

Aboriginal Heritage Conservation Strategy:

Maules Creek Coal Mine, Tarrawonga Coal Project, Boggabri Coal Mine, and Related Biodiversity Offset Areas

by

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Title

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Report version 2

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- Attachment 3 Likely Distribution of Aboriginal Site Types within the Study Area
- Attachment 4 List of Registered Aboriginal Parties for the AHCS
- Attachment 5 Summary of Desktop Assessment

1 INTRODUCTION

The Maules Creek Coal Mine is owned as a joint venture between Aston Coal 2 Pty Limited (a wholly owned company of Whitehaven Coal Limited [Whitehaven]), ICRA Maules Creek Pty Limited and J-Power Australia Pty Limited. Maules Creek Coal Pty Ltd (MCC) has been appointed by the joint venture to manage the Maules Creek Coal Mine. MCC is a wholly owned subsidiary of Whitehaven.

The Tarrawonga Coal Project is operated by Tarrawonga Coal Pty Ltd, a joint venture between Whitehaven Coal Mining Pty Ltd (70 percent [%]) and Idemitsu Boggabri Coal Pty Ltd (Idemitsu) (30%).

The Boggabri Coal Mine is operated by Boggabri Coal Operations Pty Limited (BCOPL), a wholly owned subsidiary of Idemitsu Australia Resources Pty Limited (80%0, Chugoku Electric Power Australia Resources Pty Ltd (10%) and NS Boggabri Pty Limited (10%).

For simplicity, all references to Whitehaven in this document are taken to be references to both MCC and Tarrawonga Coal Pty Ltd.

Condition 57, Schedule 3 of New South Wales (NSW) Project Approval (10_0138) for the Maules Creek Coal Mine, Condition 51, Schedule 3 of NSW Project Approval (11_0047) for the Tarrawonga Coal Project, and Condition 55, Schedule 3 of NSW Project Approval (09_0182) for the Boggabri Coal Mine require the preparation of an Aboriginal Heritage Conservation Strategy (AHCS).

The Maules Creek Coal Mine, the Tarrawonga Coal Project, and Boggabri Coal Mine have approved conditions that require the preparation of an AHCS.

This AHCS (Section 2) covers all biodiversity offset areas for the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine.

1.1 Scope and purpose of the AHCS

This AHCS has been prepared on behalf of Whitehaven and Idemitsu by Dr Andrew Sneddon and Dr Matthew Whincop of the University of Queensland Culture and Heritage Unit (UQCHU) (whose appointment has been approved by the NSW Department of Planning and Environment [DP&E] [letter dated 20 January 2016] as *suitably qualified and experienced person/s*). They were assisted by Whitehaven and Idemitsu in relation to some non-specialist inputs.

Condition 57, Schedule 3 of NSW Project Approval (10_0138) for the Maules Creek Coal Mine, Condition 51, Schedule 3 of NSW Project Approval (11_0047) for the Tarrawonga Coal Project, and Condition 55, Schedule 3 of NSW Project Approval (09_0182) for the Boggabri Coal Mine require the preparation of an AHCS as follows:

...The Proponent shall prepare and implement an AHCS for the project and the Biodiversity Offset Strategy areas to the satisfaction of the Director-General. This Strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The Strategy must:

- (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;*
- (b) be prepared in consultation with OEH, the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 18 months from the date of project approval;*
- (c) identify the Aboriginal cultural heritage values of the Biodiversity Offset Strategy areas;*
- (d) identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;*
- (e) identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within either the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural heritage significance to the Aboriginal community; and*
- (f) consider cumulative impacts and potential for developing joint initiatives with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural heritage values.*

This AHCS satisfies the above project approval conditions. However, it also recognises that Aboriginal cultural heritage management requires ongoing refinement as new data become available. For example, some parts of the biodiversity offset areas have not been accessed in the past due to the rugged nature of the terrain. This AHCS has sought to address this issue by:

- Developing a predictive model in an effort to identify places and objects of potential high cultural significance to Aboriginal persons in difficult-to-access areas.

- Building in a process by which the management regimes presented in this AHCS can be regularly augmented and refined as new information becomes available.

The purpose of this AHCS is to:

- Describe the known and potential Aboriginal heritage (archaeological and cultural) values and identify Aboriginal sites of high archaeological and/or cultural significance within the Study Areas (Section 2) and provide for their management. This includes options for the management of sites within the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine disturbance areas¹ and avoidance, enhancement and/or conservation of sites within the relevant biodiversity offset areas.
- Provide a methodology and proposed timing for the ongoing refinement of the predictive model presented in this AHCS through targeted field surveys, ongoing community consultation and anthropological research in relation to the Study Area in general and the biodiversity offset areas in particular.
- Detail the ongoing assessment and recording of cultural values within the Study Area, including the engagement of qualified and experienced archaeologists, oral historians and/or anthropologists (or equivalent) as necessary.
- Identify/specify opportunities for the Aboriginal community in the ongoing and long-term management and enhancement of Aboriginal values, based on feedback received from Registered Aboriginal Parties (RAPs) in the area.
- Provide consideration of potential cumulative impacts and the potential for developing joint initiatives with surrounding mines.
- Outline the proposed approach for ongoing consultation with existing RAPs, including engagement in field surveys, meetings, site inspections and the approach to engaging local and regional Elders that may not be RAPs.

A reconciliation of where the relevant NSW Project Approval requirements have been addressed in this AHCS is provided in Attachment 1.

¹ Aboriginal sites at the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine are managed in accordance with the currently approved Aboriginal Archaeology and Cultural Heritage Management Plan (AACHMP), Heritage Management Plan (HMP), and Cultural Heritage Management Plan respectively (Whitehaven, 2015a; 2016; Idemitsu 2013) or any subsequent revisions.

1.2 Historical Development of the Aboriginal Heritage Conservation Strategy

A draft AHCS was prepared by RPS Australia East Pty Ltd (RPS) in August 2014.

Consultation with the NSW Office of Environment and Heritage (OEH) and the DP&E was undertaken during the preparation of the previous draft strategy (RPS, 2014). An initial strategy meeting was held on 25 February 2014 with representatives of the OEH and DP&E.

Further updates on the progress and development of the strategy were provided following each community consultation meeting.

Aboriginal community consultation undertaken for the strategy to date has included the provision of a proposed methodology to all RAPs for review and comment on 7 April 2014, various workshop sessions held in April 2014 and June 2014, and general ongoing communication and consultation with relevant Aboriginal stakeholders (RPS, 2014).

The OEH recognised in correspondence dated 19 June 2015 that the community consultation undertaken to date satisfies the consultation requirement of Project Approval (10_0138) for the Maules Creek Coal Mine, Project Approval (11_0047) for the Tarrawonga Coal Project, and Project Approval (09_0182) for the Boggabri Coal Mine AHCS. A detailed description of the community consultation undertaken for the strategy to date is provided in Attachment 2 (RPS, 2014).

An additional meeting was held with representatives of the OEH and DP&E on 7 December 2015 regarding the progress and direction of the AHCS. Another meeting was held with Mr Phil Purcell of OEH on 8 and 9 February 2016 as the draft document progressed. These meetings established the desired form and content of the AHCS which included recognition of the need for a predictive approach, as well as ongoing refinement of the management strategies as new information comes to light.

The data obtained through the community consultation undertaken by RPS have been augmented by additional data obtained by UQCHU since 2013. UQCHU's community consultation has been principally directed towards the area of the Maules Creek Coal Mine, but the consultation was deliberately designed with an appreciation of regional cultural 'linkages' in mind. Therefore, it also captured pertinent information in relation to the cultural values of the Study Area (and the region quite widely defined).

Upon approval, this AHCS will supersede the previously prepared draft (dated August 2014 and included as Attachment 2).

1.3 Structure of this document

The remainder of the AHCS is structured as follows:

- Section 2: Describes the Study Area for the AHCS.
- Section 3: Describes the known Aboriginal sites and Aboriginal heritage values within the Study Area.
- Section 4: Describes the heritage potential of the Study Area including those areas and sites of potential high significance.
- Section 5: Outlines the Aboriginal heritage field survey methodology.
- Section 6: Describes the assessment and recording of cultural values within the Study Area.
- Section 7: Describes options for enhancing and conserving Aboriginal heritage values in the Study Area, including consideration of potential cumulative impacts and the potential for developing joint initiatives with surrounding mines.
- Section 8: Describes the approach for ongoing consultation regarding the AHCS.
- Section 9: Provides the references cited in the AHCS.
- Attachment 1: Provides a reconciliation of the AHCS against the relevant NSW Project Approval requirements.
- Attachment 2: Aboriginal Heritage Conservation Strategy for the BTM Complex and Biodiversity Offset Areas [Draft Only] (RPS, 2014).
- Attachment 3: Details the potential distribution of Aboriginal site types within the Study Area.
- Attachment 4: List of RAPs for the AHCS.
- Attachment 5: Provides a summary of the desktop assessment.

2 STUDY AREA

The AHCS incorporates the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine, as well as their respective biodiversity offset areas. These areas are herein collectively referred to as the Study Area and are described in further detail below.

2.1 Maules Creek Coal Mine

The Maules Creek Coal Mine is located on the northwest slopes and plains of NSW, north-east of Boggabri, and approximately 35 kilometres (km) south-east and 55 km north from the regional centres of Narrabri and Gunnedah, respectively (Figure 1).

The boundaries of the Maules Creek Coal Mine, including the general layout and areas of approved surface disturbance, are presented on Figure 2.

Whitehaven has established and maintains an Aboriginal Archaeological Sites Database for the Maules Creek Coal Mine. The database is based on numerous investigations, surveys and assessments undertaken at the Maules Creek Coal Mine and within the immediate surrounds including (but not limited to):

- AECOM Australia (2010) *Aboriginal Archaeology and Cultural Heritage Impact Assessment for the Maules Creek Coal Project*.
- Dallas (1986) *Archaeological Survey of Proposed Coal Haul Route and Rail Loop for the Maules Creek Project, Boggabri, NSW*.
- Haglund (1982) *Archaeological Investigations at Top and Bottom Rocks, Namoi River, N.S.W.*
- Haglund (1983) *Archaeological Reconnaissance Survey: Maules Creek Exploration Project*.
- Haglund (1985) *Archaeological Investigations of Areas that may be Affected by Proposed Mining for Coal in the Gunnedah Area, New South Wales*.
- Haglund (1986) *Preliminary Sampling Surveys for Aboriginal Sites, Maules Creek Project, NSW*.
- Kamminga (1977) *Amax Proposed Coal Mining at Boggabri*.
- Thompson (1981) *Aboriginal Sites Study*. In: *Environmental Impact Statement for the Proposed Vickery Coal Mine Project*.

The Aboriginal Archaeological Sites Database for the Maules Creek Coal Mine also incorporates the results of various additional investigations and assessments undertaken subsequent to the above listed assessments including due diligence and site specific investigations (Clarkson, 2014; Core Artefact Research, 2014; Global Soil Systems, 2013, 2014a, 2014b, 2014c; In the Groove Analysis, 2013; Rosendahl *et al.*, 2014; UQCHU, 2013a, 2013b, 2014a, 2014b, 2014c, 2014d, 2014e, 2014f, 2014g, 2014h, 2014i, 2014j, 2014k, 2014l, 2014m, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f, 2015g, 2015h, 2015i, 2015j, 2015k).

The results of this work are summarised in Sections 3.2.1 and 3.3.1.

Aboriginal sites at the Maules Creek Coal Mine are managed in accordance with the currently approved AACHMP (Whitehaven, 2015a) or any subsequent revision.

2.2 Tarrawonga Coal Project

The Tarrawonga Coal Project is located approximately 15 km north-east of Boggabri and 42 km north-west of Gunnedah in central northern NSW (Figure 1).

The layout of the Tarrawonga Coal Project is presented on Figure 3.

Whitehaven has established and maintains an Aboriginal Archaeological Sites Database for the Tarrawonga Coal Project. The database is based on numerous investigations, surveys and assessments undertaken at the Tarrawonga Coal Project and within the immediate surrounds, including (but not limited to):

- Archaeological Surveys & Reports (2005) *Archaeological Investigation for Sites of Indigenous Cultural Significance for the Proposed East Boggabri Coal Mine.*
- Landskape Natural and Cultural Heritage Management (2010) *Tarrawonga Coal Project Modification Cultural Heritage Assessment.*
- Kayandel Archaeological Services (2011) *Tarrawonga Coal Project Aboriginal Cultural Heritage Assessment.*
- Dunk and Vermeltfoort (2011) *Tarrawonga Coal Project Environmental Assessment. Appendix K: Aboriginal Cultural Heritage Assessment.*

The results of this work are summarised in Sections 3.2.2 and 3.3.2.

Aboriginal sites at the Tarrawonga Coal Project are managed in accordance with the currently approved HMP (Whitehaven, 2016) or any subsequent revision.

2.3 Boggabri Coal Mine

The Boggabri Coal Mine comprises an open cut coal mine located approximately 15 km north-east of the township of Boggabri and 42 km north-west of Gunnedah in central northern NSW (Figure 1).

