u> | GDA | 56 | 226098 | 6608743 | Open Site | AFT : 28 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0140</u> | <u>BC 47</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0141</u> | <u>BC 48</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0142</u> | <u>BC 49</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0143</u> | <u>BC 50</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0144</u> | <u>BC 51</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0145</u> | <u>BC 52</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0146</u> | <u>BC 53</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status Valid | | | | | | | | | |
| | | Primary Contact | | | | | | | | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0147</u> | <u>BC 54</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 60 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0148</u> | <u>BCHR1</u> | GDA | 56 | 225485 | 6608430 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0149</u> | <u>BCHR2</u> | GDA | 56 | 225368 | 6608222 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0150</u> | <u>BCHR3</u> | GDA | 56 | 224793 | 6608318 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0151</u> | <u>BCHR4</u> | GDA | 56 | 224630 | 6608316 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0152</u> | <u>BCHR5</u> | GDA | 56 | 224530 | 6608290 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0153</u> | <u>BCHR7</u> | GDA | 56 | 219896 | 6608809 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0154</u> | <u>BCHR8</u> | GDA | 56 | 215153 | 6605186 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

Number of Sites : 115

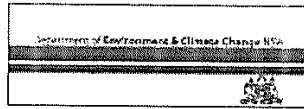
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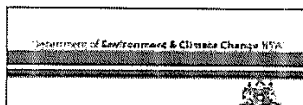




List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

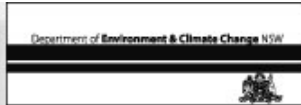
| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|----------------------------|-------|------|---------|----------|----------------------------------|---------------|---------------------------------------------|-----------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0155</u> | <u>BCHR6</u> | AGD | 56 | 223161 | 6607947 | Open Site | AFT : 1 | None | Archaeological Risk Assessment Services | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0156</u> | <u>NAS 2</u> | AGD | 56 | 228783 | 6605841 | Open Site | AFT : 2 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0157</u> | <u>GGOS 1</u> | AGD | 56 | 228499 | 6605091 | Open Site | AFT : 20 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2440 | | |
| <u>20-4-0158</u> | <u>GGOS 2</u> | AGD | 56 | 228345 | 6604288 | Open Site | AFT : 25 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2440 | | |
| <u>20-4-0159</u> | <u>GGOS 3</u> | AGD | 56 | 228292 | 6604288 | Open Site | AFT : 10 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2440 | | |
| <u>20-4-0160</u> | <u>GGOS 4</u> | AGD | 56 | 228335 | 6604163 | Open Site | AFT : 5 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2440 | | |
| <u>20-4-0161</u> | <u>NST 1</u> | AGD | 56 | 227448 | 6606507 | Open Site | TRE : 1 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |
| <u>20-4-0196</u> | <u>Boggabri Coal Pad 1</u> | AGD | 56 | 225915 | 6607271 | Open Site | PAD : 1 | None | Besant | | |
| | Status Not a Site | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 207000, Easting to = 237000, Northing From = 6597000, Northing to = 6627000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|------------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0198</u> | <u>BCD 1</u> | GDA | 56 | 225453 | 6607535 | Open Site | AFT : 1, STQ : - | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0199</u> | <u>BCD 2</u> | GDA | 56 | 225900 | 6606697 | Open Site | AFT : 2 | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0200</u> | <u>BCD 3</u> | GDA | 56 | 226322 | 6606222 | Open Site | AFT : 1 | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------------------------------------|-----------------|-------|---------|----------|-----------|------------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0011</u> | <u>Barbers Stockyard;</u> | AGD | 56 | 221400 | 6602700 | Open Site | AFT : -, TRE : - | Open Camp Site, Scarred Tree | Flick | | NRS/17798/1/70 |
| | | Status | Valid | | | | | | Permit(s) | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0015</u> | <u>Willow Tree Range</u> | AGD | 56 | 224500 | 6615300 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0016</u> | <u>Willow Tree Range</u> | AGD | 56 | 224000 | 6616000 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0017</u> | <u>Nagero Creek;</u> | AGD | 56 | 225600 | 6608000 | Open Site | AFT : - | Open Camp Site | Flick | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0019</u> | <u>Willow Tree Range.</u> | AGD | 56 | 223400 | 6614600 | Open Site | AFT : - | Open Camp Site | Haglund | 415, 1844 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0020</u> | <u>Willow Tree Range;Teston;Therribri;</u> | AGD | 56 | 222300 | 6613400 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0021</u> | <u>Willowtree Range;Tiston;Therribri;</u> | AGD | 56 | 222240 | 6613010 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0022</u> | <u>Willow Tree Range;Tiston;Therribri;</u> | AGD | 56 | 222800 | 6613300 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

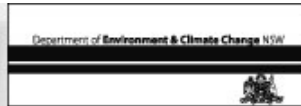


List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Eastings | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|-------------------------------------------|-----------------|-------|----------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0023</u> | <u>Willowtree Range:Tiston:Therribri:</u> | AGD | 56 | 222600 | 6614300 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0024</u> | <u>Velyama:Manilla:</u> | AGD | 56 | 218900 | 6609000 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0025</u> | <u>Velyama:Manilla:</u> | AGD | 56 | 221100 | 6611000 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0026</u> | <u>Velyama:Manilla:</u> | AGD | 56 | 221200 | 6611800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0027</u> | <u>Velyama:Manilla:</u> | AGD | 56 | 221500 | 6611800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0028</u> | <u>Teston:Manilla:</u> | AGD | 56 | 224500 | 6614300 | Open Site | AFT : - | Open Camp Site | Haglund | 415 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0029</u> | <u>Willowtree Range:Manilla:</u> | AGD | 56 | 224500 | 6614200 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0030</u> | <u>Back Creek/Stewarts Gully:Manilla:</u> | AGD | 56 | 230800 | 6615300 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |





List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|----------------------------------------------|------------------------|-------|---------|----------|----------------------------------|---------------|---------------------------------------------|--------------------------------------------------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0031</u> | <u>Maules Creek;Warriahdool;Manilla;</u> | AGD | 56 | 225200 | 6621600 | Open Site | AFT : - | Open Camp Site | Haglund | 3554 | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0032</u> | <u>Back Creek;Warriahdool;Manilla;</u> | AGD | 56 | 225700 | 6618800 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0033</u> | <u>Willowtree Range;Teston;</u> | AGD | 56 | 223300 | 6614400 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0034</u> | <u>Willow Tree Range;Teston;</u> | AGD | 56 | 223400 | 6614500 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0035</u> | <u>Back Creek;Leard State Forest;</u> | AGD | 56 | 230700 | 6614600 | Open Site | AFT : - | Open Camp Site | Haglund | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0072</u> | <u>BBS; Red Chief LALC; Iron Bridge ST 1</u> | AGD | 56 | 218438 | 6603895 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0076</u> | <u>BBS; Red Chief LALC; Leard SF 1</u> | AGD | 56 | 230304 | 6616233 | Open Site | TRE : 1 | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |
| <u>20-4-0077</u> | <u>BBS; Red Chief LALC; Leard SF 4</u> | AGD | 56 | 224856 | 6616055 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | Red Cheif LALC - BBS Survey Team | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|---------------------------------------------------|-------|------|---------|----------|-----------|----------------------------------|----------------------------------------------|---------------------------------------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0078</u> | <u>BBS; Red Chief LALC; Leard SF 3</u> | AGD | 56 | 224706 | 6615077 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | Red Cheif LALC - BBS Survey Team | | Permit(s) | | |
| <u>20-4-0079</u> | <u>BBS; Red Chief LALC; Leard SF 2</u> | AGD | 56 | 230737 | 6615251 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | Red Cheif LALC - BBS Survey Team | | Permit(s) | | |
| <u>20-4-0080</u> | <u>BBS; Red Chief LALC; Leard SF - Goonbri Ck</u> | AGD | 56 | 231841 | 6610044 | Open Site | AFT : - | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | Red Cheif LALC - BBS Survey Team | | Permit(s) | | |
| <u>20-4-0090</u> | <u>BBS; Red Chief LALC; Leard SF 5</u> | AGD | 56 | 227346 | 6610886 | Open Site | AFT : 1 | None | Archaeological Surveys & Salvage , Red Cheif LALC - BBS Survey Team | 99031 | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | Red Cheif LALC - BBS Survey Team | | Permit(s) | | |
| <u>20-4-0092</u> | <u>NAS 1</u> | AGD | 56 | 227254 | 6607483 | Open Site | AFT : 4 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2312 | | |
| <u>20-4-0093</u> | <u>NISO 1</u> | AGD | 56 | 227254 | 6607483 | Open Site | AFT : 1 | None | Appleton | | |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2312 | | |
| <u>20-4-0094</u> | <u>BC-1</u> | AGD | 56 | 226063 | 6611506 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) 2369, 2370 | | |
| <u>20-4-0096</u> | <u>BC-2</u> | GDA | 56 | 226011 | 6611602 | Open Site | AFT : 1 | None | Giles Hamm Archaeology | | NRS/17798/1/71 |
| | Status Valid | | | | | | | | | | |
| | Primary Contact | | | | | | | | Permit(s) | | |

Number of Sites :119

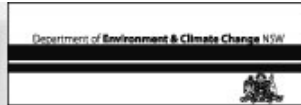
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List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0097</u> | <u>BC-3</u> | GDA | 56 | 226229 | 6612333 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0098</u> | <u>BC-4</u> | GDA | 56 | 227126 | 6611577 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0099</u> | <u>BC-5</u> | GDA | 56 | 226989 | 6610613 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0100</u> | <u>BC-6</u> | GDA | 56 | 226988 | 6610617 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0101</u> | <u>BC-7</u> | GDA | 56 | 227656 | 6611117 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0102</u> | <u>BC-8</u> | GDA | 56 | 227855 | 6611113 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0103</u> | <u>BC-9</u> | GDA | 56 | 227920 | 6611159 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0104</u> | <u>BC-10</u> | GDA | 56 | 227966 | 6611252 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0105</u> | <u>BC-11</u> | GDA | 56 | 228231 | 6611286 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0106</u> | <u>BC-12</u> | GDA | 56 | 228078 | 6612217 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0107</u> | <u>BC-13</u> | GDA | 56 | 227968 | 6611850 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0108</u> | <u>BC-14</u> | GDA | 56 | 227512 | 6611198 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0109</u> | <u>BC-15</u> | GDA | 56 | 227431 | 6611081 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0110</u> | <u>BC-16</u> | GDA | 56 | 228387 | 6611077 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0111</u> | <u>BC-17</u> | GDA | 56 | 227644 | 6608315 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0112</u> | <u>BC-18</u> | GDA | 56 | 227622 | 6608416 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

Number of Sites :119

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List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0113</u> | <u>BC-19</u> | GDA | 56 | 227622 | 6608492 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0114</u> | <u>BC-20</u> | GDA | 56 | 227531 | 6608729 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0115</u> | <u>BC-21</u> | GDA | 56 | 226251 | 6609073 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0116</u> | <u>BC-22</u> | GDA | 56 | 227767 | 6608516 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0117</u> | <u>BC-23</u> | GDA | 56 | 226605 | 6608460 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0118</u> | <u>BC-24</u> | GDA | 56 | 226039 | 6610496 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0119</u> | <u>BC-25</u> | GDA | 56 | 226014 | 6610716 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0120</u> | <u>BC-26</u> | GDA | 56 | 225879 | 6611038 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0121</u> | <u>BC-27</u> | GDA | 56 | 226238 | 6609120 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0122</u> | <u>BC-28</u> | GDA | 56 | 226159 | 6609147 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0123</u> | <u>BC-29</u> | GDA | 56 | 226090 | 6609164 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0124</u> | <u>BC30</u> | GDA | 56 | 226018 | 6609174 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0125</u> | <u>BC31</u> | GDA | 56 | 225354 | 6609238 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0126</u> | <u>BC32</u> | GDA | 56 | 225147 | 6609354 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0127</u> | <u>BC33</u> | GDA | 56 | 225058 | 6609442 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0128</u> | <u>BC34</u> | GDA | 56 | 225940 | 6611680 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

Number of Sites :119

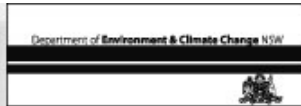
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List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0129</u> | <u>BC36</u> | GDA | 56 | 230527 | 6609006 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0130</u> | <u>BC37</u> | GDA | 56 | 226785 | 6608396 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/71 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0131</u> | <u>BC38</u> | GDA | 56 | 226524 | 6608158 | Open Site | AFT : 144 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0132</u> | <u>BC39</u> | GDA | 56 | 226422 | 6608122 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0133</u> | <u>BC 40</u> | GDA | 56 | 226468 | 6608332 | Open Site | AFT : 10 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0134</u> | <u>BC 42</u> | GDA | 56 | 226309 | 6608430 | Open Site | AFT : 6 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0135</u> | <u>BC 41</u> | GDA | 56 | 226333 | 6608273 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0136</u> | <u>BC 43</u> | GDA | 56 | 226155 | 6608455 | Open Site | AFT : 15 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0137</u> | <u>BC 44</u> | GDA | 56 | 226186 | 6608185 | Open Site | AFT : 4 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0138</u> | <u>BC 45</u> | GDA | 56 | 226282 | 6608124 | Open Site | AFT : 4 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0139</u> | <u>BC 46</u> | GDA | 56 | 226098 | 6608743 | Open Site | AFT : 28 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0140</u> | <u>BC 47</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0141</u> | <u>BC 48</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 3 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0142</u> | <u>BC 49</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0143</u> | <u>BC 50</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0144</u> | <u>BC 51</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

Number of Sites :119

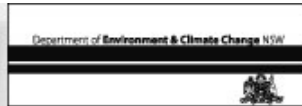
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List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|--------------|-----------------|-------|---------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0145</u> | <u>BC 52</u> | GDA | 56 | 226105 | 6608889 | Open Site | TRE : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0146</u> | <u>BC 53</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0147</u> | <u>BC 54</u> | GDA | 56 | 226105 | 6608889 | Open Site | AFT : 60 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0148</u> | <u>BCHR1</u> | GDA | 56 | 225485 | 6608430 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0149</u> | <u>BCHR2</u> | GDA | 56 | 225368 | 6608222 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0150</u> | <u>BCHR3</u> | GDA | 56 | 224793 | 6608318 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0151</u> | <u>BCHR4</u> | GDA | 56 | 224630 | 6608316 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0152</u> | <u>BCHR5</u> | GDA | 56 | 224530 | 6608290 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |

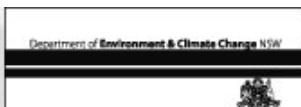


List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|---------------|-----------------|-------|---------|----------------------------------|-----------|---------------|----------------------------------------------|-----------------------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0153</u> | <u>BCHR7</u> | GDA | 56 | 219896 | 6608809 | Open Site | AFT : 1 | None | Hamm | | NRS/17798/1/72 |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0155</u> | <u>BCHR6</u> | AGD | 56 | 223161 | 6607947 | Open Site | AFT : 1 | None | Archaeological Risk Assessment Services | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0156</u> | <u>NAS 2</u> | AGD | 56 | 228783 | 6605841 | Open Site | AFT : 2 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | Red Cheif LALC - BBS Survey Team | | | | Permit(s) | | |
| <u>20-4-0157</u> | <u>GGOS 1</u> | AGD | 56 | 228499 | 6605091 | Open Site | AFT : 20 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | 2440 | |
| <u>20-4-0158</u> | <u>GGOS 2</u> | AGD | 56 | 228345 | 6604288 | Open Site | AFT : 25 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | 2440 | |
| <u>20-4-0159</u> | <u>GGOS 3</u> | AGD | 56 | 228292 | 6604288 | Open Site | AFT : 10 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | 2440 | |
| <u>20-4-0160</u> | <u>GGOS 4</u> | AGD | 56 | 228335 | 6604163 | Open Site | AFT : 5 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | 2440 | |
| <u>20-4-0161</u> | <u>NST 1</u> | AGD | 56 | 227448 | 6606507 | Open Site | TRE : 1 | None | Appleton | | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |





List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|----------------------------|------------------------|------------|---------|----------|-----------|------------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0196</u> | <u>Boggabri Coal Pad 1</u> | AGD | 56 | 225915 | 6607271 | Open Site | PAD : 1 | None | Besant | | |
| | | Status | Not a Site | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0198</u> | <u>BCD 1</u> | GDA | 56 | 225453 | 6607535 | Open Site | AFT : 1, STQ : - | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0199</u> | <u>BCD 2</u> | GDA | 56 | 225900 | 6606697 | Open Site | AFT : 2 | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0200</u> | <u>BCD 3</u> | GDA | 56 | 226322 | 6606222 | Open Site | AFT : 1 | None | Besant | 101906 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0201</u> | <u>HR NV64.66-70</u> | GDA | 56 | 221790 | 6608296 | Open Site | AFT : 12 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0203</u> | <u>HRNV21</u> | GDA | 56 | 218459 | 6608295 | Open Site | AFT : 8 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0205</u> | <u>HRNV34</u> | GDA | 56 | 227321 | 6611700 | Open Site | TRE : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |
| <u>20-4-0208</u> | <u>HR NV 65</u> | GDA | 56 | 221304 | 6608652 | Open Site | AFT : 8 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Eastings | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|-------------------------------------|-----------------|-------|----------|----------|-----------|---------------|----------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0209</u> | <u>HR NV 71-74</u> | GDA | 56 | 221304 | 6608652 | Open Site | AFT : 5 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0216</u> | <u>LFNV1,2,3,4 & 13</u> | GDA | 56 | 223477 | 6609967 | Open Site | AFT : 4 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0217</u> | <u>LFNV5,6,14,15,16,18 & 19</u> | GDA | 56 | 228350 | 6612270 | Open Site | AFT : 9 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0218</u> | <u>LF NV 7,8,9</u> | GDA | 56 | 227396 | 6612675 | Open Site | AFT : 3 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0219</u> | <u>LF NV10</u> | GDA | 56 | 227341 | 6612386 | Open Site | AFT : 4 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0220</u> | <u>LFNV11</u> | GDA | 56 | 225126 | 6612750 | Open Site | AFT : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0221</u> | <u>LFNV12</u> | GDA | 56 | 223805 | 6610902 | Open Site | AFT : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0222</u> | <u>LFNV25,26,27</u> | GDA | 56 | 225649 | 6610101 | Open Site | TRE : 3 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



List of Sites (List - Short)