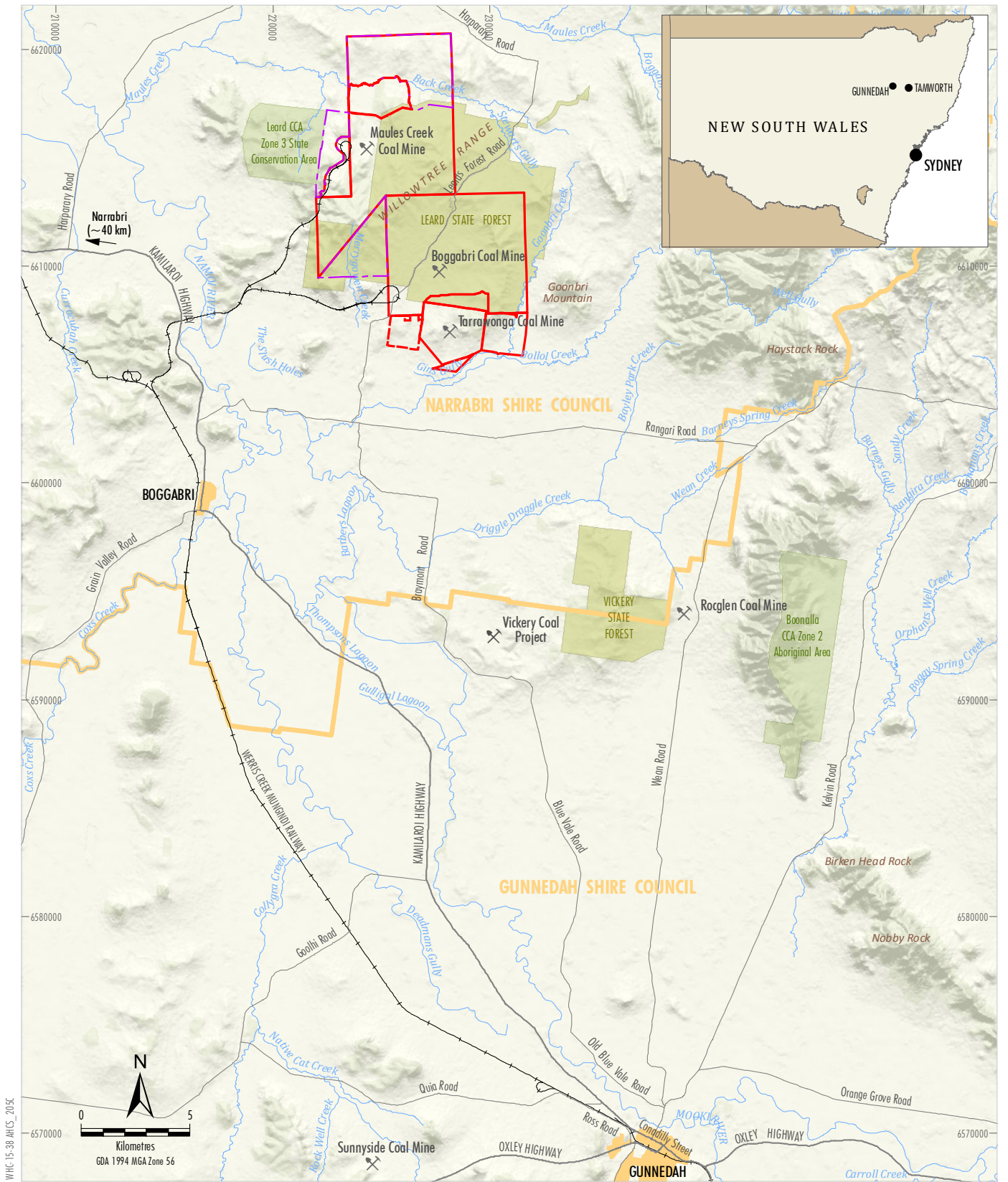
The layout of the Boggabri Coal Mine is presented on Figure 3.

Idemitsu has established and maintains Site Management Protocols (CHMP, Section 4) for Aboriginal cultural heritage sites within the Boggabri Coal Mine (Idemitsu 2013). These protocols are based on numerous investigations, surveys and assessments undertaken at the Boggabri Coal Mine and within the immediate surrounds, including (but not limited to):

- Hamm (2005) *Aboriginal Cultural Heritage Assessment Report, Boggabri Coal Project.*
- ARAS (2005) *Boggabri Coal Project Aboriginal Cultural Heritage Assessment Report. Report to Idemitsu Boggabri Coal Pty Ltd.*
- Insite Heritage (2010) *Aboriginal Cultural Heritage Impact Assessment Report for the Continuation of Boggabri Coal Mine.*
- Insite Heritage (2014) *Aboriginal Cultural Heritage Assessment Proposed 75W Modification (4) (PA 09_0182) Boggabri Coal Expansion Project.*
- Insite Heritage (2014a) *Aboriginal Cultural Heritage Salvage Report Goonbri Road Upgrade Boggabri, NSW*
- Insite Heritage (2015) *Stage One Aboriginal Cultural Heritage Salvage report Boggabri Coal Expansion Project Boggabri, NSW*

The results of archaeological investigations are summarised in Sections 3.2.3 and 3.3.3.

Aboriginal sites at the Boggabri Coal Mine are managed in accordance with the currently approved CHMP (Idemitsu 2013) or any subsequent revision.



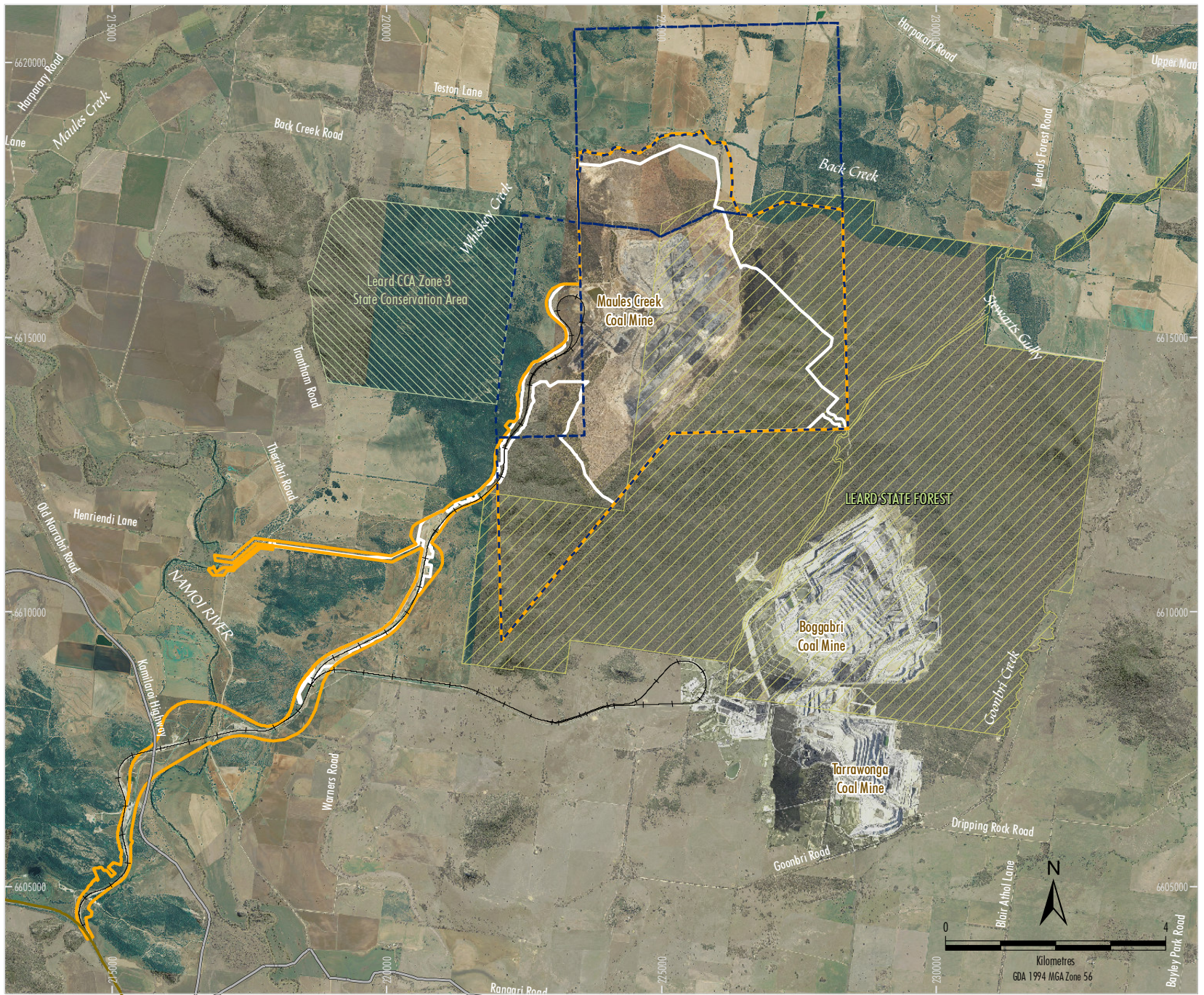
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- LEGEND**
- Exploration Licence Boundary (EL & AUTH)
 - Mining Lease Boundary (ML & CL)
 - Mining Lease Application Boundary (MLA)
 - Local Government Boundary
 - Railway

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Regional Location

Source: LPMA - Topographic Base (2010); NSW Department of Industry (2015)

Figure 1



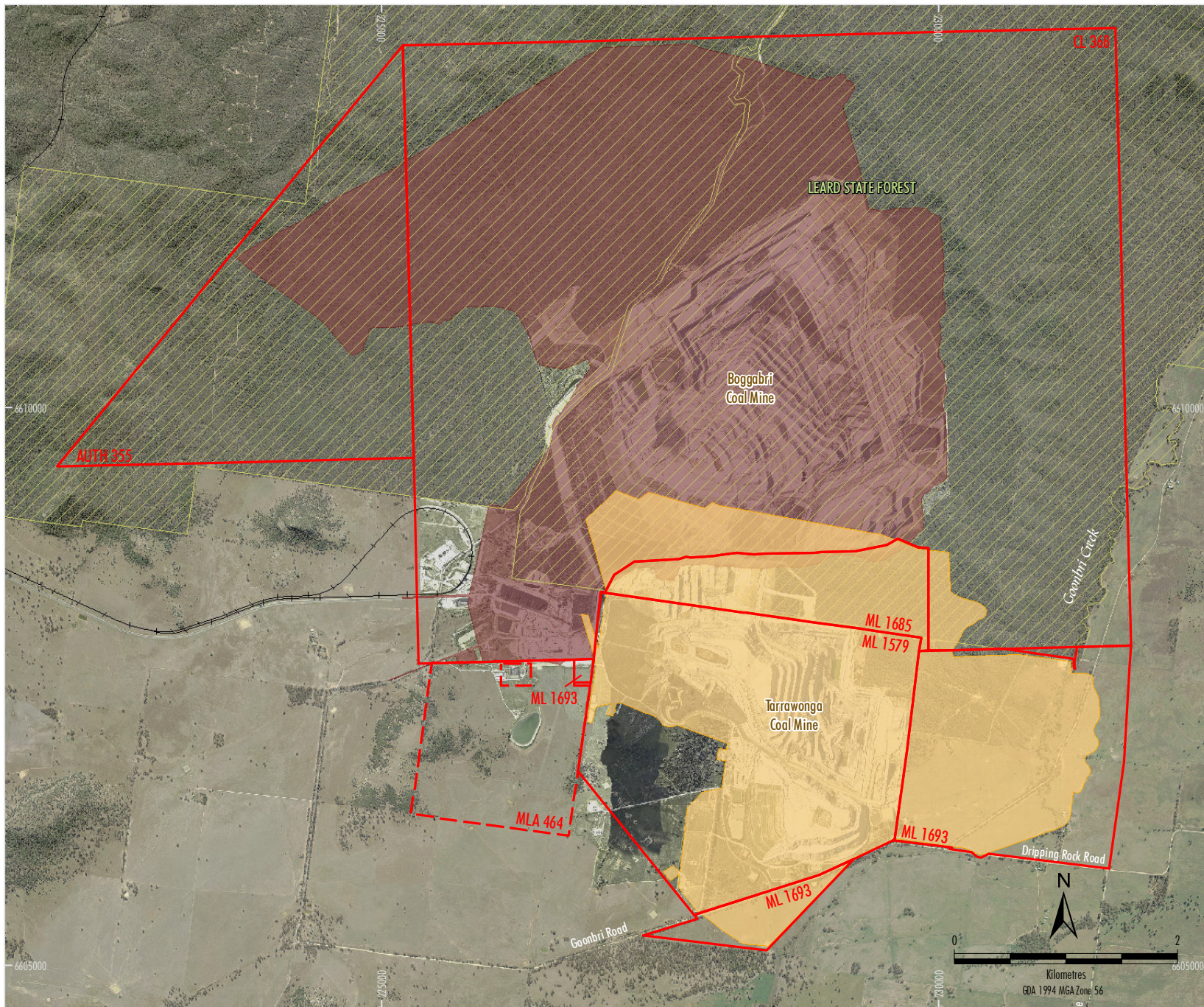
LEGEND

- NPWS Estate
- State Forest
- Railway
- Mining Tenement Boundary
- Maules Creek Project Boundary
- Maules Creek Project Surface Development Extent

Source: OEH (2013); Whitehaven Coal Limited (2015); NSW LP&I (2014)
 Orthophoto Mosaic: Whitehaven Coal Limited (Mar 2016 - July 2011)

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Maules Creek Coal Mine Layout

Figure 2



- LEGEND**
- State Forest
 - Mining Tenement (ML, CL & AUTH)
 - Mining Lease Application Boundary
 - Approximate Extent of Approved Boggabri Coal Mine
 - Approximate Extent of Approved Tarrawonga Coal Project
 - Railway

Source: Boggabri Coal Pty Ltd (2014); Tarrawonga Coal Pty Ltd (2012)
 Orthophoto: Whitehaven Coal Limited (Jul 2011; Sept 2015)

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Existing/Approved Boggabri and Tarrawonga Coal Mines

Figure 3

2.4 Biodiversity Offset Areas

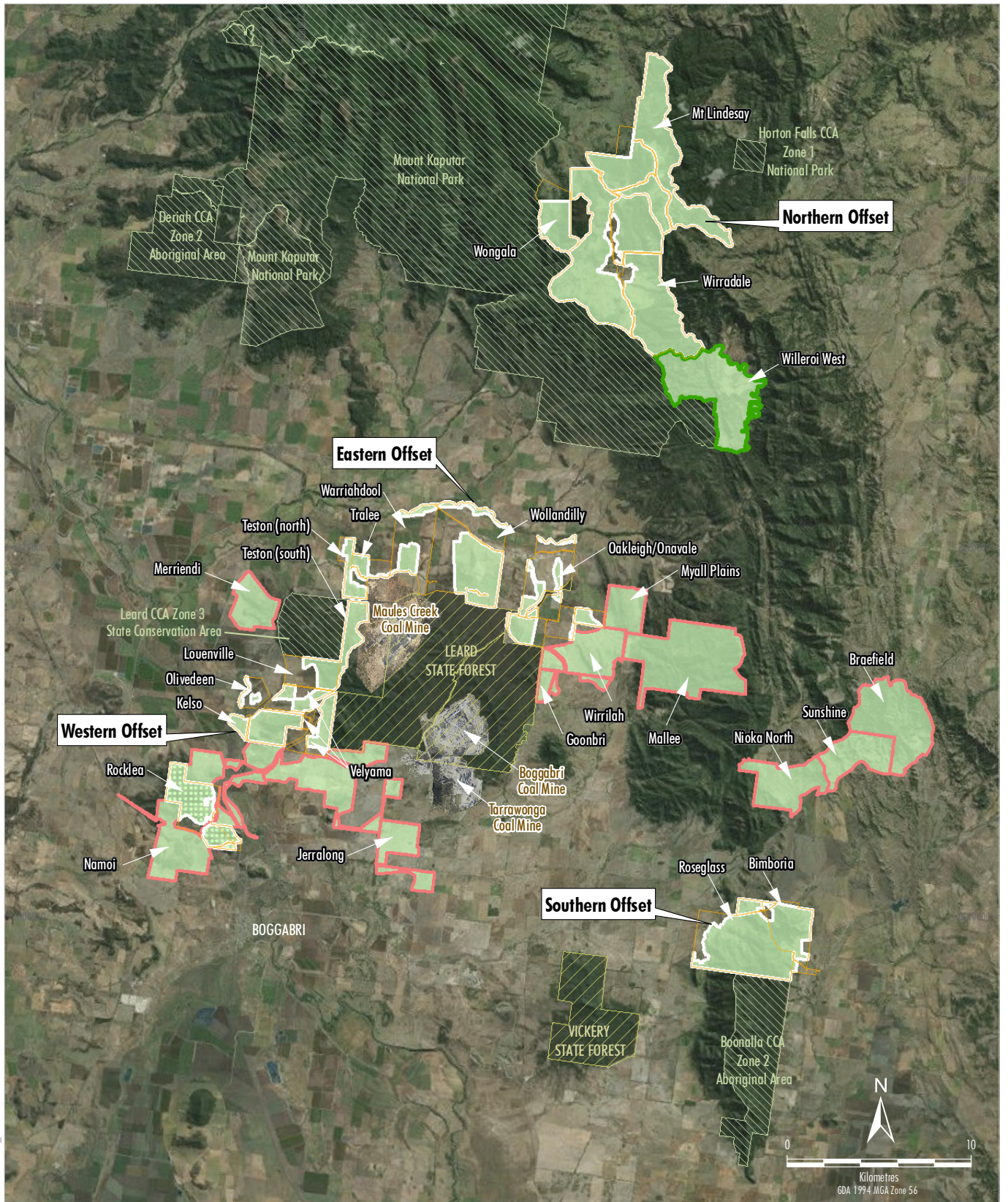
The biodiversity offset areas relevant to the AHCS for the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine are listed in Table 1 below. The locations of the biodiversity offset areas are presented on Figure 4.

Table 1
Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine
Biodiversity Offset Areas

Biodiversity Offset Property	Offset Area
<i>Maules Creek Coal Mine Biodiversity Offset Areas</i>	
Mt Lindesay	MC Northern Offset
Wirradale	MC Northern Offset
Wongala	MC Northern Offset
Teston (north)	MC Eastern Offset
Tralee	MC Eastern Offset
Wollandilly	MC Eastern Offset
Warriahdool	MC Eastern Offset
Kelso	MC Western Offset
Louenville	MC Western Offset
Olivedeem	MC Western Offset
Teston (south)	MC Western Offset
Velyama	MC Western Offset
Oakleigh/Onavale	MC Eastern Offset
Roseglass	MC Southern Offset
Bimbooria	MC Southern Offset
<i>Maules Creek/Boggabri Coal Shared Offset</i>	
Rocklea (also known as the Shared Offset) ¹	Western Offset
<i>Tarrawonga Coal Project Biodiversity Offset Areas</i>	
Willeroi West	-
<i>Boggabri Coal Mine Biodiversity Offset Areas</i>	
Nioka North	BC Eastern Offset
Sunshine	BC Eastern Offset

Braefield	BC Eastern Offset
Mallee	BC Central Offset
Myall Plains	BC Central Offset
Wirrilah	BC Central Offset
Goonbri	BC Central Offset
Jerralong	BC Western Offset
Namoi ²	BC Western Offset
Merriendi	BC Western Offset
Victoria Park	BC Western Offset

- 1 This property is owned by Maules Creek Coal Pty Ltd (a wholly owned subsidiary of Whitehaven) under a joint venture ownership with Boggabri Coal (Idemitsu).
- 2 The Namoi biodiversity offset area contains the Shared Offset, land purchased as a joint venture between Boggabri Coal and the Maules Creek Coal Mine.
- 3 The offset properties listed in the table are as per the approved Maules Creek Coal Mine Biodiversity Management Plan (dated February 2016) and Boggabri Coal Mine Biodiversity Offset Strategy (dated October 2015).



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- LEGEND**
- NPSW Estate
 - State Forest
 - Maules Creek Offset Property
 - Biodiversity Offset Areas
 - Maules Creek Coal Mine
 - Boggabri Coal Mine
 - Tarrowonga Coal Project
 - Shared Offset - Maules Creek Coal Mine/Boggabri Coal Mine

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Biodiversity Offset Strategy Areas
Relevant to the AHCS

Source: Whitehaven Coal Limited (2015); Indemitsu (2016);
 NSW L&PI (2014)
 Orthophoto: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX,
 Getmapping, Aerogrid, IGN, IGP and the GIS User Community

Figure 4

2.4.1 Maules Creek Coal Mine Biodiversity Offset Areas

The MC Eastern and Western Offset areas comprise a selection of properties located to the north and west of the Leard State Forest (Whitehaven, 2014a). Several properties within the eastern portion of the offset area contain stretches of Back Creek and Maules Creek, which are tributaries of the Namoi River. Similarly, several properties within the western portion of the offset area are adjacent to the Leard State Conservation Area and have frontage to the Namoi River (Whitehaven, 2014a).

The properties in the MC Eastern and Western offset have been used for dryland cropping in combination with livestock grazing. As such, these properties have been cleared extensively in the past for agricultural and pastoral activities (Whitehaven, 2014a).

The MC Southern Offset comprises two properties, Roseglass and Bimbooria, which adjoin the northern boundary of Boonalla State Conservation Area. The MC Southern Offset, which is situated to the south of the Nandewar Ranges, is located approximately 30 km east of Boggabri and 30 km north of Gunnedah. The topography of the MC Southern Offset is characterised by rugged, steep terrain with ridgetop environments occupying the central and southern portions of the site. Three ephemeral unnamed watercourses occur on the property, which are fed by numerous tributaries that drain the steep terrain in the south and east. The three main creeks drain east-west into Wean Creek and then Driggle Draggie Creek, and eventually the Namoi River (Whitehaven, 2014a).

The MC Northern Offset comprises three properties: Mt Lindesay, Wirradale and Wongala. The MC Northern Offset is located approximately 40 km west of the township of Barraba and is approximately 18 km north-east of the Maules Creek Coal Mine (Whitehaven, 2014a). The Northern Offset is extensively vegetated and linked to adjacent forested lands, including Mount Kaputar National Park to the west and private properties to the east, which are in turn connected to Horton Falls National Park. Wirradale is immediately adjacent to the Mount Kaputar National Park. Portions of the Northern Offset are currently being used to graze Dorpa sheep and cattle (Whitehaven, 2014a).

The locations of the Maules Creek Coal Mine biodiversity offset areas are presented on Figure 4.

2.4.2 Tarrawonga Coal Project Biodiversity Offset Area

The biodiversity offset area relevant to the AHCS for the Tarrawonga Coal Project is the Willeroi West Offset Area.

The Willeroi West Offset Area is located approximately 20 km to the north-east of the Tarrawonga Coal Project and adjoins the Mount Kaputar National Park. The offset covers an area of approximately 1,660 hectares and includes a range of vegetation communities (Eco Logical Australia, 2015).

The location of the Willeroi West Offset Area is presented on Figure 4.

2.4.3 Boggabri Coal Mine Biodiversity Offset Areas

The BC Eastern Offset area comprises three properties located more than 10 km to the east of the Leard State Forest; Nioka North, Sunshine and Braefield (BCOPL, 2015). The topography of the BC Eastern Offset is characterised by rugged, steep terrain with ridgetop environments occupying the northern portions of the site. The BC Eastern Offset area is traversed by numerous drainage lines that feed seasonal creeks beyond the property boundaries. The western edge of the Nioka North property fronts Mi Hi Creek, a seasonal watercourse that flows into Bollol Creek and eventually the Namoi River. The majority of the BC Eastern Offset area has been extensively cleared for grazing and other pastoral activities, though an area of uncleared remnant vegetation is located in the northern reaches of the Braefield property.

The BC Central Offset comprises four properties, Mallee, Myall Plains, Wirrilah, and Goonbri, with the later two adjoining the north-eastern boundary of the Leard State Forest. The topography of the BC Central Offset is characterised by cleared, undulating plains in the west (Goonbri and Wirrilah properties) and rugged, steep terrain with ridgetop environments in the east (Myall Plains and Mallee properties). The Goonbri and Wirrilah properties contain a section of Goonbri Creek, a seasonal creek that flows south to join Bollol Creek and eventually the Namoi River. Two tributaries of Maules Creek traverse the northern reaches of the Myall Plains and Mallee properties, and are fed by the many steep gullies draining the higher landforms. The Mallee property also contains a section of Dripping Rock Creek, which also flows into Bollol Creek and then the Namoi River. The location known as Dripping Rock is located beyond the BC Central Offset area.

The BC Western Offset area comprises the Merriendi, and Jerralong properties as well as several smaller properties contained within the Namoi Offset. The Namoi Offset, which includes the Shared Offset (Rocklea property), contains several kilometres of frontage to the Namoi River (BCOPL, 2015). The Merriendi property within the BC Western Offset area adjoins the western margins of the Leard State Conservation Area, while the eastern extent of the Namoi Offset abuts the south-western edge of the Leard State Forest.

Much of the properties in the BC Eastern, BC Central and BC Western offset areas have been used for dryland cropping in combination with livestock grazing. As such, large areas within these properties have been extensively cleared in the past for agricultural and pastoral activities (BCOPL, 2015). The Mallee and Myall Plains properties, and northern portions of the Braefield property, appear to be the least impacted by pastoral activities with remnant vegetation communities extant.

The locations of the Boggabri Coal Mine biodiversity offset areas are presented on Figure 4.

3 KNOWN ABORIGINAL ARCHAEOLOGICAL HERITAGE AND CULTURAL VALUES OF THE STUDY AREA

3.1 Background

The existing Aboriginal sites and known cultural values within the Study Area have been identified through a combination of detailed archaeological investigations, cultural surveys, including involvement of RAPs, literature review, and searches of the AHIMS database.

While Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine have been the focus of detailed on-ground surveys, preliminary surveys of the biodiversity offset areas have also been undertaken, as informed by an Aboriginal cultural heritage predictive model developed by contextual study.

The RAPs have been extensively consulted on the nature and extent of Aboriginal cultural heritage at the Maules Creek Coal Mine, Tarrawonga Coal Project, Boggabri Coal Mine and surrounding areas (incorporating portions of the wider Study Area), including as part of comprehensive Aboriginal Cultural Heritage Assessments, as well as ongoing management of Aboriginal heritage during construction and operations. The consultation to date has included specific cultural values assessments, discussions with RAPs individually and in group sessions, participation in field surveys, review of previous specialist investigations, survey data and assessment reports, and the provision of stories and cultural information by the local Aboriginal community.

The RAPs were also consulted regarding the specific cultural values of the Study Area including the biodiversity offset areas during the previously held workshops for the AHCS (Attachment 2) (RPS, 2014).

The cultural values identified and documented in previous assessments and during the consultation process undertaken to date are summarised in the below sub-sections. Ongoing consultation with the Aboriginal community and the assessment and recording of cultural values are described in Sections 8 and 6 of this document, respectively.

The known and predicted sites and values are described in Sections 3.2 and 3.3.

3.2 Archaeological Context

3.2.1 Maules Creek Coal Mine

A total of 67 extant Aboriginal sites have been previously recorded at the Maules Creek Coal Mine being artefact scatters (43) and isolated finds (24) (Whitehaven, 2015a). A number of previously recorded sites have been salvaged ahead of approved surface disturbance activities in accordance with the currently approved AACHMP (Whitehaven, 2015a) or any subsequent revision.

Of the sites previously recorded at the Maules Creek Coal Mine, three artefact scatters are assessed as being of high archaeological significance. These sites are: Back Creek AS3 (AHIMS 20-4-0397), Back Creek AS6 (AHIMS 20-4-0400) and the Teston South Site Complex (AHIMS 20-4-0026), the latter having been partially salvaged through controlled excavations (51 m²) and surface collection (Whitehaven, 2015a).

Previously recorded Aboriginal archaeological heritage sites at the Maules Creek Coal Mine are presented on Figure 5. A complete list of the Aboriginal sites at the Maules Creek Coal Mine is provided in the currently approved AACHMP (Whitehaven, 2015a).

Aboriginal sites at the Maules Creek Coal Mine are managed in accordance with the currently approved AACHMP (Whitehaven, 2015a) or any subsequent revision.

3.2.2 Tarrawonga Coal Project

A total of 133 Aboriginal sites have been previously recorded at the Tarrawonga Coal Project, being artefact scatters (50), isolated finds (59) and scarred trees (24) (Whitehaven, 2016). No sites or areas of high archaeological significance have been identified at the Tarrawonga Coal Project (Kayandel, 2011).

Previously recorded Aboriginal sites at the Tarrawonga Coal Project are presented in Figure 6. A complete list of the Aboriginal sites at the Tarrawonga Coal Project is provided in the currently approved HMP (Whitehaven, 2016).

Aboriginal sites at the Tarrawonga Coal Project are managed in accordance with the currently approved HMP (Whitehaven, 2016) or any subsequent revision.

3.2.3 Boggabri Coal Mine

The ARAS assessment of the Boggabri Coal Mine consent area identified 61 Aboriginal cultural heritage sites (30 artefact scatters, 26 isolated artefacts and 5 scarred trees). In 2007, 42 sites were approved for salvage, but 23 of these sites remain extant. A 2009 survey identified an additional 77 Aboriginal cultural heritage sites (Insite 2010).

Two patches of grinding grooves on sandstone bedrock in Leard State Forest were also identified during subsequent survey, though they are both considered relatively poor examples of their site type (Insite 2010: 73). In 2011, an additional 14 Aboriginal cultural heritage sites were recorded on Boggabri Coal land during the course of the Tarrawonga Cultural Heritage Assessment (Kayandel 2011).