Grid Reference Type = AGD (Australian Geodetic Datum), Zone = 56, Easting From = 218000, Easting to = 235000, Northing From = 6600000, Northing to = 6622000, Feature Search Type = AHIMS Features

| Site ID | Site Name | Datum | Zone | Easting | Northing | Context | Site Features | Site Types (recorded prior to June 2001) | Recording (Primary) | Reports (Catalogue Number) | State Arch. Box No (for office use only) |
|------------------|---------------------------------|-----------------|-------|---------|----------|-----------|---------------|---------------------------------------------|------------------------|-------------------------------|---------------------------------------------|
| <u>20-4-0223</u> | <u>LFNV28, 29 & 31</u> | GDA | 56 | 227436 | 6612395 | Open Site | TRE : 3 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0224</u> | <u>LF NV 24, 51-61 & 63</u> | GDA | 56 | 224946 | 6608068 | Open Site | AFT : 145 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0225</u> | <u>LFNV30</u> | GDA | 56 | 227321 | 6611700 | Open Site | TRE : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0226</u> | <u>LFNV32</u> | GDA | 56 | 225740 | 6611543 | Open Site | TRE : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0227</u> | <u>LFNV33</u> | GDA | 56 | 225971 | 6611066 | Open Site | AFT : 1 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0228</u> | <u>LFNV 49, 50 & 62</u> | GDA | 56 | 224896 | 6609111 | Open Site | AFT : 26 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |
| <u>20-4-0229</u> | <u>LFNV 77, 78</u> | GDA | 56 | 223825 | 6608155 | Open Site | AFT : 10 | None | Besant | 101940 | |
| | | Status | Valid | | | | | | | | |
| | | Primary Contact | | | | | | | Permit(s) | | |



Appendix B

| Survey Unit (Transect number) | Landform | Survey Unit area (sq m) | Visibility % | Exposure % | Effective coverage area (sq m) | Effective coverage % |
|-------------------------------------|----------|----------------------------|-----------------|---------------|--------------------------------------|-------------------------|
| 1 | LS | 41550 | 20 | 30 | 2493 | 6 |
| 2 | LS | 158350 | 20 | 30 | 9501 | 6 |
| 3 | LS/US | 88150 | 20 | 30 | 5289 | 6 |
| 4 | LS/US | 84700 | 20 | 30 | 5082 | 6 |
| 5 | F/LS/US | 158350 | 40 | 40 | 25336 | 16 |
| 6 | US | 45450 | 20 | 20 | 1818 | 4 |
| 7 | US | 63400 | 40 | 40 | 10144 | 16 |
| 8 | US | 45350 | 40 | 40 | 7256 | 16 |
| 9 | US | 41550 | 40 | 40 | 6648 | 16 |
| 10 | US | 87057 | 20 | 20 | 3482 | 4 |
| 11 | US/LS | 35152 | 30 | 30 | 3164 | 9 |
| 12 | US | 16329 | 20 | 20 | 653 | 4 |
| 13 | US | 72786 | 20 | 30 | 4367 | 6 |
| 14 | US | 35247 | 40 | 40 | 5640 | 16 |
| 15 | US | 34045 | 40 | 40 | 5447 | 16 |
| 16 | US/LS | 85517 | 40 | 40 | 13683 | 16 |
| 17 | US/LS | 156694 | 40 | 40 | 25071 | 16 |
| 18 | F | 36721 | 20 | 20 | 1469 | 4 |
| 19 | F | 45435 | 30 | 30 | 4089 | 9 |
| 20 | F/LS | 42049 | 30 | 30 | 3784 | 9 |
| 21 | F | 95989 | 20 | 20 | 3840 | 4 |
| 22 | F/US | 98440 | 40 | 40 | 15750 | 16 |
| 23 | F | 62288 | 30 | 30 | 5606 | 9 |
| 24 | F | 59910 | 30 | 30 | 5392 | 9 |
| 25 | F | 51385 | 30 | 30 | 4625 | 9 |
| 26 | F | 58109 | 20 | 20 | 2324 | 4 |
| 27 | F | 115794 | 30 | 30 | 10421 | 9 |
| 28 | F/LS | 113356 | 30 | 30 | 10202 | 9 |
| 29 | F/LS | 64152 | 20 | 20 | 2566 | 4 |
| 30 | F/LS | 148144 | 10 | 10 | 1481 | 1 |
| 31 | F | 133807 | 20 | 20 | 5352 | 4 |
| 32 | F | 50729 | 20 | 20 | 2029 | 4 |
| 33 | F | 56046 | 20 | 20 | 2242 | 4 |
| 34 | F | 55957 | 20 | 20 | 2238 | 4 |
| 35 | F | 57561 | 20 | 20 | 2302 | 4 |
| 36 | SG 103 | 354 | 20 | 20 | 4134 | 4 |
| 37 | LS/SG | 68953 | 10 | 10 | 690 | 1 |
| 38 | LS/SG | 55665 | 20 | 20 | 2227 | 4 |
| 39 | US | 35016 | 10 | 10 | 350 | 1 |
| 40 | F/LS/SG | 81296 | 30 | 30 | 7317 | 9 |
| 41 | F | 88383 | 40 | 40 | 14141 | 16 |
| 42 | F | 79353 | 40 | 40 | 12697 | 16 |
| 43 | F | 56583 | 30 | 30 | 5092 | 9 |

| Survey Unit (Transect number) | Landform | Survey Unit area (sq m) | Visibility % | Exposure % | Effective coverage area (sq m) | Effective coverage % |
|------------------------------------------------------------------------------------------------------|----------|----------------------------|-----------------|---------------|--------------------------------------|-------------------------|
| 44 | F | 50497 | 10 | 10 | 505 | 1 |
| 45 | F | 75081 | 30 | 30 | 6757 | 9 |
| 46 | F | 98756 | 20 | 20 | 3950 | 4 |
| 47 | F | 54509 | 20 | 20 | 2180 | 4 |
| 48 | F | 19759 | 20 | 20 | 790 | 4 |
| 49 | F | 22624 | 20 | 20 | 905 | 4 |
| 50 | F | 108466 | 10 | 10 | 1085 | 1 |
| 51 | F/LS/US | 176863 | 20 | 20 | 7075 | 4 |
| 52 | F | 166429 | 20 | 20 | 6657 | 4 |
| 53 | LS/US | 127264 | 10 | 10 | 1273 | 1 |
| 54 | LS/US | 14428 | 10 | 10 | 144 | 1 |
| 55 | CRF | 20358 | 20 | 20 | 814 | 4 |
| 56 | CRF | 29861 | 10 | 10 | 299 | 1 |
| 57 | CRF | 57946 | 5 | 5 | 145 | 0.25 |
| 58 | CRF | 15223 | 5 | 5 | 38 | 0.25 |
| 59 | CRF/LS | 24489 | 40 | 40 | 3918 | 16 |
| 60 | CRF | 83518 | 30 | 30 | 7517 | 9 |
| 61 | LS/US | 101504 | 30 | 30 | 9135 | 9 |
| 62 | LS | 7715 | 10 | 10 | 77 | 1 |
| 63 | CRF | 63035 | 40 | 40 | 10086 | 16 |
| 64 | CRF | 86447 | 40 | 40 | 13832 | 16 |
| 65 | CRF/F | 36327 | 30 | 30 | 3269 | 9 |
| 66 | F | 18661 | 30 | 30 | 1680 | 9 |
| 67 | CRF/F | 35952 | 30 | 30 | 3236 | 9 |
| 68 | F | 66341 | 20 | 20 | 2654 | 4 |
| 69 | CRF/LS | 32651 | 30 | 30 | 2939 | 9 |
| 70 | CRF/LS | 31909 | 30 | 30 | 2872 | 9 |
| 71 | LS | 114991 | 10 | 10 | 1150 | 1 |
| 72 | LS | 77399 | 30 | 30 | 6966 | 9 |
| 73 | F/LS | 184069 | 20 | 20 | 7363 | 4 |
| 74 | F | 152101 | 20 | 20 | 6084 | 4 |
| F = Flat; CRF = Creek/River Flat; LS = Lower Slopes; US = Upper Slopes/Ridge; SG = Steep-sided Gully | | | | | | |