Nineteen artefact sites of moderate to high significance are scheduled to be conserved during the course of the project (Idemitsu 2013: Table 2).

Previously recorded Aboriginal archaeological heritage sites at the Boggabri Coal Mine are presented on Figure 7. A total of 67 Aboriginal cultural heritage sites are the subject of the Boggabri CHMP (Idemitsu 2013). The currently approved Boggabri Coal Mine CHMP (Idemitsu 2013) includes a list of sites scheduled for salvage and those to be conserved throughout the life of the mine. The results of archaeological salvage work for the mine operations areas and, haul road/rail loop, as well as associated Goonbri Road upgrade are presented within the relevant salvage reports (Insite 2015 and Insite 2014a, respectively).

There have been 21 AHIMS sites salvaged and 2 AHIMS sites partially salvaged in 2013. A total of 9 AHIMS sites and 1 partial site, remain to be salvaged to allow for pit expansion in future years (Idemitsu 2013), or any subsequent revision.

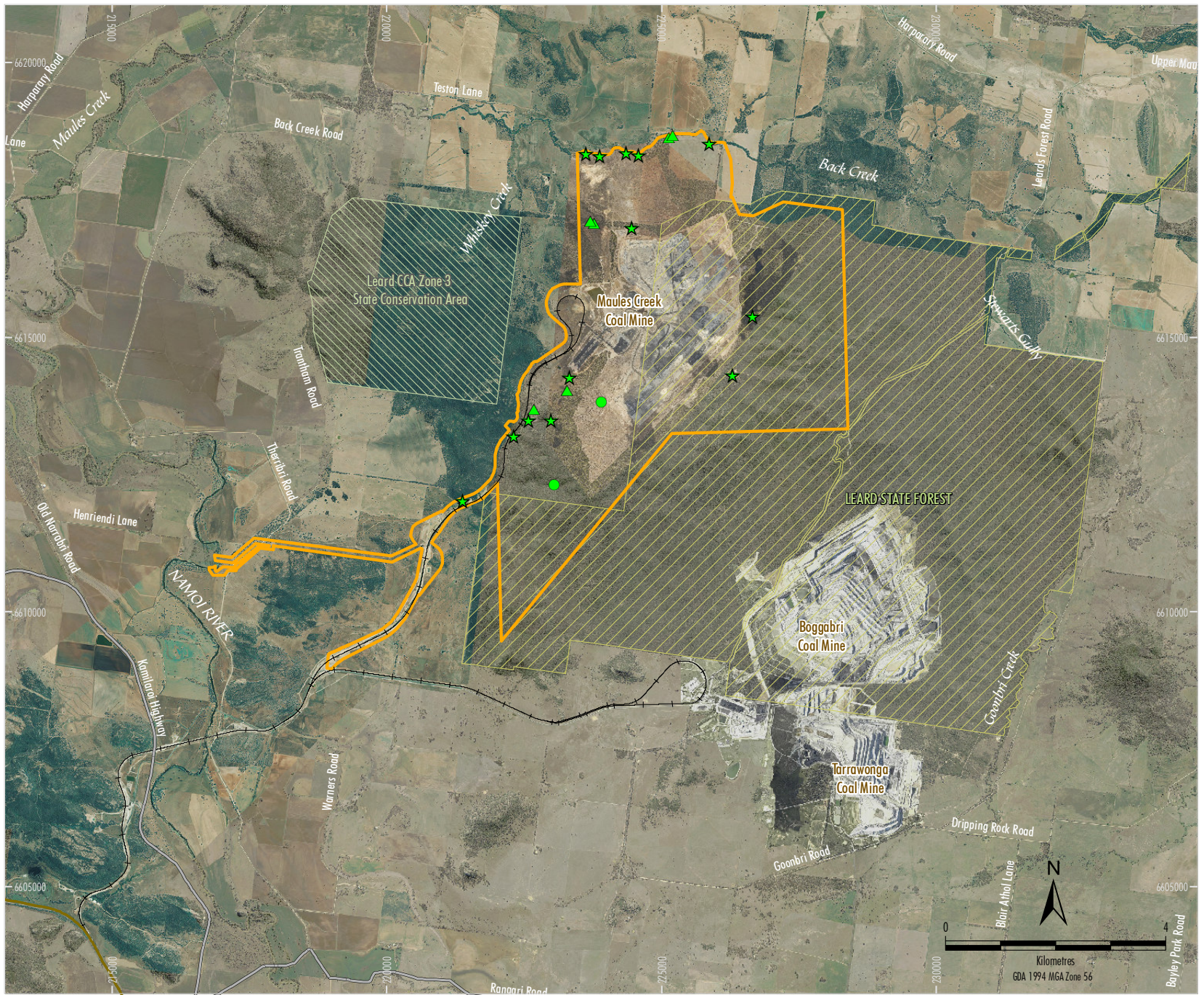
Thirty-two whole, and two partial AHIMS sites will be retained throughout the course of the project. Note that fourteen (14) of these sites were recorded by Tarrawonga Coal Project and may be impacted by operations associated with that mine (see Table 2 in Idemitsu 2013).

The archaeological salvage program for the Boggabri Coal Expansion Project identified two areas of more intense occupation at each end of the project area; at NV48 in the Shared Offset property, and BC43 in the Mine Infrastructure Area (MIA) (Insite 2015: 32, 99-104).

The results of archaeological salvage of the Goonbri Road Upgrade (Insite 2014a) indicate:

- an abundance of local, natural stone resources suitable for artefact production;
- more complex sites occur alongside Goonbri Creek and ephemeral drainage lines, in areas where water can pool; and
- that occupation was more transient on the slopes and ridges where raw materials were collected.

Aboriginal sites at the Boggabri Coal Mine are managed in accordance with the currently approved CHMP (Idemitsu 2013) or any subsequent revision.



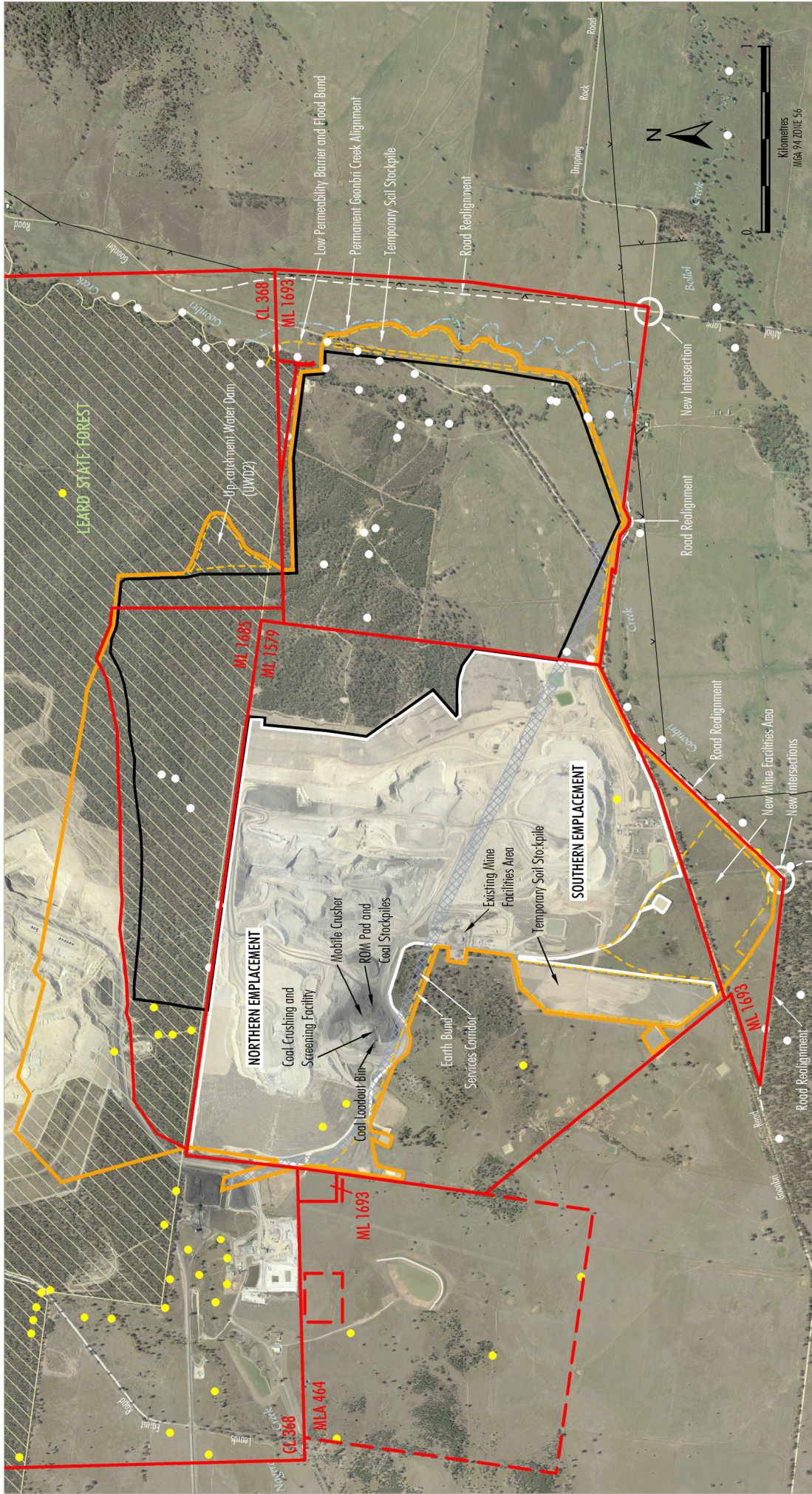
LEGEND

- NPWS Estate
- State Forest
- Railway
- AACHMP Project Boundary
- Site Type**
- Artefact Scatter
- Isolated Artefact
- Grinding Groove

Source: OEH (2013); Whitehaven Coal Limited (2015);
 NSW LP&I (2014); Whincop Archaeology (2016)
 Orthophoto Mosaic: Whitehaven Coal Limited
 (Mar 2016 - July 2011)

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Aboriginal Heritage Sites at the
Maules Creek Coal Mine

Figure 5

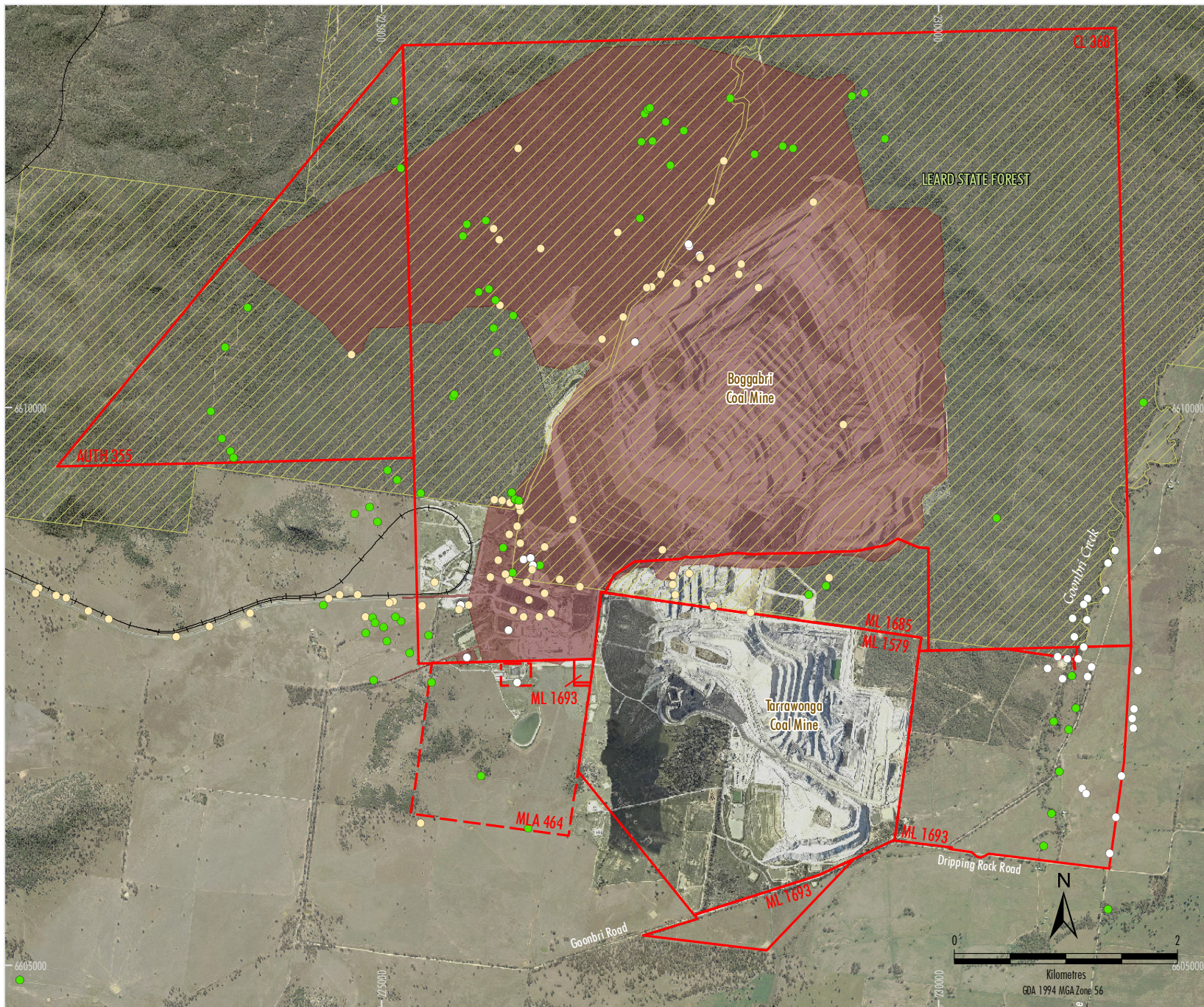







LEGEND

- Mining Lease Boundary (ML & CL)
- - - Mining Lease Application Boundary (MLA)
- x—x— 11KV Electricity Transmission Line
- x-x- 11KV Electricity Transmission Line Realignment
- ▨ Leard State Forest
- Approximate Extent of Existing/Approved Surface Development
- Approximate Extent of Project Surface Development
- Approximate Extent of Open Cut Extension
- Aboriginal Heritage Site (March 2011 Survey)
- Aboriginal Heritage Site (AHIMS Database)

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Aboriginal Heritage Sites at the Tarrawonga Coal Mine

Source: AHIMS (2010) and Isanadel (2011)
 Orthophoto: Whitehaven Coal Limited (Jul 2011)



LEGEND
 State Forest
 Mining Tenement (ML, CL & AUTH)
 Mining Lease Application Boundary
 Approximate Extent of Approved Boggabri Coal Mine
 Railway
Aboriginal Heritage Sites
 Arch cleared
 Arch not cleared
 PTS
 Source: Boggabri Coal Pty Ltd (2014)
 Orthophoto: Whitehaven Coal Limited (Jul 2011; Sept 2015)

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Aboriginal Heritage Sites at the Boggabri Coal Mine

Figure 7

3.2.4 Biodiversity Offset Areas

AHIMS Search Results

AHIMS searches were undertaken over the biodiversity offset areas on 25, 27 and 30 November 2015 and 20 and 21 July 2016. The AHIMS search results are presented in Figure 8.

A total of 33 previously registered Aboriginal sites were identified within the biodiversity offset areas including thirty open artefact sites and three scarred (or modified) trees. These sites are listed in Table 2 below. No Aboriginal places, as defined within the NPW Act, are listed on the AHIMS for the biodiversity offset areas. The coordinates for the mythological site of Gin's Leap (AHIMS 20-4-0010) are situated in the northern edge of the Rocklea Shared Offset, but the extent of the site is generally understood to encompass the discrete rocky outcrop to the immediate north of the Shared Offset; for this reason it is not included in Table 2.

Table 2
AHIMS Aboriginal sites within Biodiversity Offset Areas

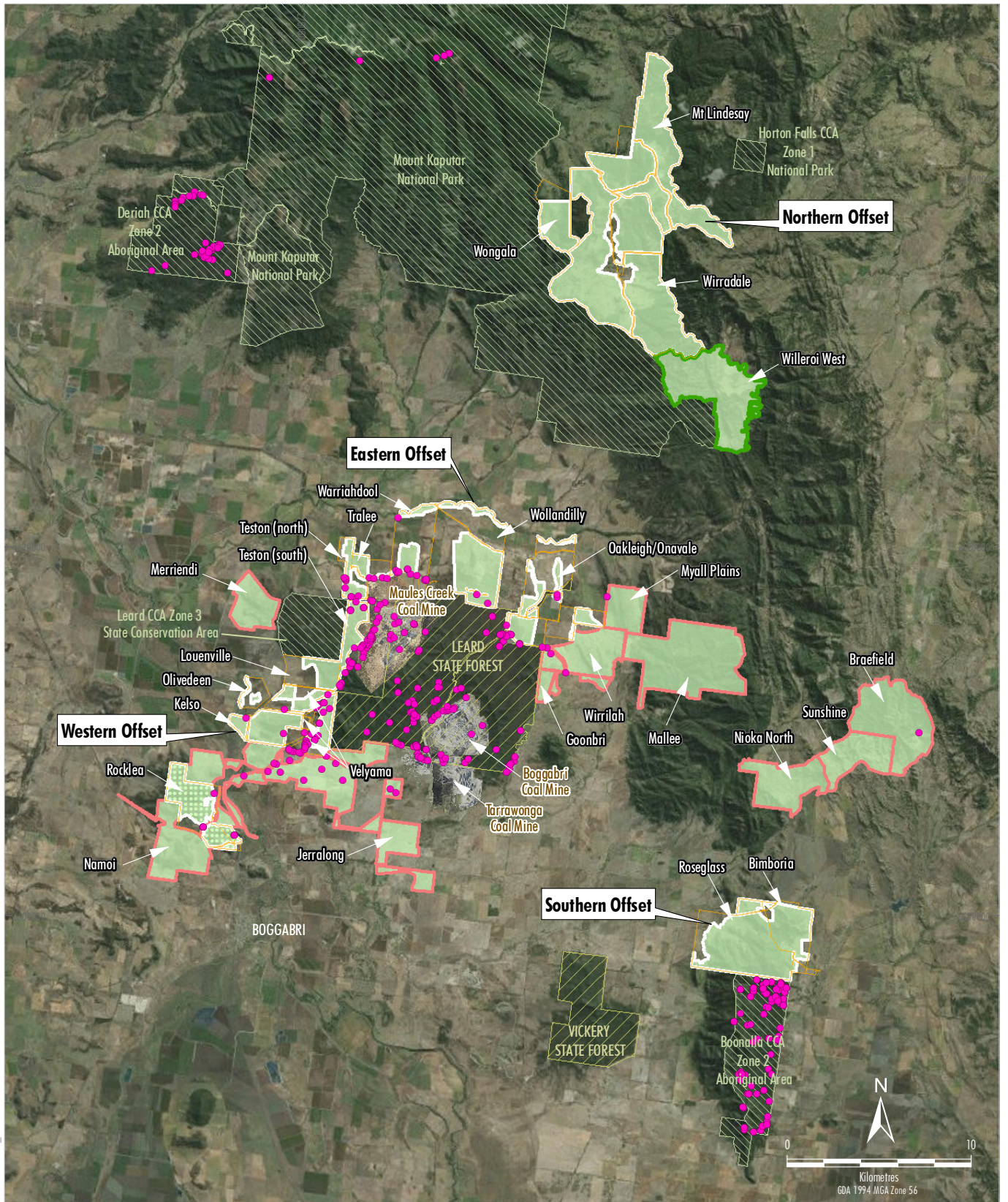
Biodiversity Offset Property	AHIMS No.	Site Name	Site Type
Shared Offset			
Rocklea	20-4-0215	HRNV 48	Artefact Scatter
BC Western Offset			
Namoi	20-4-0604	VEP IA 16	Isolated Artefact
	20-4-0663	VEP IA 17	Isolated Artefact
	20-4-0527	PL 1/14	Artefact Scatter
	20-4-0671	VEP AS 13	Artefact Scatter
	20-4-0074	BBS; Red Chief LALC; Daiseymead ST1	Modified Tree
	20-4-0640	VEP IA 19	Isolated Artefact
	20-4-0624	VEP IA 09	Isolated Artefact
	20-4-0644	VEP IA 18	Isolated Artefact
	20-4-0638	VEP IA 20	Isolated Artefact
MC Western Offset			
Velyama	16-4-0011	Velyama AS3	Artefact Scatter
	20-4-0479	MC REG5 AS1	Artefact Scatter
	16-4-0015	Velyama AS7	Artefact Scatter

	20-4-0462	Velyama ST1	Modified Tree
	20-4-0025	Velyama; Manila (MC9)	Artefact Scatter
	20-4-0497	Teston South IA1	Isolated Artefact
Teston South	20-4-0409	Teston AS4	Artefact Scatter
	20-4-0410	Teston AS5	Artefact Scatter
Teston North	20-4-0656	Teston North AS1	Artefact Scatter
	20-4-0654	Teston North AS3	Artefact Scatter
	20-4-0655	Teston North AS2	Artefact Scatter
	20-4-0653	Teston North AS4	Artefact Scatter
	20-4-0651	Teston North IA2	Isolated Artefact
	20-4-0652	Teston North AS5	Artefact Scatter
	20-4-0482	MC REG12 AS1	Artefact Scatter
	20-4-0664	Teston North IA1	Isolated Artefact
Wollandilly	20-4-0648	Wollandilly AS4	Artefact Scatter
	20-4-0647	Wollandilly AS3	Artefact Scatter
Warriahdool	20-4-0032	Back Creek; Warriahdool; Manilla	Artefact Scatter
MC Eastern Offset			
Oakleigh/Onavale	20-4-0444	T10/2	Isolated Artefact
BC Central Offset			
Wirrilah	20-4-0476	T18/2	Modified Tree
	20-4-0446	T13/2	Artefact Scatter
Myall Plains	20-4-0586	BC16/4	Artefact Scatter
BC Eastern Offset			
None			
MC Northern Offset			
None			
MC Southern Offset			
None			
Tarrawonga (Willeroi West) Offset			
None			

Source: AHIMS search results 25, 27 and 30 November 2015, and 20 and 21 July 2016.

INSERT FIGURE 8 – AHIMS sites

WHC-15-38 AHCS_20PD



- LEGEND**
- NPSW Estate
 - State Forest
 - Maules Creek Offset Property
 - Biodiversity Offset Areas
 - Maules Creek Coal Mine
 - Boggabri Coal Mine
 - Tarrawonga Coal Project
 - Shared Offset - Maules Creek Coal Mine/Boggabri Coal Mine
 - Aboriginal Heritage Sites (AHIMS)
 - Recorded Location

Source: Whitehaven Coal Limited (2015); Indemitsu (2016); NSW L&PI (2014); Whinco Archaeology (2016) Orthophoto: Esri, DigitalGlobe, GeoEye, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP and the GIS User Community

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Biodiversity Offset Strategy Areas
Relevant to the AHCS -
AHIMS Search Results

Figure 8

Site Inspection

In addition to the AHIMS searches, a site inspection of the biodiversity offset areas was undertaken by archaeologists from UQCHU on 16-19 November 2015 and 12-13 July 2016.

A low density artefact scatter was identified on exposed ground within the property boundary of the Olivdeen offset property but outside of the biodiversity offset area. Although this site is located outside of the offset area, the site has been recorded and will be registered on AHIMS.

Potential grinding grooves were also identified on several sandstone outcrops within drainage lines located on a low south-facing rise on the Onavale offset property. These sites are referred to as Onavale GG1, Onavale GG2 and Onavale GG3. The sites extend almost the entire length of the drainage lines, with the features distributed widely across the rocky outcrops. These locations have been identified within the biodiversity offset area and will be formally recorded and registered on AHIMS upon further archaeological investigation, assuming an anthropogenic origin is confirmed. Two artefact scatters were also identified on the Onavale property during a Due Diligence assessment of proposed revegetation works within the offset property. These two sites, Onavale AS1 and Onavale AS2, have been recorded and will be registered on AHIMS.

An isolated artefact was identified on the Braefield offset property during the site visit. This site is located within the offset area and has been recorded, and will be registered on AHIMS. This site will be registered as Braefield IA1.

The results of the site inspection have been used to further refine the proposed survey methodology and the predictive model for the Study Area (Section 4).

3.2.5 Broader Surrounding Region

In addition to covering the biodiversity offset areas, AHIMS searches were also undertaken for the surrounding region, to provide archaeological context for the Study Area and to inform the refinement of the predictive model. Areas were chosen of comparable landform and vegetation communities to those encountered in the biodiversity offsets. These areas included (Figure 8):

- Mount Kaputar National Park (adjacent to the Northern Offset area).
- Deriah CCA Zone 2 Aboriginal Area (adjacent to the Mount Kaputar National Park).
- Horton Falls CCA Zone 1 National Park (in proximity to the Northern Offset area).
- Boonalla CCA Zone 2 Aboriginal Area (adjacent to the Southern Offset area).
- Leard CCA Zone 2 State Conservation Area (adjacent to the Western Offset area).
- Leard State Forest.

In addition to isolated finds and artefact scatters, a number of Aboriginal site types (some of which have not yet been investigated and assessed by archaeologists) were registered on AHIMS within the above listed areas. These included grinding grooves, water holes, habitation structures, ochre quarries, Aboriginal resource and gathering sites, art sites, possible burial sites, scarred trees, rock shelters (with and without cultural deposits) and potential archaeological deposits. A restricted access site has also been included on AHIMS. All of these sites are located outside of the biodiversity offset areas, however, they contribute to the known archaeological resource and the regional archaeological context of the Study Area and inform the refinement of the predictive model.

3.3 Cultural Values

3.3.1 Maules Creek Coal Mine

The cultural values associated with the Maules Creek Coal Mine have been extensively recorded and documented in previous investigations by a range of heritage practitioners, including in the currently approved AACHMP.

The RAPs consulted for the Maules Creek Coal Mine commonly emphasised the importance of any physical evidence of their ancestors within the Maules Creek Coal Mine boundaries, especially artefact scatters and (should any be clearly identified) scarred trees or other cultural objects and features.

Some RAPs have stated during consultation that they value archaeological sites for more than their scientific worth because such sites reflect both the physical and spiritual presence of ancestors on Country (Whitehaven, 2015a). Nevertheless, there has typically been general agreement that the appropriate management response to any identified archaeological sites should be to follow standard archaeological methodologies.

Some RAPs involved in previous community consultation have also emphasised the following in relation to non-archaeological cultural values (Whitehaven, 2015a):

- The Inter-connectedness of places - traditionally, Gomeri people are considered to have traversed the region for trade, hunting and foraging, along established routes defined by the topography (e.g. certain creek lines and ridgelines). Further, their movement through the landscape would have been reflected in traditional stories and places (e.g. 'songlines' and 'Dreaming places'). This traditional knowledge has been impacted by the actions of white settlers and government policy since first contact, but some traditional stories can still potentially connect the Maules Creek Coal Mine environs with features of the wider landscape (e.g. 'Gins Leap', 'Barbers Pinnacle', Mount Kaputar and 'Dripping Rock').

- 'Nature' and 'Culture' - some Aboriginal people do not make a clear distinction between the natural world and 'culture', because the two things are closely intertwined (e.g. through the existence of totemic species, the use of bush tucker and bush medicine, and through cultural obligations for the management of Country).
- Access - some Gomeroi people are presently experiencing a renewed interest in their history and traditions, and they wish to be afforded opportunities to access Country containing major cultural sites, objects, items, etc. to continue to embed their beliefs in physical places, to continue to practice traditional activities, and to educate their younger generations.

3.3.2 Tarrawonga Coal Project

The cultural values associated with the Tarrawonga Coal Project have been extensively recorded and documented in previous investigations, surveys and assessments, including the currently approved HMP (Whitehaven, 2016).

Aboriginal sites within or surrounding the Tarrawonga Coal Project area have been identified as being of cultural significance to the Aboriginal community. The Aboriginal community identified that (Landskape, 2010):

- All sites/artefacts have some cultural significance to Aboriginal people.
- Artefacts found in the Tarrawonga Coal Project area were of a similar cultural value to other artefacts known from the region.
- Areas with reduced visibility would likely have artefacts of a similar cultural significance to those recorded by the Tarrawonga Coal Project surveys.

3.3.3 Boggabri Coal Mine

The cultural values associated with the Boggabri Coal Mine have been extensively recorded and documented in previous investigations by a range of heritage practitioners, including in the currently approved CHMP (Idemitsu 2013).