Appendix C

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|-----------|---------------------------------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------|-------------------------------------------------|
| 20-4-0015 | Willow Tree Range (MC6) | 224665 | 6615317 | AS | 5 | 0 | | Flats | Yes |
| 20-4-0016 | Willow Tree Range (MC5) | 224147 | 6616149 | AS | 7 | 29 | 6814 | Flats | Junction |
| 20-4-0019 | Willow Tree Range (MC4) | 223550 | 6614793 | AS | 45 | 2 | 79 | Flats | Yes |
| 20-4-0020 | Willow Tree Range; Teston; Therribri (MC7) | 222508 | 6613511 | AS | 40 | 97 | 21839 | Lower Slope | Yes |
| 20-4-0021 | Willow Tree Range; Teston; Therribri (MC8) | 222320 | 6613198 | AS | 40 | 13 | 489 | Steep Sided Gully | Yes |
| 20-4-0022 | Willow Tree Range; Teston; Therribri (MC9) | 222989 | 6613482 | AS | 9 | 1 | | Lower Slope | Yes |
| 20-4-0023 | Willow Tree Range; Teston; Therribri (MC10) | 222819 | 6614537 | AS | 30 | 8 | 3927 | Lower Slope | Yes |
| 20-4-0024 | Velyama; Manilla (MC11) | 219001 | 6609239 | AS | 5 | 4 | 2303 | Lower Slope | No |
| 20-4-0025 | Velyama; Manilla (MC12) | 221327 | 6611226 | AS | 4 | 10 | 3959 | Lower Slope | Junction |
| 20-4-0026 | Velyama; Manilla (MC13) | 221292 | 6611969 | AS | 40 | 55 | 32410 | Steep Sided Gully | Yes |
| 20-4-0027 | Velyama; Manilla (MC14) | 221646 | 6612032 | AS | 80 | 249 | 12593 | Steep Sided Gully | Yes |
| 20-4-0028 | Teston; Manilla (MC15) | 224752 | 6615016 | AS | 20 | 25 | 8656 | Flats | Yes |
| 20-4-0029 | Willowtree Range; Manilla (MC21) | 224679 | 6614603 | AS | 30 | 10 | 1550 | Lower Slope | Yes |
| 20-4-0033 | Willowtree Range; Teston (MC2) | 223443 | 6614561 | AS | 4 | 1 | | Lower Slope | Yes |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|-----------|------------------------------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------|-------------------------------------------------|
| 20-4-0034 | Willowtree Range; Teston (MC3) | 223598 | 6614673 | AS | 7 | 1 | 78 | Lower Slope | Yes |
| 20-4-0074 | BBS; Red Chief LALC; Daiseymead ST 1 (NV34) | 216907 | 6607786 | ST | 1 | 1 | | Major Creek/Riv er Flat | Yes |
| 20-4-0077 | BBS; Red Chief LALC; Leard SF 4 | 224961 | 6616244 | IA | 1 | 0 | | Flats | Yes |
| 20-4-0078 | BBS; Red Chief LALC; Leard SF 3 | 224811 | 6615266 | IA | 1 | 0 | | Flats | Yes |
| 20-4-0154 | BCHR8 | 215153 | 6605186 | IA | 1 | 0 | | Lower Slope | Yes |
| 20-4-0203 | HRNV21 | 218488 | 6608317 | AS | 8 | 7 | 2376 | Flats | Yes |
| | MC22 | 214965 | 6604749 | RS | 4 | 0 | | Steep Sided Gully | Yes |
| | MC23 | 215215 | 6606169 | AS | 2 | 0 | | Major Creek/Riv er Flat | Yes |
| | MC24 | 215405 | 6606489 | AS | 11 | 0 | | Major Creek/Riv er Flat | Yes |
| | MC25 | 215855 | 6606489 | AS | 71 | 0 | | Major Creek/Riv er Flat | Yes |
| | Back Creek AS1 | 223621 | 6618342 | AS | N/A | 14 | 528 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS2 | 223882 | 6618305 | AS | N/A | 10 | 201 | Major Creek/Riv er Flat | Junction |
| | Back Creek AS3 | 224360 | 6618368 | AS | N/A | 30 | 3032 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS4 | 224584 | 6618315 | AS | N/A | 4 | 81 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS5 | 225871 | 6618537 | AS | N/A | 6 | 63 | Major Creek/Riv er Flat | Yes |
| | Back Creek AS6 | 226184 | 6618503 | AS | N/A | 33 | 5951 | Major Creek/Riv er Flat | Yes |
| | Back Creek IA1 | 225135 | 6618633 | IA | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Back Creek IA2 | 225211 | 6618669 | IA | N/A | 1 | | Major Creek/Riv | Yes |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|----------------------------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------|-------------------------------------------------|
| | | | | | | | | er Flat | |
| | Leard SF AS1 | 226284 | 6614316 | AS | N/A | 320 | 59824 | Flats | Junction |
| | Leard SF AS2 | 226658 | 6615384 | AS | N/A | 4 | 132 | Lower Slope | Yes |
| | Leard SF IA1 | 225541 | 6615348 | IA | N/A | 1 | | Flats | No |
| | Leard SF IA2 | 225023 | 6615846 | IA | N/A | 1 | | Flats | No |
| | Leard SF ST1 | 226403 | 6615738 | ST | N/A | 1 | | Lower Slope | No |
| | Leard SF ST2 | 226273 | 6614045 | ST | N/A | 1 | | Flats | Yes |
| | Namoi River ST1 | 216971 | 6611063 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST1 | 217817 | 6611408 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST2 | 217800 | 6611420 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST3 | 217469 | 6611246 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST4 | 217437 | 6611193 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST5 | 217300 | 6611054 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST6 | 217375 | 6611118 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST7 | 217374 | 6611117 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | Namoi River TSR ST8 | 217386 | 6611137 | ST | N/A | 1 | | Major Creek/Riv er Flat | Yes |
| | NV20 | 217315 | 6607905 | AS | | 2 | | Lower Slope | Yes |
| | NV22 | 217588 | 6607848 | AS | | 7 | | Lower Slope | No |
| | NV23 | 215017 | 6605133 | AS | | 2 | | Lower Slope | Yes |
| | NV35 (Namoi River TSR ST9) | 215619 | 6607338 | ST | 1 | 1 | | Major Creek/Riv er Flat | Yes |
| | NV36 | 215647 | 6607336 | ST | | 1 | | Major Creek/Riv er Flat | Yes |
| | NV37 | 215541 | 6607376 | ST | | 1 | | Major | No |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|---------------------------|-------------------------------------------------|
| | | | | | | | | Creek/River Flat | |
| | NV38 | 215511 | 6607407 | IA | | 1 | | Major Creek/River Flat | No |
| | NV39 | 215342 | 6607421 | AS | | 2 | | Major Creek/River Flat | Yes |
| | NV40 | 215209 | 6607087 | AS | | 3 | | Major Creek/River Flat | Yes |
| | NV41 | 215177 | 6606618 | IA | | 1 | | Major Creek/River Flat | Yes |
| | NV42 | 215205 | 6606338 | IA | | 1 | | Major Creek/River Flat | Yes |
| | NV43 | 215253 | 6606444 | AS | | 2 | | Major Creek/River Flat | Yes |
| | NV44 | 215339 | 6605495 | IA | | 1 | | Major Creek/River Flat | Yes |
| | NV45 | 215158 | 6605133 | IA | | 1 | | Lower Slope | No |
| | NV46 | 215091 | 6605058 | IA | | 1 | | Lower Slope | Yes |
| | NV47 | 215091 | 6605058 | AS | | 2 | | Lower Slope | Yes |
| | NV48 | 214606 | 6604800 | AS | | 14 | | Lower Slope | Yes |
| | NV75 | 217277 | 6607988 | IA | | 1 | | Lower Slope | No |
| | NV76 | 216773 | 6607827 | ST | | 1 | | Major Creek/River Flat | Yes |
| | Teston AS1 | 224005 | 6615953 | AS | N/A | 9 | 800 | Flats | Yes |
| | Teston AS2 | 224058 | 6616636 | AS | N/A | 7 | 2 | Flats | Yes |
| | Teston AS3 | 224455 | 6616988 | AS | N/A | 8 | 5 | Flats | Yes |
| | Teston AS4 | 222585 | 6616561 | AS | N/A | 10 | 9 | Flats | Yes |
| | Teston AS5 | 223322 | 6616707 | AS | N/A | 2 | 12 | Flats | Yes |
| | Teston AS6 | 224714 | 6615494 | AS | N/A | 3 | 6 | Flats | Yes |
| | Teston AS7 | 223363 | 6614378 | AS | N/A | 5 | 73 | Flats | Yes |
| | Teston GG1 | 221590 | 6612073 | GG | N/A | 1 | | Steep Sided Gully | Yes |
| | Teston GG2 | 221838 | 6612286 | GG | N/A | 1 | | Steep Sided Gully | Yes |
| | Teston | 221942 | 6612352 | GG | N/A | 1 | | Steep | Yes |

| AHIMS ID | Site Name | Easting (GDA94 Zone 56) | Northing (GDA94 Zone 56) | Site Type | Previously Reported Artefact Count | Artefact Count in Current Survey | Site Extent (m ²) | Landform | Within 100 m of major drainage line |
|----------|----------------|-------------------------------|--------------------------------|--------------|---------------------------------------------|-------------------------------------------|-------------------------------------|----------------|-------------------------------------------------|
| | Grindstone 1 | | | | | | | Sided Gully | |
| | Teston IA1 | 223836 | 6615484 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA2 | 224781 | 6616695 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA3 | 224846 | 6616638 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA4 | 224353 | 6615901 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA5 | 224466 | 6615712 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA5 | 223288 | 6614031 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA6 | 223710 | 6617113 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA7 | 223783 | 6617070 | IA | N/A | 1 | | Flats | Yes |
| | Teston IA8 | 222894 | 6617066 | IA | N/A | 1 | | Flats | Yes |
| | Teston ST1 | 222999 | 6615685 | ST | N/A | 1 | | Lower Slope | No |
| | Teston ST2 | 224413 | 6617032 | ST | N/A | 1 | | Flats | Yes |
| | Velyama AS1 | 220207 | 6609523 | AS | N/A | 2 | | Flats | Yes |
| | Velyama AS2 | 220172 | 6609400 | AS | N/A | 4 | 118 | Flats | Yes |
| | Velyama AS3 | 220269 | 6609278 | AS | N/A | 2 | 35 | Flats | Yes |
| | Velyama AS4 | 220150 | 6609200 | AS | N/A | 8 | 311 | Flats | Yes |
| | Velyama AS5 | 220129 | 6609122 | AS | N/A | 3 | 5 | Flats | Yes |
| | Velyama AS6 | 219812 | 6608891 | AS | N/A | 5 | 249 | Flats | No |
| | Velyama AS7 | 220814 | 6609752 | AS | N/A | 3 | 6 | Flats | No |
| | Velyama IA1 | 220156 | 6609314 | IA | N/A | 1 | | Flats | Yes |
| | Velyama IA2 | 220106 | 6609009 | IA | N/A | 1 | | Flats | No |
| | Velyama IA3 | 219344 | 6608973 | IA | N/A | 1 | | Flats | No |
| | Velyama IA4 | 219264 | 6608993 | IA | N/A | 1 | | Flats | No |
| | Velyama IA5 | 219012 | 6611213 | IA | N/A | 1 | | Flats | Yes |
| | Velyama ST1 | 220926 | 6610422 | ST | N/A | 1 | | Flats | Yes |
| | Watsons ST1 | 223575 | 6617425 | ST | N/A | 1 | | Flats | Yes |
| | Younger ST1 | 225772 | 6618035 | ST | N/A | 1 | | Lower Slope | No |



Appendix D

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 June 2010 | Letter sent to relevant stakeholders to provide a list of stakeholders that should be consulted with in relation to the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. | Department of Environment and Climate Change and Water (DECCW), Narrabri Shire Council (NSC), National Native Title Tribunal (NNTT), NSW Department of Aboriginal Affairs - Office of the Registrar, Narrabri Shire Council (NSC), Native Title Services Corporation Limited (NTSCORP Limited), Namoi Catchment Management Authority Tamworth and Red Chief Local Aboriginal Lands Council (RCLALC). |
| 15 June 2010 | Public Notice displayed in <i>The Courier</i> and the <i>Namoi Valley Independent</i> advertising expression of interest for proposed Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. Expressions of interest were invited by all interested parties by 30 June 2010. | N/A |
| 15 June 2010 | Letter sent to known Aboriginal stakeholder organisations offering to participate in the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. | BBTP, CCC, GNAC, ELCHC and MMAC |
| 16 June 2010 | Letter received from NNTT indicating no outstanding Native Title claims within the Narrabri Local Government Area. | NNTT |
| 17 June 2010 | Letter received from NTSCORP Limited requesting a map of the Project so that they could forward the expression of interest to the relevant stakeholders. | NTSCORP Limited |
| 18 June 2010 | Letter received from Lloyd Matthews from BBC registering an expression of interest in the Project. | BBC |
| 18 June 2010 | Facsimile received from Donna Sampson from CCC registering an expression of interest in the Project. | CCC |
| 20 June 2010 | Facsimile received from registering an expression of interest in the Project. | HVCC, MC, ANTC and UHHCC |
| 21 June 2010 | Email received from Rodney Matthews from GC registering an expression of interest in the Project. | GC |
| 21 June 2010 | Email received from Wayne Matthews from BBTP registering an expression of interest in the Project. | BBTP |
| 21 June 2010 | Letter received from Gwen Griffen from MMAC registering an expression of interest in the Project. | MMAC |
| 22 June 2010 | Email received from Robert Horne from RCLALC registering an expression of interest in the Project. | RCLALC |
| 24 June 2010 | Letter received from NSC providing the list of two known Aboriginal organisations or individuals that may have an interest in the Project including NLALC, WAC. | NSC |
| 29 June 2010 | Letter sent to Aboriginal stakeholder organisations identified by the relevant authorities offering to participate in the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. | NLALC and WAC |
| 29 June 2010 | Facsimile received from Edward Trindall from NLALC registering an expression of interest in the Project. | NLALC |
| 30 June 2010 | Letter received from DECCW providing the list of nine known Aboriginal organisations or individuals that may have an interest in the Project including NLALC, WWLALC, ANRO, ELCHC, GGAC, MMAC, BBTP and | DECCW |

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| | GNAC. | |
| 1 July 2010 | Email received from Jane Bender from GGAC registering an expression of interest in the Project. | GGAC |
| 5 July 2010 | Letter received from Craig Trindall from GNAC registering an expression of interest in the Project. | GNAC |
| 5 July 2010 | Facsimile sent to remaining Aboriginal stakeholder organisations identified by the relevant authorities offering to participate in the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. | WWLALC and ANRO |
| 5 July 2010 | Letter received from Office of the Registrar indicating no Registered Aboriginal Owners pursuant to Division 3 of the <i>Aboriginal Land Rights Act 1983</i> . | Office of the Registrar |
| 7 July 2010 | Email received from Jason Wilson from GNRO registering an expression of interest in the Project. | GNRO |
| 8 July 2010 | Email received from Kasey Hilderson from WWLALC registering an expression of interest in the Project. | WWLALC |
| 13 July 2010 | Methodology for the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment fieldwork sent to all 18 registered groups. Methodology provided information on the Project and the proposed methodology. Comments in relation to the draft methodology were asked to be provided by 9 August 2010. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 20 July 2010 | Facsimile received from Justin Matthews from CC registering an expression of interest in the Project. | CC |
| 23 July – 4 August 2010 | Telephone call made to all registered groups to confirm if they had received a copy of the draft methodology and to ask if they would like their organisations name provided to DECCW and the RCLALC. Details were not provided if groups could not be contacted. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 23 July 201 | Telephone call made to Lloyd Matthews to confirm the receipt of the draft methodology. Lloyd indicated he had received the draft methodology and was satisfied with its content. | BBC |
| 24 July 2010 | Facsimile received from Patricia Hands from ELCHC stating she agreed with the content of the draft methodology and would like to participate in the Project. | ELCHC |
| 26 July 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | GC, MC, ANTC and HVCC, |
| 27 July 2010 | Telephone call made to Craig Trindall who indicated he was satisfied with the draft methodology and that in addition to the proposed Planning Meeting an additional meeting should be held after the fieldwork is complete. | GNAC |
| 27 July 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | BBC, UHHC and MRC |
| 4 August 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | GGAC |
| 4 August 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | CC |
| 5 August 2010 | Letter sent to DECCW and RCLALC providing a copy of the public notifications, the letter to the Aboriginal organisations informing them of the Project and a record of the Aboriginal parties who provided approval to release their names. | DECCW and RCLALC |
| 5 August 2010 | Received an acceptance of the methodology and | ANRO |

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| | expression of interest to be involved in the fieldwork. | |
| 5 August 2010 | Letter received from Robert Horne in regard to the draft methodology. Robert generally agreed with the draft methodology however noted that AHIMS searches do not provide a true reflection of Cultural Heritage and that he would like two representatives from his organisation present for the duration of the fieldwork. | RCLALC |
| 8 August 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | CCC and NLALC |
| 9 August 2010 | Email received from Kasey Hilderson stating that their organisation would like to participate in the field assessment. | WWLALC |
| 9 August 2010 | Email received from Wayne Griffiths in regard to the draft methodology. Wayne generally agreed with the draft methodology however noted that he would like a representative from his organisation present for the duration of the fieldwork. | BBTP |
| 10 August 2010 | Telephone call made to Brian Warren from WAC to confirm if his organisation would like to participate in the Maules Creek Aboriginal Archaeological and Cultural Heritage Assessment. Brian indicated that WAC was in the process of shutting down and kindly declined the invitation to participate in the Project. Brian indicated there was no need to continue providing further correspondence to his organisation. | WAC |
| 10 August 2010 | Received an acceptance of the methodology and expression of interest to be involved in the fieldwork. | MMAC |
| 10 August 2010 | Facsimile sent to all registered Aboriginal stakeholders inviting each organisation to attend a Planning Meeting to discuss the various aspects of the Project including the Aboriginal Heritage consultation program, draft methodology and associated fieldwork involvement. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 11 August 2010 | Telephone call made to Paul Houston at DECCW Dubbo inviting him to attend the Planning Meeting. Paul politely declined the initiation to attend as a result of work commitments. | DECCW |
| 13 August 2010 | Planning Meeting held at the Boggabri RSL Memorial Club commencing at 10.00am. 20 representatives from 15 organisations attended. | MMAC, CCC, RCLALC, GC, ELCHC, HVCC, ANTC, GGAC, BBC, MRC, MC, UHHC, CC, NLALC and ANRO. |
| 15 August 2010 | Email received nominating a representative to participate in the fieldwork and providing current Work Cover and Public Liability insurances. | CCC |
| 16 August 2010 | Letter sent to all registered Aboriginal stakeholder groups providing a copy of the presentation provided during the Planning Meeting. In addition, a Competency Statement was provided that provided: a request for insurances; nominated the proposed fieldwork dates; requested the name of the nominated representative who would be participating in the fieldwork; and request to complete a Competency Statement. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 17 August 2010 | Facsimile received with signed Competency Statement form provided along with the relevant insurances. A nominated representative to participate in the field assessment was also included. | CCC, UHHCC, HVCC, BBC, CC, ANTC and MC |