The RAPs consulted for the Boggabri Coal Mine commonly emphasised the importance of any physical evidence of their ancestors within the wider landscape, especially artefact scatters and scarred trees or other cultural objects and features, as well as other aspects of the environment.

For example, Insite Heritage (2011) observed that the Aboriginal participants in the consultation process that they facilitated, commonly emphasised the need to appropriately

manage the archaeological resource, applying archaeological methodologies, while some Aboriginal participants also noted that such features are significant for more than the scientific data that they might yield. Some Aboriginal participants commented on 'the importance of the broader landscape, the plants, animals and resources contained within' (Insite 2011: 24). This is consistent with the results of Aboriginal community consultation undertaken by UQCHU for Idemitsu in 2014, and is very similar to those results obtained through consultation for Maules Creek Coal Mine and the Tarrawonga Coal Project (and described in 3.3.1 and 3.3.2 above).

3.3.4 Biodiversity Offset Areas

The community consultation undertaken to date for the AHCS (Attachment 2) (RPS, 2014) has demonstrated that although the RAPs consider all land to be of cultural significance, there are no discrete geographic areas within the biodiversity offset areas that are of specific cultural value.

The community consultation undertaken by UQCHU since 2013 has identified species of flora and fauna in the wider region that RAPs indicate are significant for cultural reasons (e.g. for bush tucker and bush medicine, and as totemic species). Many of these species are likely to be represented in the biodiversity offset areas.

As noted, UQCHU has undertaken detailed community consultation in relation to the flora and fauna within portions of the Study Area that have, or may have, Aboriginal cultural significance. Given the emphasis placed on biodiversity within the biodiversity offset areas, this AHCS emphasizes the opportunities for the integration of ecological and cultural heritage outcomes in the Study Area, especially the biodiversity offset areas (Section 7).

In November 2015, archaeologists from UQCHU identified an unusual circular anomaly in the growth pattern of grass on the open ridges of the Wirradale property (in the MC Northern Offset area). Although this is likely to be botanical in nature or the result of modern farming activities, this document has adopted a precautionary approach and it is proposed that this location will be revisited during the field surveys (Section 5.2).

3.3.5 Broader Surrounding Region

A review of previous investigations, surveys and assessments relating to the Study Area's surrounds has also been undertaken. A summary of the results is provided in Attachment 5. The reviewed reports include (but are not limited to):

- Balme (1984) *North Central Rivers Archaeological Project: A Preliminary Pre-fieldwork Report.*
- Dallas (1986) *Archaeological Survey of Proposed Coal Haul Route and Rail Loop for the Maules Creek Project, Boggabri, NSW.*
- Haglund (1982) *Archaeological Investigations at Top and Bottom Rocks, Namoi River, N.S.W.*
- Haglund (1983) *Archaeological Reconnaissance Survey: Maules Creek Exploration Project.*
- Haglund (1985) *Archaeological Investigations of Areas that may be Affected by Proposed Mining for Coal in the Gunnedah Area, New South Wales.*
- Haglund (1986) *Preliminary Sampling Surveys for Aboriginal Sites, Maules Creek Project, NSW.*
- Kamminga (1977) *Amax Proposed Coal Mining at Boggabri.*
- Thompson (1981) Aboriginal Sites Study. In: *Environmental Impact Statement for the Proposed Vickery Coal Mine Project.*

The results of the AHIMS searches undertaken for the Boonalla CCA Zone 2 Aboriginal Area (adjacent to the Southern Offset area) and the Mount Kaputar National Park (adjacent to the Northern Offset area and Willeroi West) indicate that these particular areas may hold sites of high cultural (and archaeological) significance (e.g. burials, stone arrangements, rock-shelters, a restricted access site, etc.). As the geology and landforms within the MC Southern Offset, BC Eastern Offset, MC Northern Offset, and sections of the BC Central Offset areas are similar to these adjacent areas, there remains potential for these offset areas to contain sites of similar significance.

The AHIMS search identified a mythological site in proximity to the Rocklea offset property, namely Gin's Leap (AHIMS 20-4-0010). Although the AHIMS record places this site within the boundary of the offset property, this is considered to be a referencing error on the site card. Rather this site is located immediately beyond the Rocklea offset property boundary. Gin's Leap is an unusual landscape feature (a well-defined, prominent outcrop of weathered rhyolite) located on the western margin of the Kamilaroi Highway approximately 3 to 4 km north of the Boggabri township.

It is also noted that the site card for Gin's Leap (AHIMS 20-4-0010) indicates that several other hills in the locality were identified by a 'Gamilaraay' man who guided Sir Thomas Mitchell

through the area in 1831. The relevant site card was prepared over 30 years ago and does not include detailed referencing, however it notes:

- Tanguilda (Dhanggalda) – on a hill approximately 5 km to the east of Gin’s Leap. The site card states that the meaning of the name is believed to be associated with mussels, although it is not clear who the source for this information was. This appears to be the name for Barbers Pinnacle.
- Bullabalakit (Balabalagirr) – on a hill 3 km to the north north-east of Gin’s Leap. The site card states that the meaning of the name is believed to be associated with death, although it is not clear who the source for this information was. While the Gin’s Leap site card connects this name with a hill 3 km to the north east, Mr Brown (the Gamilaaray tracker employed by Mitchell) refers to Gin’s Leap itself by this name (Bullabalakit).
- Einerguendi (Yinarr ngindaay) – on a hill 6 km to the north north-east Gin’s Leap. The site card states that the meaning of the name is believed to be associated with women, although it is not clear who the source for this information was.

While contemporary RAPs have not provided any additional information in relation to the above locations to date, it is noted that during the field surveys any potential locations for these hills would be investigated within the Study Area. It is likely however that these hills are located outside of the Study Area.

4 HERITAGE POTENTIAL OF THE STUDY AREA

The predictive model developed for the Study Area in this AHCS makes a distinction between archaeological sites, on the one hand, and sites (and other features) that may be of non-archaeological cultural significance, on the other. A predictive model based on empirically observable data (e.g. vegetation regimes, hydrology, geology, landforms) will have greater utility in identifying purely archaeological sites than sites of spiritual or social significance (see also Purcell 2002). Therefore, in making predictions in relation to non-archaeological sites, this report has principally had regard to the results of previous community consultation and to the ethnographic literature rather than other kinds of data. In both cases this report has considered previous investigations, surveys and assessments in the local area and wider surrounds, the distribution and patterning of known sites, the landform units and landscape context of the Study Area and the previous known land uses in the area.

4.1 Desktop Assessment and Initial Predictive Model

A desktop assessment was initially undertaken to inform and assess the landscape context (i.e. geological and hydrological characteristics and previous land use) and the archaeological and cultural context (i.e. ethnographic history, regional archaeological studies and AHIMS searches) of the Study Area (Sections 3.2 and 3.3).

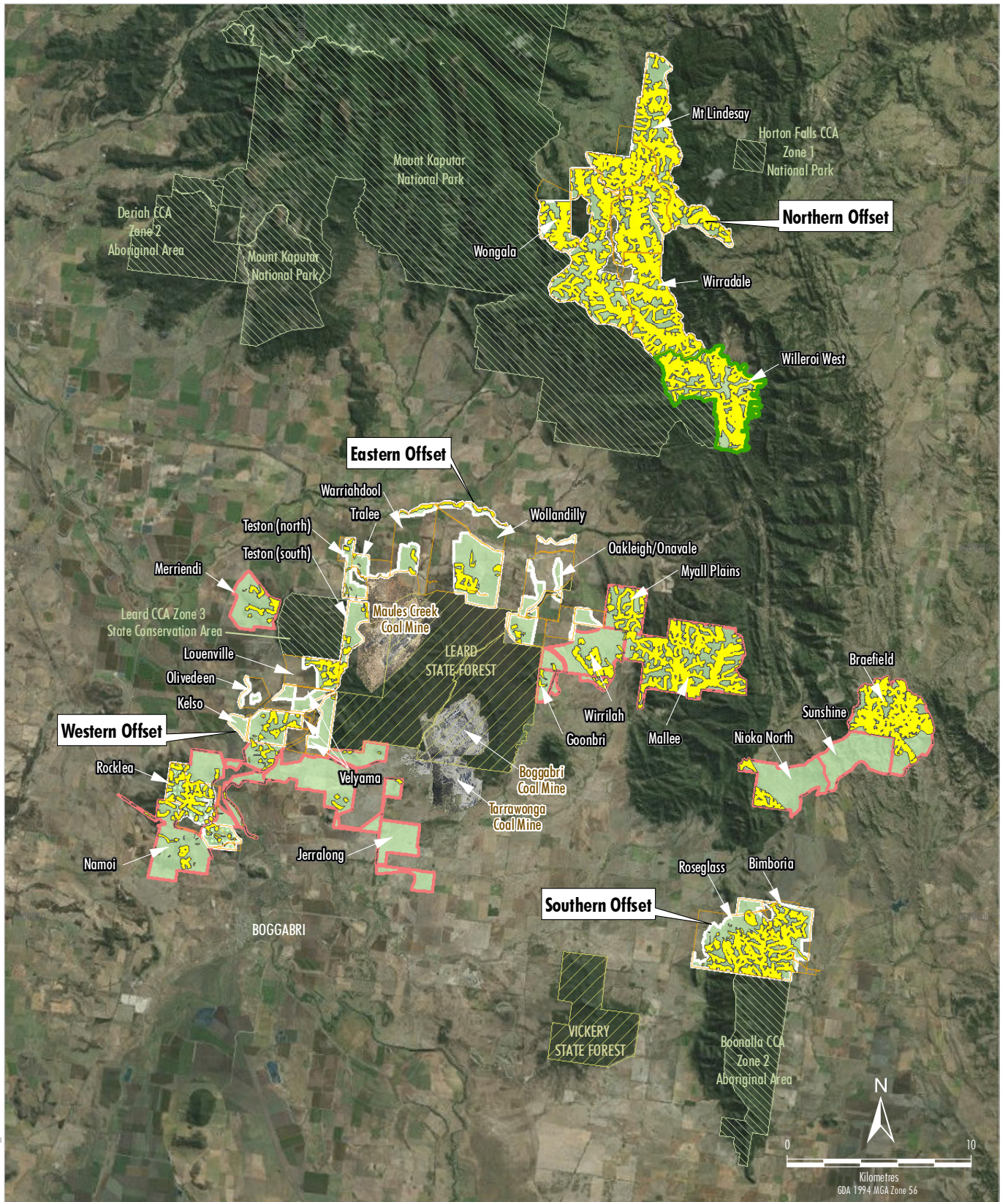
This desktop assessment included a review of numerous investigations, surveys and assessments within the Study Area and surrounds, including (but not limited to) those assessments listed in Section 3.

The results of the desktop investigation, including a consideration of geology, hydrology, existing land use patterns and known existing Aboriginal sites, were used to develop a preliminary model of areas within the Study Area with the potential to embody Aboriginal heritage values (Figure 9). A summary of the likely distribution of various Aboriginal site types is provided in Attachment 3.

4.2 Site inspection

As described in Section 3, following completion of the desktop assessment site inspections of the biodiversity offset areas was undertaken by archaeologists from UQCHU on 16-19 November 2015 and 12-13 July 2016.

The purpose of the site inspections was to identify relevant taphonomic (site formation) processes (e.g. erosion, disturbance) that may impact the potential for in situ archaeological deposits and, ultimately, the efficacy of the predictive model developed. As a result of the site inspection, the predictive model was further refined and revised (Section 4.3, Figure 9).



WHC-15-38 AHCS_2100

LEGEND

- NPSW Estate
- State Forest
- Maules Creek Offset Property
- Predictive Cultural Heritage Sensitive Area
- Biodiversity Offset Areas
- Maules Creek Coal Mine
- Boggabri Coal Mine
- Tarrawonga Coal Project
- Shared Offset - Maules Creek Coal Mine/Boggabri Coal Mine

Source: Whitehaven Coal Limited (2015); Indemitsu (2016); NSW L&PI (2014)
 Orthophoto: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP and the GIS User Community

ABORIGINAL HERITAGE CONSERVATION STRATEGY
Biodiversity Offset Strategy Areas
Relevant to the AHCS -
Cultural Heritage Sensitive Areas

Figure 9

4.3 Revised Predictive Model

The results of the desktop assessment and site inspections indicate that Aboriginal sites are most likely to occur in areas that are:

- within 200 m of a named watercourse;
- within 100 m of a mapped drainage line;
- within 50 m of a known Aboriginal cultural heritage site; and/or
- on landforms of slope no greater than 30°, except where sandstone bedrock or limestone outcrops are present.

In this report, Aboriginal sites are assessed as being of high archaeological significance where they have the potential to yield data that are relevant to substantive research questions (i.e. represent high research potential). Therefore, sites that are undisturbed, especially those with intact deep stratigraphy, and those that are of an unusual or rare nature, will typically be of higher archaeological significance.

The preliminary predictive model has been developed based on unavoidably coarse geological and hydrological data. Future refinement of the model will draw on geomorphological data and vegetation mapping at a finer scale, on the working hypothesis that vegetation regimes will be an accurate proxy for the underlying geology, hydrology and landform, as outlined in Purcell 2002.

The above described predictive model would be further reviewed, and if necessary revised following completion of the field surveys (Section 5). It is noted that while the field surveys would be designed based on the above predictive model, the approach would be subject to change based on the on-ground conditions identified during the survey (e.g. if cliff lines or caves are identified then the methodology would be updated as necessary to consider these features); if certain areas are inaccessible to survey it is unlikely that Aboriginal people would have been accessing these areas.

5 ABORIGINAL HERITAGE FIELD SURVEY METHODOLOGY

The methodology for the Aboriginal heritage field surveys has been developed based on the previously identified Aboriginal sites and cultural values within the Study Area, the results of the desktop assessment and site inspection, and the predictive model developed for the area.

The proposed sampling strategy for the Study Area is outlined in Sections 5.1 and 5.2 below.

5.1 Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine

Aboriginal sites at the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine are managed in accordance with the currently approved AACHMP, HMP, and CHMP, respectively (Whitehaven 2015a; 2016; Idemitsu 2013) or any subsequent revisions. Therefore, no further survey of these areas is proposed as part of this AHCS.

It is noted that the currently approved AACHMP for the Maules Creek Coal Mine (Whitehaven 2015a) does identify cultural heritage sensitive areas within Maules Creek Coal Mine area. The currently approved CHMP (Idemitsu 2013) for the Boggabri Coal Mine also makes allowance for ongoing monitoring of all ground disturbance activities. Archaeological monitoring and inspection of these areas will continue be undertaken as required by the relevant protocols.