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 18 August 2010 | Facsimile received with signed Competency Statement form provided along with the relevant insurances. A nominated representative to participate in the field assessment was also included. | GC, GGAC, RCLALC, NLALC, BBTP and ELCHC |
| 19 August 2010 | Facsimile received with signed Competency Statement form provided along with the relevant insurances. A nominated representative to participate in the field assessment was also included. | MMAC, |
| 20 August 2010 | Telephone call to Jason Wilson to confirm if he would like to participate in the fieldwork component of the consultation program. Jason indicated that he had other commitments and would not be able to participate in the fieldwork however would like to continue to be involved in the consultation program. | ANRO |
| 20 August 2010 | Letter sent inviting Aboriginal stakeholder groups who had already provided the relevant insurances the offer to participate in the upcoming Archaeological and Cultural Heritage Assessment for the Maules Creek Coal Project to be held on the working days between the 23 September and the 1 October 2010. The letter detailed the dates of the fieldwork and provided a description of the PPE equipment required to be worn. | RCLALC, CCC, BBTP, ELCHC, GC, HVCC, BBC, CC and ANTC |
| 19 August 2010 | Letter sent inviting the remaining Aboriginal stakeholder groups who had registered in the Project the offer to participate in the upcoming Archaeological and Cultural Heritage Assessment for the Maules Creek Coal Project to be held on the working days between the 2 October and the 10 October 2010. The letter detailed the dates of the fieldwork and provided a description of the PPE equipment required to be worn. A copy of each Aboriginal group's Certificate of Currency for insurance purposes was also requested. | MMAC, GGAC, GNAC, MC, UHHCC, NLALC, WWLALC and MRC |
| 23 August – 1 September 2010 | Group 1 fieldwork. | RCLALC, CCC, BBTP, ELCHC, GC, HVCC, BBC, CC and ANTC |
| 31 August 2010 | Facsimile received with signed Competency Statement form provided along with the relevant insurances. A nominated representative to participate in the field assessment was also included. | WWLALC |
| 1 September 2010 | Telephone call to Wayne Matthews however spoke to Cheryl Matthews who noted that Wayne was away working and could not be contacted. It was noted that Wayne had not responded to any correspondence and had not provided a copy of the relevant insurances and as a result would not be able to participate in the field assessment. Cheryl noted that this was ok and that they would still like to review the draft report. | MRC |
| 1 September 2010 | Telephone call to Robert Horne notifying him that as a result of representative from MRC withdrawing from the fieldwork would it be possible for a representative from RCLALC to attend in his place. Robert indicated this would be fine. | RCLALC |
| 2 September – 10 September 2010 | Group 2 fieldwork. | MMAC, GGAC, GNAC, MC, UHHCC, NLALC, WWLALC and RCLALC |
| 23 September 2010 | Letter sent to the Aboriginal groups required to complete the remaining area within the Project Boundary. | RCLALC, BBTP, BBC and NLALC |

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 23 September 2010 | Letter sent to the Aboriginal groups not required to complete the remaining area within the Project Boundary. | MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, WWLALC, ANRO, CC and MRC |
| 29 September - 1 October 2010 | Group 3 Fieldwork | RCLALC, BBTP, BBC and NLALC |
| 3 November 2010 | Sent a hard copy of the Draft Aboriginal Archaeology and Cultural Heritage Impact Assessment Report by express post. Comment in relation to the draft report is sought prior to the 1 December 2010. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, GC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 5 November 2010 | Return Fax form received in support of the draft report. | GC |
| 22 November 2010 | Telephone called made to all contactable Aboriginal stakeholder groups who have been provided a copy of the EA report confirming they had received the report and that if they had any comments they should be provided prior to Wednesday, 1 December 2010. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 23 November – 1 December 2010 | Numerous telephone calls made to all contactable Aboriginal stakeholder groups who have been provided a copy of the EA report noting any comments in relation to the draft report should be provided prior to Wednesday, 1 December 2010. | RCLALC, BBTP, MMAC, GGAC, ELCHC, CCC, GNAC, ANTC, HVCC, MC, UHHCC, BBC, NLALC, WWLALC, ANRO, CC and MRC |
| 24 November 2010 | Lloyd Matthews indicated that he had not yet received a copy of the draft report. Hansen Bailey apologised and noted that an additional copy of the draft report would be sent via express post today. | BBC |
| 24 November 2010 | Return Fax received from Stephen Hands stating he agrees with the content of the draft report and that any artefact be removed be placed in a safe keeping place and the scar trees fenced off. | ELCHC |
| 29 November 2010 | Return Fax received from Lloyd Matthews stating he agrees with the majority of the draft report and that any significant sites be appropriately preserved. | BBC |
| 29 November 2010 | Return Fax received from Justin Matthews stating he agrees with the content of the draft report and that he would like to participate in any further field work. In addition Justin noted that he would like grader scrapes and test excavations conducted. | CC |
| 30 November 2010 | Letter received from Donna Sampson stating that she supports the draft report and feels the artefacts will undergo the appropriate forms of analysis and be reported in accordance with the relevant guidelines. Donna also noted that ongoing consultation with all registered stakeholders is required. | CCC |
| 30 November 2010 | Letter received from Robert Horne noting that mitigation and management of Aboriginal does not include the salvage of sites and that RCLALC does not support the destruction of any identified Aboriginal artefact. Robert also noted that Major Thomas Mitchell moved through the Leard State Forest while exploring the area following European settlement. It was noted that future Director-Generals Environmental Assessment Requirements should consider the Aboriginal heritage and social economic impact to the local Aboriginal community including appropriate compensation to an Aboriginal community trust to provide assistance to facilities for | RCLALC |

| Date | Method of Consultation | Aboriginal Stakeholder Groups Contacted |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| | tertiary education, training, health, land management and housing along with realistic Aboriginal employment within the mine. Robert noted that outcomes should be negotiated prior to the Project being approved. Robert also noted that DECCW should have a greater capacity to protect Aboriginal objects. | |
| 30 November 2010 | Second Return Fax received from Michele Stair and Rodney Matthews stating they would like grader scrapes and excavations conducted over the artefact scatters. | GC |
| 1 December 2010 | Return Fax received from Gwen Griffen stating she agrees with the content of the draft report however does not support the destruction of any artefacts. | MMAC |
| 1 December 2010 | Letter received from Jane Bender stating that she was largely satisfied with the report however noted that she does not support the destruction or removal of any cultural sites that hold importance to the her community and culture. Jane noted that her organisation would like to continue to be consulted in relation to the location of a keeping place in the future. | GGAC |
| 3 December 2010 | Email received from Wayne Griffiths stating that his organisation agrees with the content of the draft report. Wayne provided comments in relation the definition of cultural significance, noting that the true definition of this can not be written and can not be simply defined as physical or documented evidence. In addition it was noted that significance and cultural heritage is ongoing and continues from generation to generation. Wayne also noted his organisation would like to continue to participate in any further work and stated that he was extremely happy with the consultation process conducted for the Project. | BBTP |
| 13 December 2010 | All comments received from Aboriginal stakeholder groups have been incorporated into the EA report where relevant. | N/A |

Appendix E



THE COURIER

Celebrating Narrabri's Sesqui-Centenary 1860-2010

VOL XCVII No.47

TUESDAY, JUNE 15, 2010 \$1.30 Inc. GST

KFC
NARRABRI

is now
OPEN!

same
location.
same

ASTON
RESOURCES

Aboriginal Stakeholder Consultation Maules Creek Coal Project

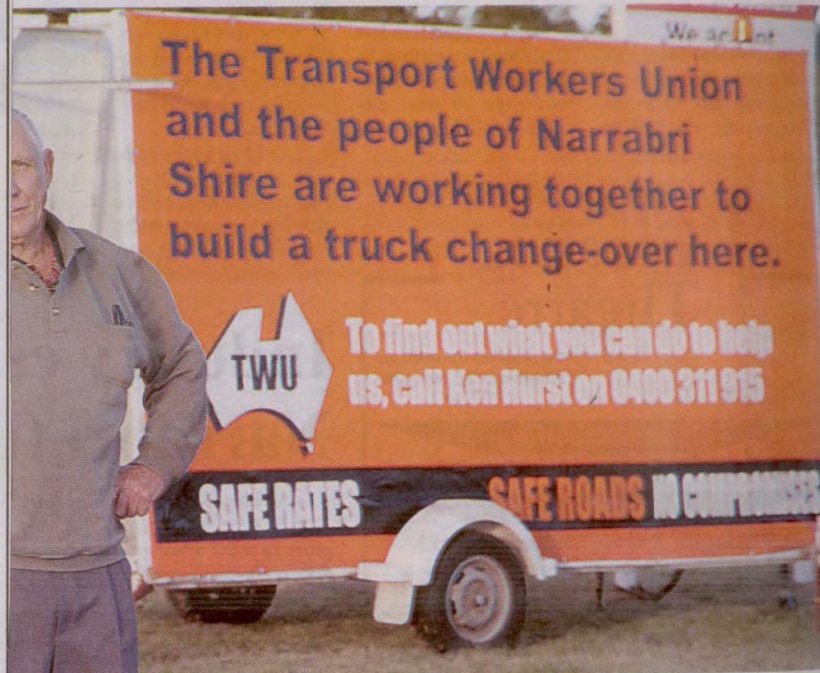
Aston Resources is seeking to identify Aboriginal stakeholders who wish to be consulted in relation to an Aboriginal Heritage Impact Assessment associated with the Maules Creek Coal Project located 20 km north-east of Boggabri, NSW.

The purpose of community consultation with Aboriginal stakeholders is to assist Aston Resources in undertaking an Aboriginal Heritage Impact Assessment. Relevant stakeholders are requested to register their interest in writing to:

Mr Jason Martin
Hansen Bailey
Environmental Consultants
PO Box 473
SINGLETON NSW 2330
jmartin@hansenbailey.com.au

Tel: 02 6575 2010
Fax: 02 6575 2001

Expressions of Interest should include current contact details. The closing date for registration is close of business on Wednesday, 30 June 2010. Once Expressions of Interest have been received, a planning meeting will be held to discuss the program further.



own and truckstop campaigner Ross Gribble with the bright orange campaign sign now the campaign for a truck rest stop and changeover facility at Narrabri.