5.2 Biodiversity Offset Areas

5.2.1 Proposed Survey Methodology

Targeted field surveys would be undertaken within the biodiversity offset areas by suitably qualified and experienced archaeologists in consultation with relevant RAPs (Section 8). The findings of the surveys would be distributed to relevant RAPs (i.e. including those who do not attend the surveys).

The surveys would target those areas within the biodiversity offset areas with the highest potential for Aboriginal cultural heritage of high significance (Figure 9).

The survey methodology employed would be based on a landform sampling approach within the areas determined most likely to contain Aboriginal cultural heritage of high significance.

Where there is more than one instance of the same or similar landforms within the areas assessed to have the potential for Aboriginal cultural heritage of high archaeological significance, example(s) of the landform can be sampled. Proportional emphasis will be placed on those landforms deemed to hold a higher potential for Aboriginal sites of high archaeological significance. Landforms deemed to hold a low potential for sites of high scientific significance (i.e. based on results of AHIMS searches, previous archaeological surveys, the site inspections and the predictive model), will be sampled to a relatively lesser degree.

The field survey would be undertaken in a manner deemed appropriate by an appropriately qualified and experienced archaeologist (e.g. focussing on areas of greater exposure). Although all sites and cultural values identified will be adequately recorded, the field surveys would focus on those sites that are generally of a higher significance (e.g. rock shelters, grinding grooves, scarred trees) than open context stone artefact sites (e.g. low density artefact scatters).

5.2.2 Proposed Targeted Survey Areas

Based on AHIMS search results, the desktop assessment, predictive modelling and the site inspections, the areas considered most likely to have potential for Aboriginal sites of high significance have been identified. These areas are described in Table 3 below and would be targeted during the field surveys for the AHCS.

While the areas described in Table 3 would be targeted for sampling during the field surveys, should any additional areas with the potential to contain Aboriginal sites or areas of high significance be identified, then these areas would also be subject to sample survey.

Table 3
Proposed Targeted Survey Areas

Offset Area	Offset Properties	Target Areas for Field Survey
Maules Creek Coal Mine Biodiversity Offset Areas		
MC Southern Offset	Roseglass, Bimbooria	<ul style="list-style-type: none"> • A sample of the drainage lines in the Roseglass property, with a focus on the lower reaches of drainage lines draining westwards into undulating plains. • A sample of the western facing ridgelines and slopes on the Roseglass and Bimbooria properties, where abundant rock outcrops were visually identified during the site inspection.
MC Northern Offset	Mt Lindesay, Wongala, Wirradale	<ul style="list-style-type: none"> • A sample of grassy balds (uplands) on western portion of the Wirradale property, where the ridges are wide and open and comprised of natural grasslands. • A sample of drainage lines in the eastern portion of the Wirradale property, with a focus on the lower reaches of the drainage lines draining westwards into the existing farmland. • A sample of west facing ridgelines and upper slopes of the Mt Lindsey property, where abundant rock outcrops were visually identified during the site inspection. • A representative sample of landforms across the Wongala property, subject to access constraints.

Table 3 (continued)
Proposed Targeted Survey Areas

Offset Area	Offset Properties	Target Areas for Field Survey
Maules Creek Coal Mine Biodiversity Offset Areas		
MC Western Offset ¹	Olivedeen, Kelso, Louenville	<ul style="list-style-type: none"> A sample of the west facing river terrace along the western portion of the Olivedeen property. Inspection of the possible hill location described as 'Einergeuendi' on the Kelso property. A representative sample of landforms across the Louenville property, subject to access constraints.
MC Eastern Offset ^{2, 3}	Wollandilly, Oakleigh/Onavale, Warriahdool	<ul style="list-style-type: none"> Inspection of the previously identified grinding grooves in drainage lines on the low south-facing rise in the west of the Oakleigh/Onavale offset property. A sample along Maules Creek within the Warriahdool, Wollandilly and Oakleigh/Onavale offset properties.
Boggabri Coal Mine Biodiversity Offset Areas		
BC Eastern Offset	Braefield Sunshine Nioka North	<ul style="list-style-type: none"> A sample of the drainage lines in the Braefield property, with a focus on the lower reaches of drainage lines draining into the surrounding undulating plains. A sample of the remnant vegetation area in the Nioka North property. A sample of the drainage lines within the Tulcumba sandstone traversing the Sunshine property.
BC Central Offset	Mallee Myall Plains Wirrilah Goonbri	<ul style="list-style-type: none"> A sample of Goonbri Creek within the Wirrilah and Goonbri properties. A sample of Dripping Rock Creek within the Mallee property. A sample of drainage lines in the Mallee and Myall Plains offsets, with a focus on the lower reaches of drainage lines draining eastwards and northwards into undulating plains. A sample of the exposed rock outcrops in the higher landforms of the Mallee property.
BC Western Offset	Jerralong Namoi Merriendi	<ul style="list-style-type: none"> A sample of drainage lines in the north-western portion of the Namoi offset, with a focus on the lower reaches of the Goonbri Creek flowing westwards into the Namoi River. The length of the terraced margins of the Namoi River floodplain in the Namoi offset. A representative sample of landforms across the Merriendi property, subject to access constraints.

¹ The Velyama and Teston (South) offset properties have been subject to previous systematic survey and no further targeted survey work is considered warranted on these properties.

² A large portion of the Warriahdool offset property is under crop and is considered to be highly disturbed with little remnant vegetation. This property is considered to hold low potential for in situ archaeological material and no additional targeted survey work is considered warranted on this property.

³ Systematic survey has previously been undertaken along Back Creek including portions of the Teston (North), Tralee and Warriahdool offset properties and no further targeted survey work is considered warranted on these properties in the vicinity of Back Creek.

Table 3 (continued)
Proposed Targeted Survey Areas

Tarrawonga Coal Project Biodiversity Offset Area		
Willeroi Offset	Willeroi West	<ul style="list-style-type: none"> A sample of grassy balds (uplands) on the north-eastern portion of the Willeroi West property, where the ridges are wide and open and comprised of natural grasslands.
Maules Creek/Boggabri Coal Shared Offset		
Western Offset	Rocklea	<ul style="list-style-type: none"> A sample of drainage lines in northern portion of the Rocklea property, with a focus on the lower reaches of drainage lines draining eastwards and northwards into undulating plains.

In addition to those areas described in Table 3, any areas of interest identified during the site inspection would also be subject to survey and more detailed consideration.

Further, it is noted that additional survey work may be undertaken outside of the described targeted survey areas in order to validate the predictive model and confirm that site predictions are consistent with the on-ground conditions.

5.2.3 Timing of Proposed Survey Works

It is anticipated that the surveys would be undertaken over several weeks, and would be undertaken over multiple survey campaigns. The field surveys would commence within 12 months of the approval of this AHCS, and are anticipated to be completed within 2 years of the approval of this AHCS.

The timing of the surveys (and the scheduling of which properties and areas would be inspected first) would be determined in consideration of revegetation/regeneration works required by the currently approved Revised Biodiversity Offset Strategy for Tarrawonga Coal Project, and Maules Creek Coal Mine (Whitehaven, 2015b) (or equivalent) and the Biodiversity Offset Strategy for Boggabri Coal Mine (BCOPL 2015).

As outlined in Section 8.2, relevant survey findings and assessment documentation would be distributed to relevant RAPs as necessary. Copies of these documents would also be made available to the OEH and DP&E.

6 ASSESSMENT AND RECORDING OF CULTURAL VALUES

In order to identify and assess potential Aboriginal cultural heritage values within the Study Area, it is proposed that the already commenced consultation process within the Aboriginal community be continued, including:

- Review of background resources including previous cultural values studies for the region and surrounding projects.
- Historical research and review of the ethnographic literature.
- Discussions with relevant RAPs during field surveys.
- Discussions and meetings with relevant RAPs, Elders, Traditional Owners, and any persons/groups with cultural knowledge of the Study Area both on-Country and elsewhere.
- Interviews with Aboriginal knowledge holders.

The objectives of the consultation would be to:

- Characterise the heritage values of the Study Area in broad terms, building on the extensive cultural values work undertaken within the Study Area (e.g. at the Maules Creek and Boggabri Coal Mines) since 2013. This would include an analysis of ways of facilitating access to the biodiversity offset areas for the purposes of 'reconnection' with Country and the education of young Aboriginal people.
- Collect and document cultural, social and historical information and values through specific interviews with Aboriginal people who had identified themselves, or who had been identified by others, as having cultural, social or historical knowledge relevant to the Aboriginal cultural values of the Study Area.
- Establish the location of specific heritage places within the Study Area, should any exist and should that knowledge exist within the Aboriginal community.
- Capture community views in relation to the significance and management requirements of a range of archaeological site types.
- Integrate traditional knowledge about the Study Area's flora and fauna with the results of scientific ecological mapping, including the development of mutually satisfactory management recommendations.

Where the consultation is directed towards identifying specific Aboriginal objects or places, this will include:

- Sites or places associated with ceremonies, spiritual/mythological beliefs and traditional knowledge, which date from the pre-contact period and have persisted until the present time (should any exist).
- Sites or places with historic significance, which date from the post-contact period and are remembered by people today (for example, plant and animal resource use areas and known camp sites), should any exist.
- Sites or places of contemporary significance (including locations where Aboriginal objects have been identified), for which the significance has been acquired in recent times (should any exist).

The above described consultation would be undertaken by qualified and experienced heritage practitioners (archaeologists, oral historians and anthropologists as necessary) within 18 months of the approval of this AHCS.

As outlined in Section 8.2, relevant reports, survey findings and assessment documentation would be distributed to relevant RAPs as necessary. Copies of these documents would also be made available to the OEH and DP&E.

The process for the identification of RAPs for the AHCS is described in Section 8.1.

7 ENHANCEMENT AND CONSERVATION OF ABORIGINAL HERITAGE VALUES

Options for enhancing and conserving Aboriginal heritage values and sites within the Study Area will be developed within 12 months of the completion of the field surveys and the cultural values assessment (which are anticipated to be completed within 2 years and 18 months of approval of this AHCS, respectively). However, these options would be developed by reference to a central principle underpinning the Burra Charter: that the nature and level of a place's significance will determine the management response (Australia ICOMOS, 2013).

As outlined in Section 8.2, relevant reports, survey findings and assessment documentation would be distributed to relevant RAPs as necessary. Copies of these documents would also be made available to the OEH and DP&E.

As previously noted, the heritage places identified in the wider area have predominantly been archaeological sites. Therefore, the appropriate heritage management response, agreed to by RAPs, has been to investigate those sites applying standard archaeological methodologies. This AHCS adopts this approach but augments it with recommendations with respect to the management of non-archaeological heritage places and objects.

The management regime established by this AHCS is responsive to:

- The location of known and potential Aboriginal sites, especially whether they are within areas of proposed revegetation works or would be avoided. This will assist to prioritise management responses.
- Specific site types and archaeological significance.
- A 'risk matrix' that prioritises actions relative to 'risks' to identified heritage places (below).

During previous consultation, some RAPs have raised the following concerns:

- The destruction of Aboriginal sites, which RAPs characterise as the 'footprints' of their ancestors in this region.
- The loss of physical linkages between places that in the past might have been connected through ceremony and activity e.g. Gins Leap and Mount Kaputar.
- The loss of access to Country that RAPs have only recently been given access to again, after many years of separation caused by white settlement.
- Damage and destruction of flora and fauna that have cultural value for RAPs.

In community consultation about these risks to Aboriginal cultural values, the RAPs have also identified a range of opportunities that the mines in the region may be able to offer. These might be undertaken as joint initiatives between the mines, and include:

- The investigation of Aboriginal sites, including the involvement of Aboriginal people together with archaeologists. This affords young people an opportunity to have physical connection with their Country and with the artefacts generated by their forebears.
- A program to record the stories that their older knowledge holders have in relation to the region so that they will not be lost.
- Maximising access of Aboriginal people to Country for the purposes of traditional activities (bush tucker collection and ceremony).
- Involvement of Aboriginal people in the identification, recording and management of flora and fauna. This would assist to educate younger people about the ecology in the region, and may also benefit the mining operations through the dissemination of Aboriginal knowledge.

These risks and opportunities identified by RAPs through consultation have guided the potential management responses considered in this AHCS. In particular, the management strategies considered in this AHCS would potentially mitigate the identified risks.

All ongoing decisions regarding the management, enhancement or conservation of any identified sites or areas of cultural value will be made in consultation with the RAPs (Section 8).

Some potential management measures for any identified sites are described in Sections 7.1 to 7.3, along with potential options for the enhancement and conservation of Aboriginal sites and values within the Study Area. These recommendations are partly based on the matters discussed in Section 3.3.1 above, especially the importance of aspects of the natural environment to local Aboriginal culture, and the desire to access 'Country' in order to 'reconnect' and educate the younger generation.

7.1 Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine

Aboriginal sites at the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine are managed in accordance with the currently approved AACHMP, HMP, and CHMP, respectively (Whitehaven 2015a; 2016; Idemitsu 2013) or any subsequent revisions. Therefore, no further management measures, enhancement or conservation options are proposed for these sites as part of this AHCS.

Whitehaven will continue to facilitate reasonable access to the sites and/or areas within the Maules Creek Coal Mine and Tarrawonga Coal Project boundaries in accordance with the currently approved AACHMP and HMP, respectively (Whitehaven, 2015a, 2016) or any subsequent revisions. Similarly, Idemitsu has an established procedure for facilitating Aboriginal community access to cultural sites in accordance with Section 4.6.3 of the currently approved CHMP (Idemitsu 2013).

7.2 Biodiversity Offset Areas

7.2.1 Enhancement and Conservation of Aboriginal Heritage Values

The ongoing methods for conserving and enhancing Aboriginal heritage values in the biodiversity offset areas will be determined and re-evaluated (for their effectiveness) as necessary. Options that will be considered by Whitehaven and Idemitsu for enhancing and conserving Aboriginal heritage values within the biodiversity offset areas may include:

- A program for undertaking an Aboriginal cultural heritage educational documentation program specific to the Study Area for use as an educational tool/resource by the local and wider Aboriginal community.
- Development of educational displays of local plants and animals and traditional materials to enhance education and connection to Country.
- A workshop involving ecologists/botanists and RAPs in which knowledge will be shared. This would involve the parties jointly mapping culturally significant species, bush foods and medicinal plant resources in the biodiversity offset areas. The intention will be to: prioritise those places that RAPs should be able to access; identify culturally sensitive species with a view to informing appropriate management responses; educating interested Aboriginal parties on the distribution of culturally sensitive flora and fauna. This may result in such things as a programme of plant and seed collection for educational and cultural use.
- Additional site inspections to allow the Aboriginal community to experience connection with Country and to view a selection of the recorded sites.