Stop!

Namoi Valley Independent

\$1.20 including GST

Serving Gunnedah and district

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Tuesday, June 15, 2010

Power cut disrupts Gunnedah

PAGE 2



Public Notice

ASTON
RESOURCES

Aboriginal Stakeholder Consultation Maules Creek Coal Project

Aston Resources is seeking to identify Aboriginal stakeholders who wish to be consulted in relation to an Aboriginal Heritage Impact Assessment associated with the Maules Creek Coal Project located 20kms north-east of Boggabri, NSW.

The purpose of community consultation with Aboriginal stakeholders is to assist Aston Resources in undertaking an Aboriginal Heritage Impact Assessment. Relevant stakeholders are requested to register their interest in writing to:

Mr Jason Martin
Hansen Bailey
Environmental Consultants
PO Box 473
SINGLETON NSW 2330
jmartin@hansenbailey.com.au
Tel: (02) 6575 2010
Fax: (02) 6575 2001

Expressions of Interest should include current contact details. The closing date for registration is close of business on Wednesday, June 30, 2010. Once Expressions of Interest have been received a planning meeting will be held to discuss the program further.

a moment of insanity" and hit Mr Stewart several times.

Mr Stewart's body was found the next day.

The trial continued when McGuren bowed his head in court as a letter was

RL coach forced to retire

PAGE 20



Witness called

LARRY Rex Stewart prepared his will a week before he was killed at his Gunnedah home, the NSW Supreme Court has heard.

Mr Stewart, 50, was allegedly murdered in 2008 by his former friend John Allan McGuren, 46, after an alleged confrontation turned horribly wrong.

McGuren was charged with his murder in December 2008.

A Supreme Court Trial into Mr Stewart's death began at the Tamworth Court House last week.

McGuren had previously attempted to plead guilty to the lesser charge of manslaughter but the plea was rejected by the prosecution.

over a woman McGuren relationship with.

McGuren had alleged Stewart of sparking up the woman after his fell.

The woman was the to the case.

She told the court relationship with McG months and ended the December 2006.

McGuren was convicted damaging the woman's a window at her home.

He was sentenced to a term of imprisonment a short time later.

McGuren was released on October 2, 2003.

the murder trial

n the night of allegedly arrived load home with

uren allegedly the home and had accidentally n the neck.

aged to make where the dis-

! police he had

maliciously damaging her car after she ended the relationship.

McGuren had then allegedly accused his former friend Mr Stewart of making advances toward her.

"I wanted to marry you," the letter read.

"I would have served you the rest of my life in any way you wanted."

The letter also read the concerns McGuren had about his former partner's relationship with Mr Stewart.

"As far as Rex is concerned ... as soon as he sees a chance he'll try to take it," the letter said.

When he was later released from jail, Mr Stewart and McGuren's ex partner were



Appendix F

05-NOV-2010 11:44

P. 1

Return Fax: (02) 6575 2001

Attention: Jason Martin

RE: MAULES CREEK COAL PROJECT – ABORIGINAL ARCHAEOLOGY AND CULTURAL HERITAGE IMPACT ASSESSMENT REPORT

Aboriginal Stakeholder Group: Giverr Consultants

I have read and have understood the Maules Creek Coal Project – Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which has been prepared by AECOM. I agree that this Report is adequate and consistent with the views and wishes of the local Aboriginal Community. With regard to the Report, I would like to confirm that our group:

☒ Agrees with the content☐ Disagrees with the content

We would like to make the following comments on the Report:

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing data sets.

3. Once the information is gathered, the next step is to develop a plan or strategy to address the problem. This may involve breaking the problem down into smaller, more manageable parts.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress along the way.

5. Finally, it is essential to evaluate the results of the process. This involves comparing the outcomes against the original goals and objectives to determine the effectiveness of the solution.

Signed in support: M. Sten

On behalf of (Group): G. W. I. R. C.

Date: 5/11/10



17/12/2010

101206 BBTP.htm

From: W & M Griffiths [wallis.griffiths@bigpond.com]
Sent: Friday, 3 December 2010 12:01 AM
To: Jason Martin
Subject: Maules Creek Coal Project - Aboriginal Archaeology and Cultural Heritage Impact Assessment Report

Mr Jason Martin
Hansen Bailey
Environmental Consultants
PO BOX 473
SINGLETON NSW 2330

Dear Jason

I have read the Maules Creek Coal Project - Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which was prepared by AECOM. I agree that this report is well detailed and meets all the Aboriginal Culture and Heritage standards, and is consistent with our views. I would like to confirm that our group agree with the content. And wish to make the following comments.

Defining Cultural Significance - a dictionary definition has been provided. A true definition of culture cannot be provided by such means. Cultural significance cannot simply be defined by physical or documented evidence, it is defined by its importance within a community, the historical significance, a link to ancestors through gathering where previous generations have. A religious community are not required to explain the cultural significance of religious ceremonies, whether they be held in a church field or river. Wherever ceremonies are held it is accepted as being culturally significant without requiring documentary evidence.

Aboriginal Heritage Values - this too is not limited to a finite definition. Historical evidence confirms the presence of the aboriginal community in years past, but its value and heritage significance is ongoing and continued from generation to generation.

Just because the laws of European settlers imposed laws and restrictions upon the aboriginal community, including removing us from the land to which we belong, limiting our access to significant meeting places, restriction and prevention of ceremonies and gatherings to pass on culture and heritage. The values did not cease, although the continuance of significant culture and Heritage may have been forced to change at the insistence of the government of the day, or may have taken on a more clandestine nature, no the less the value is as important now, if not more so.

Management Recommendations – we would wish to be involved and consulted in all aspects of the management process, especially the salvage Excavation

I wish to offer my commendation on the extensive efforts made by Hansen Bailey to ensure this process is transparent and realistic, and we look forward to continued collaboration with you.

I may be contacted at anytime to discuss this further on 0409 220 756. My contact details are listed below.

Wayne Griffiths

Traditional owner
Bigundi Biame Traditional People
PO BOX 254
Gunnedah NSW 2380
Tel: 02 6742 0311

Mob: 0409 220 756

K:/.../101206 BBTP.htm

1/2



17/12/2010

101206 BBTP.htm



RED CHIEF LOCAL ABORIGINAL LAND COUNCIL

P.O. BOX 745

GUNNEDAH NSW 2380

Phone: (02) 6742 3602 Fax: (02) 6742 3815

Email: redchief@westnet.com.au

30th November 2010

Jason Martin
Environmental scientist
Hansen Bailey
PO Box 473
Singleton NSW 2330

Dear Jason

Re: Response to Maules Creek Project Aboriginal Archaeological & Cultural Impact Assessment Report

Again I apologise for the delay in responding to the above and the cause of your anxiety. But your company needs to be aware that the very reason for it to be appropriate for Aboriginal people to be involved in cultural heritage work, is that cultural heritage is not to be seen as just artefacts and sites to be collected, processed and studied, but they hold cultural significance. Sites cannot be replaced, they are gone forever. It is after all our culture heritage that you ask to be destroyed, our approach to these matters are informed from different considerations and responsibilities than which the proponent need to be troubled by.

For in excess of two hundred years our people, without appropriate consideration, have been subjected to banishment of country and culture through European settlement, government policy and development. None more severe, then open cut mining. For this reason, we do not see ourselves as mere 'rubber stamps' for documents your company feels we need to approve, but will bring our own judgement to bear on what we consider has been culturally appropriate.

You should appreciate our precautionary approach when dealing in these matters, especially when we are noting misleading statements. I draw your attention to the executive summary that states in paragraph (4) ***the impacts to Aboriginal heritage will be mitigated through salvage excavation of areas of high significance***. My understanding of mitigation does not involve the complete destruction of a site, for which your intents appear to be clear. Surface artefacts alone do not represent the entirety of Aboriginal culture but are more relevant to the land in which they are produced, utilised and to which our people are connected. Beside this, all Aboriginal sites hold cultural significance!

With reference to **Section 6.0 Archaeological & Ethnographic Context and 6.1**

Kamilaroi People: the author has questioned the veracity of the letters, journals and official reports of early explorers and although have referenced Mitchell's passing of Boggabri on the southern and western side, has failed to note his journey and encounters

to the north through Barbers Lagoon the project area itself (The Laird Forest) and associated areas - an over sight certainly worthy of mention.

10.0 Management recommendations principles

It is apparent that the most effective extraction of coal reserves far out-weigh the conservation of Aboriginal cultural and the heritage our people. Open cut mining would arguably be the most destructive of any development, and is responsible for the destruction of all within the context of our culture.

As stated earlier in this response we do not consider ourselves as mere ‘rubber stamps’ to approve the destruction of any of our cultural heritage and before any consideration is given, we would have to ask: has the developer considered any alternate less environmentally destructive methods of extracting coal; under-ground mining- shared use of the neighbouring mines infrastructure such as haul road rail loading facility, this alone would clearly contribute to the loss of sites and culture associated with country (including cultural and spiritual landscape features).

Furthermore sites left in situ will always present themselves more culturally stimulating then those to be placed in the chambers of a museum. Loss of sites and country means loss of culture for Aboriginal people and for this reason the effects are devastating. If these sites are to be destroyed then the developers should also ask themselves what social or economic benefits they may offer as a result of their actions, to alleviate some of the suffering of Aboriginal in this area

Should this proposed mining project be approved, the future Director-General’s Requirements under Section 75F of the EP&AA Act 1979 must consider the following. We believe that the proponent and the Department of Planning must consider separately the key issues of ‘**Heritage - Aboriginal**’, and the ‘**Social & Economic**’ impacts on the local and regional Aboriginal community. These social and economic impacts of the proposed mining do not just affect the non-Aboriginal people now living within this part of country, but also the Indigenous people who are still being discriminated against within the general community.

To help alleviate some of the Aboriginal community’s social difficulties, increase their wellbeing and help provide a future for their children, it is believed that the following considerations should be taken by your department.

The Aboriginal people of this country require compensation (under common law, or similar legislation) for the loss of their land, their culture and heritage since European settlement, and now the total destruction by mining of those intrinsic values, for the benefit of rich and indifferent overseas interests. The enforcement of compensatory social and economic benefit requirements will go towards ensuring an improvement in the health and lifestyle of the Aboriginal people within this region.

The compensation proposed is:

- 1% - 2% of mining revenue which goes to the NSW Government, be put in an Aboriginal community trust to provide assistance and facilities for tertiary education and training, health, land management and housing; and

- Realistic Aboriginal employment within the mine (eg. 1:10 ratio of Aboriginal staff and mine workers).

Issues relating to social and economic value returns to the Aboriginal community from mining activities, should be priced and included in the Environmental Impact Statement for this, and for all future mine sites in this country and NSW. Some of the profits of coal mining should be returned to the people for loss of our culture and heritage. At least these issues need to be negotiated with the Aboriginal community at an early stage of the mine concept and prior to the Part 3A Environmental Assessment application phase of the project.

The tangible Aboriginal cultural heritage aspects of the proposed Maules Creek project will need to be addressed separately to community compensation for the loss of the land and wellbeing.

In addition, it is disgusting that under Part 3A legislation, the Department of Environment, Climate Change and Water (DECCW) has no role to play in relation to sites management except in an 'advisory capacity'. If they are supposed to undertake the role of protector of Aboriginal objects, places and sites within NSW, it is felt that they should give more legal leverage for Aboriginal people to have control of their cultural heritage. There is no way to replace the destruction of the cultural heritage either spiritually or physically - it is seen as being relics of the past and can be discarded or locked away in museums.

We would be happy to accommodate a meeting in the future in regards to the above

Sincerely

Robert Horne
CEO

Return Fax: (02) 6575 2001

Attention: Jason Martin

**RE: MAULES CREEK COAL PROJECT – ABORIGINAL ARCHAEOLOGY AND
CULTURAL HERITAGE IMPACT ASSESSMENT REPORT**

Aboriginal Stakeholder Group: *Min Min Aboriginal Corporation*

I have read and have understood the Maules Creek Coal Project – Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which has been prepared by AECOM. I agree that this Report is adequate and consistent with the views and wishes of the local Aboriginal Community. With regard to the Report, I would like to confirm that our group:

☒ Agrees with the content

☐ Disagrees with the content

We would like to make the following comments on the Report:

Min Min Aboriginal Corporation has always taken the view, whilst we don't agree with the disturbance or removal of any artefacts that are important to Aboriginal people and your organisation has met all of the requirements that is needed. Min Min Aboriginal Corporation has no issues of concern at this time.

Signed in support: *G A Giffen*

On behalf of (Group): *Min Min Aboriginal Corporation*

Date: *1-12-10*

Mervyn Omas

34-36 Farrar Road
PO Box 439
GUNNEDAH NSW 2380



Phone: 02 6742 7038
Fax: 02 6742 6670
Email: jane@gunidagunyah.com.au
ABN: 99 561 430 099
ICN: 2708

Friday, 17 December 2010

Jason Martin
Environmental Scientist
Hansen and Bailey
Environmental Consultants

Re: Maules Creek Coal Project Aboriginal Archaeological Cultural and Heritage Impact Assessment Report

Dear Jason

Gunida Gunyah Aboriginal Corporation does not and cannot support any destruction or removal of any significant cultural sites that hold importance to our community and culture. It is imperative that this Corporation does all that it can to ensure the protection and conservation of our culture for the future social, cultural and economic wellbeing of the Aboriginal community.

Bearing in mind the Management mitigation measures that are indicated in the report, we do believe that if carried out accordingly these measures will lessen the detrimental impact on some of the significant sites identified in the report.

We do not support the removal of artefacts as they play a vital role in our history and future, we would like a discussion to be held with the key Aboriginal Stakeholders as to where the suggested keeping place is going to be located and the method of relocation. We would also like to have a representative present during the duration of the relocation.

Overall we are satisfied with the content and recommendations of the report

Sincerely

Jane Bender

Jane Bender
CEO
Gunida Gunyah Aboriginal Corporation
0267427038

24/03/2010

30-NOV-2010 13:34 From:

To: 65752001

P.1/1

Return Fax: (02) 6575 2001**Attention: Jason Martin****RE: MAULES CREEK COAL PROJECT – ABORIGINAL ARCHAEOLOGY AND
CULTURAL HERITAGE IMPACT ASSESSMENT REPORT****Aboriginal Stakeholder Group:** CARRAWONGA CONSULTANTS

I have read and have understood the Maules Creek Coal Project – Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which has been prepared by AECOM. I agree that this Report is adequate and consistent with the views and wishes of the local Aboriginal Community. With regard to the Report, I would like to confirm that our group:

☒ Agrees with the content☐ Disagrees with the content

We would like to make the following comments on the Report:

I JUSTIN MATTHEWS OF
16 B MAHOGANY ST MUSWELLBROOK

I would like to be ^{involved} in more work
at MAULES CREEK CREEK

also I would like to have
Grader scrapes, Test EXVATIONS
in the near future

THANK YOU

Justin Matthews

29-11-2010

Signed in support: Justin Matthews

On behalf of (Group): CARRAWONGA CONSULTANTS

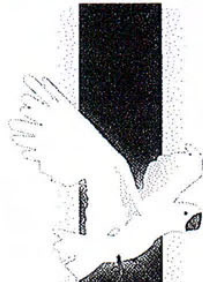
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30/11/2010 15:48

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CACATUA GENERAL SERV

PAGE 01



Cacatua Culture Consultants

Entity of Cacatua General Services

ABN 83 774 580 518

30 November 2010

Jason Martin
Environmental Scientist
Hansen Bailey Pty Ltd
PO Box 473
Singleton NSW 2330

RE: Maules Creek Coal Project Aboriginal Archaeological and Cultural
Heritage impact assessment.

Jason,

We have read and discussed the contents of the Draft that was prepared by
AECOM with regards to the above project.

This being Kamilaroi land and the manager's traditional lands he is very
passionate for the preservation of the Culture Heritage within this area. We are
aware of the impact that this area will undertake.

We understand that the artefacts will need to undergo appropriate forms of
analysis and reported in accordance with relevant guidelines. We feel that the
stakeholders should be involved with this part of the process where possible. We
believe that every effort should be made to include the stakeholders.

We agree that this Report is adequate and at this point we support the Draft.
Yours truly

Donna Sampson
Administration

22 Ibis Parade, Woodberry NSW 2322
Ph: 02 4964 4685 • Fax: 02 4964 4635

Return Fax: (02) 6575 2001

Attention: Jason Martin

RE: MAULES CREEK COAL PROJECT – ABORIGINAL ARCHAEOLOGY AND CULTURAL HERITAGE IMPACT ASSESSMENT REPORT

Aboriginal Stakeholder Group: Bullen Bullen Consultants

I have read and have understood the Maules Creek Coal Project – Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which has been prepared by AECOM. I agree that this Report is adequate and consistent with the views and wishes of the local Aboriginal Community. With regard to the Report, I would like to confirm that our group:

☐ Agrees with the content

☐ Disagrees with the content

We would like to make the following comments on the Report:

I agrees with most of the content
we would like to protect number of well preserved scarred
Tree's
Grinding Grooves
Aboriginal Ceremony or Dreaming
Site
Also Excavator, grader scrape
some dig & sifting

Signed in support: Lloyd Matthews

On behalf of (Group): Bullen Bullen Consultants

Date: 29.11.2010



25/11 2010 09:01 FAX 61 2 65422005

COMMUNITY HEALTH

0001/0001

Return Fax: (02) 6575 2001**Attention: Jason Martin****RE: MAULES CREEK COAL PROJECT – ABORIGINAL ARCHAEOLOGY AND
CULTURAL HERITAGE IMPACT ASSESSMENT REPORT****Aboriginal Stakeholder Group:** Elli Lewis

I have read and have understood the Maules Creek Coal Project – Aboriginal Archaeology and Cultural Heritage Impact Assessment Report which has been prepared by AECOM. I agree that this Report is adequate and consistent with the views and wishes of the local Aboriginal Community. With regard to the Report, I would like to confirm that our group:

☒ Agrees with the content☐ Disagrees with the content

We would like to make the following comments on the Report:

I agree with the finding in the report. And that if any artefact have to be removed to be placed in safe keeping. And Scard trees to be fenced off. Thank you.

Signed in support: *[Signature]*

On behalf of (Group): Elli Lewis

Date: 24/11/10