- Maintenance of an Aboriginal sites database for any sites identified within the biodiversity offset areas.
- Inclusion of documented values and sites in future revisions of the Biodiversity Offset Strategy to inform planned biodiversity works, so that significant sites can be avoided and, if possible, enhanced (e.g. through additional plantings, fencing).
- Further investigations where archaeological sites are identified but the site extent, nature of contents and/or its archaeological significance cannot be adequately assessed through the survey methodology. These investigations may include test excavation in consultation with the Aboriginal community. This would however only be undertaken where a site would be disturbed by an approved biodiversity offset strategy and that requirement could be modified to avoid disturbance. In each case, avoidance and protection would be the primary objective.

These options would be evaluated and developed following completion of the field surveys.

Additionally, as noted in Section 4.3 above, the predictive modelling underpinning this AHCS would be augmented with finer-grained vegetation mapping, based on the working hypothesis that vegetation regimes will be an effective proxy for the underlying geology, hydrology and landforms that can be predictors of Aboriginal activities (Purcell 2002).

7.2.2 Long-Term Protection and Management of Significant Sites

The long-term security of the biodiversity offset areas themselves are described in the approved Biodiversity Management Plans for the Maules Creek Coal Mine and Tarrawonga Coal Project (Whitehaven 2014a; Eco Logical Australia 2015, respectively) and Biodiversity Offset Strategy for the Boggabri Coal Mine (BCOPL 2015).

The long-term protection and management of sites within the biodiversity offset areas may include the following:

- All relevant databases for cultural heritage (e.g. the sites databases) would make appropriate note of the boundaries of the biodiversity offset areas including geospatial coordinates and shape files and clear statements of heritage significance for each site.
- Erection of signs (where appropriate) in the vicinity of heritage places that state that the area is environmentally sensitive and that unauthorised access is prohibited.
- Access to the properties would be restricted by appropriate means (e.g. access will be required to be authorised by the relevant Environment and Community Manager or delegate).

- The prohibition of unauthorised entry (e.g. entry will be allowed for actions described in the currently approved AACHMP, HMP, and CHMP (Whitehaven 2015a; 2016; Idemitsu 2013) and for works associated with the management of the biodiversity offsets).
- Consideration of the design/approach of revegetation works in the biodiversity offset areas to avoid impacts to known sites.
- Ongoing consultation with the RAPs in the conservation and management of Aboriginal cultural heritage within the biodiversity offset areas (Section 8).

These options would be evaluated, and developed following completion of the field surveys and the cultural values assessment.

7.2.3 Aboriginal Community Access

Aboriginal community members may wish to access sites and/or areas within the biodiversity offset areas for cultural purposes (e.g. education, ceremony). Whitehaven and Idemitsu are committed to facilitating reasonable access consistent with personnel workplace health and safety. Access, in all instances, will be subject to relevant operational and safety considerations and cannot be guaranteed. There will be no unauthorised access. Protocols for requesting access are outlined in the AACHMP, HMP and CHMP for the Maules Creek Coal Mine, Tarrawonga Coal Project, and Boggabri Coal Mine, respectively (Whitehaven 2015a; 2016; Idemitsu 2013).

7.2.4 Avoidance of Known and/or Undisturbed Aboriginal Sites

In accordance with the relevant approved Biodiversity Offset Strategy (or equivalent), portions of the biodiversity offset areas are proposed to be re-vegetated. Any known and/or undisturbed Aboriginal sites located within these areas would be avoided by surface disturbance or re-vegetation works where possible.

In the event that avoidance of any known and/or undisturbed Aboriginal sites is not possible, the management of these sites would be developed in consultation with the OEH and DP&E.

7.2.5 Input from Aboriginal Community

As described in Section 8.2, information sessions will be held with relevant RAPs following completion of the field surveys. The purpose of this meeting would be to identify and document any cultural values associated with the identified sites and/or or the biodiversity offset areas. Proposed management measures and the approach to the long-term protection of identified sites and areas would also be discussed with the relevant RAPs at this information session.

7.3 Consideration of Cumulative Impacts and Potential Joint Initiatives

The potential cumulative impacts of the Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine have been previously investigated and assessed (AECOM Australia, 2010; Kayandel, 2011; Insite 2010). These cumulative impacts are not considered further in this AHCS.

As the biodiversity offset areas would primarily result in the conservation of Aboriginal heritage, it is considered that there would be no cumulative impacts beyond those previously identified. Further, the proposed works would not cause, within a regional context, any further adverse heritage impacts. In the case of culturally significant flora and fauna, the offset areas would in fact enhance Aboriginal heritage values.

Notwithstanding, it is proposed that the enhancement and conservation measures described in Section 7.1 would be jointly implemented by Whitehaven for both the Maules Creek Coal Mine and Tarrawonga Coal Project, and Idemitsu for the Boggabri Coal Mine.

In addition, Whitehaven and Idemitsu continue to consider opportunities to engage and support the local Aboriginal community by other means (e.g. through sponsorship of various organisations and/or events, such as the Clontarf Foundation).

8 APPROACH FOR ONGOING CONSULTATION

Whitehaven and Idemitsu are committed to maintaining ongoing consultation with the Aboriginal community in relation to the AHCS. The below subsections outline the approach for consultation with the existing RAPs.

8.1 Identification of Registered Aboriginal Parties

Consistent with OEH requirements, the RAPs for the AHCS were identified through a comprehensive program of Aboriginal community consultation undertaken for the following assessments:

- *Maules Creek Coal Project Aboriginal Archaeology and Cultural Heritage Impact Assessment (AECOM, 2010).*
- *Tarrawonga Coal Project Aboriginal Cultural Heritage Assessment (Kayandel, 2011).*
- *Aboriginal Cultural Heritage Impact Assessment Report for the Continuation of Boggabri Coal Mine (Insite 2010).*

Subsequent to the above listed assessments, additional RAPs have registered their interest with Whitehaven in being consulted as part of the ongoing management of Aboriginal cultural heritage at the Maules Creek Coal Mine. These RAPs have also been included in relation to the Maules Creek Coal Mine portions of the Study Area.

For the Boggabri Coal Mine, additional indigenous individuals and groups registered interest in the project following the initial registration period. These individuals and groups are included as Interested Parties, as will any further people who come forward. Idemitsu will invite all RAPs and Interested Parties to participate in the consultation process with regard to the AHCS, but only RAPs will be invited to participate in actual survey. An overview on the progress of the AHCS will be made available on an annual basis to RAPs and Interested Parties.

A consolidated list of RAPs for the AHCS is provided in Attachment 4. Attachment 4 also identified which of these RAPs relate to the Maules Creek Coal Mine and associated biodiversity offset areas, which RAPs relate to the Tarrawonga Coal Project and associated biodiversity offset areas, and which RAPs and Interested Parties relate to the Boggabri Coal Mine and associated biodiversity offset areas.

8.2 General Ongoing Consultation and Site Inspections

It will be the responsibility of RAPs to ensure that up-to-date contact details (full name, postal address, telephone number, and where possible, email address) are provided to Whitehaven or Idemitsu, as relevant. These details will be updated on the register of RAPs which will be maintained by Whitehaven and Idemitsu over the life of the AHCS.

It is proposed that information sessions (in addition to those described in Section 6) will be held with relevant² RAPs (and Interested Parties for the Boggabri Coal Mine) following completion of the field surveys. The purpose of this meeting would be to identify and document any cultural values associated with the identified sites and/or or the biodiversity offset areas. Proposed management measures and the approach to the long-term protection of identified sites and areas would also be discussed with the relevant RAPs at this information session to provide the RAPs with further opportunities (along with those described in Sections 6 and 7) to provide input into the ultimate conservation strategies implemented.

Following completion of the surveys, Whitehaven and/or Idemitsu will offer relevant RAPs (and Interested Parties) the opportunity to attend a site inspection to view the Study Area and a selection of the Aboriginal sites/areas identified (consistent with the process for Aboriginal community access outlined in Section 7.2.3).

Ongoing consultation with RAPs (and Interested Parties for the Boggabri Coal Mine) will occur throughout the life of the AHCS, including as part of the broader community consultation processes undertaken at the Maules Creek Coal Mine, Tarrawonga Coal Project and Boggabri Coal Mine. In the event that additional meetings are required to discuss the AHCS, it is anticipated that these meetings would be open to relevant RAPs (and Interested Parties for the Boggabri Coal Mine) and would provide a forum for RAPs to raise any concerns they may have regarding the strategy. These meetings will also provide an opportunity for Whitehaven and Idemitsu to provide updates on the AHCS. Meetings with RAPs would be convened by Whitehaven and/or Idemitsu as needed. Additional meetings with RAPs may be held on an as required/requested basis, as agreed by Whitehaven and/or Idemitsu.

Aboriginal community members other than RAPs may attend individual meetings, if agreed by Whitehaven and/or Idemitsu prior to the meeting.

² Tarrawonga Coal Project RAPs (Attachment 4) would be consulted in relation to the outcomes of field surveys undertaken on the Tarrawonga Coal Project biodiversity offset area. Maules Creek Coal Mine RAPs (Attachment 4) would be consulted in relation to the outcomes of field surveys undertaken on the Maules Creek Coal Mine biodiversity offset areas. Boggabri Coal Mine RAPs (Attachment 4) would be consulted in relation to the outcomes of field surveys undertaken on the Boggabri Coal Mine biodiversity offset areas.

Relevant RAPs will be notified of upcoming meetings (and/or fieldwork) with a minimum of 15 business days notice.

Relevant reports, survey findings and assessment documentation would be distributed to relevant RAPs as necessary. Whitehaven and/or Idemitsu would issue all documentation in an electronic format (i.e. via email or CD/DVD), with hard copies available upon request. Hard copies of key reports would also be made available to relevant RAPs at key locations including the Whitehaven Gunnedah offices, the Maules Creek Coal Mine and Tarrawonga Coal Project administration offices and at the Red Chief Local Aboriginal Land Council. Reports would be prepared within 12 months of the completion of relevant activities (e.g. field surveys, cultural values assessments etc).

8.3 RAP Involvement in Fieldwork Activities

A selection of relevant RAPs for each mine would be engaged to participate in any fieldwork (e.g. survey etc.) and/or any other heritage management works required by the AHCS (e.g. further investigations as described in Section 7.2.1).

It is anticipated that the fieldwork would generally be undertaken in teams. Each team would be composed of an archaeologist and between two and three RAPs, depending on availability and as necessary.

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University of Queensland Culture & Heritage Unit (2015c) *Archaeological Assessment of Rock Features at Maules Creek Coal Mine*. Advice prepared for Whitehaven Coal Limited. 16 February 2015.

University of Queensland Culture & Heritage Unit (2015d) *Archaeological Assessment of Potential Scarred Trees*. Advice prepared for Whitehaven Coal Limited. 19 February 2015.

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University of Queensland Culture & Heritage Unit (2015f) *Archaeological Assessment of Potential Scarred Trees*. Advice prepared for Whitehaven Coal Limited. 2 March 2015.

University of Queensland Culture & Heritage Unit (2015g) *Maules Creek Coal Mine: Biodiversity and Aboriginal Cultural Heritage Compliance Audit*. Advice prepared for Whitehaven Coal Limited. 13 March 2015.

University of Queensland Culture & Heritage Unit (2015h) *Maules Creek Coal Mine: Results of Archaeological Monitoring Program*. Advice prepared for Whitehaven Coal Limited. 4 May 2015.

University of Queensland Culture & Heritage Unit (2015i) *Maules Creek Coal Mine: Results of Archaeological Monitoring Program*. Advice prepared for Whitehaven Coal Limited. 5 May 2015.

University of Queensland Culture & Heritage Unit (2015j) *Re: Annual Monitoring of Aboriginal Cultural Heritage Sites within the MCCP Lease Area*. Advice prepared for Whitehaven Coal Limited. 3 August 2015.

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Whitehaven Coal Limited (2015b) *Maules Creek Coal Mine Revised New South Wales Biodiversity Offset Strategy*. August 2015.

ATTACHMENT 1 - PROJECT APPROVAL RECONCILIATION

Table A-1
Condition 57, Schedule 3 of NSW Project Approval (10_0138)
Requirements for Maules Creek Coal Mine

NSW Project Approval Condition	AHCS Section
<p>Aboriginal Heritage Conservation Strategy</p> <p>57. <i>The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset Strategy areas to the satisfaction of the Director-General. This Strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The Strategy must:</i></p> <p>(a) <i>be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;</i></p> <p>(b) <i>be prepared in consultation with OEH, the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 18 months from the date of project approval;</i></p> <p>(c) <i>identify the Aboriginal cultural heritage values of the Biodiversity Offset Strategy areas;</i></p> <p>(d) <i>identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;</i></p> <p>(e) <i>identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within either the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural heritage significance to the Aboriginal community; and</i></p> <p>(f) <i>consider cumulative impacts and potential for developing joint initiatives with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural heritage values.</i></p>	<p>This document</p> <p>Section 1.1</p> <p>Section 1.2</p> <p>Section 3</p> <p>Section 4</p> <p>Section 7</p> <p>Section 7</p>

Table A-2
Condition 51, Schedule 3 of NSW Project Approval (11_0047)
Requirements for Tarrawonga Coal Project

NSW Project Approval Condition	AHCS Section
Aboriginal Heritage Conservation Strategy	
<p>51. <i>The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset Strategy areas to the satisfaction of the Director-General. This Strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The Strategy must:</i></p>	This document
<p>(a) <i>be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;</i></p>	Section 1.1
<p>(b) <i>be prepared in consultation with OEH, the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 18 months from the date of project approval;</i></p>	Section 1.2
<p>(c) <i>identify the Aboriginal cultural heritage values of the Biodiversity Offset Strategy areas;</i></p>	Section 3
<p>(d) <i>identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;</i></p>	Section 4
<p>(e) <i>identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within either the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural heritage significance to the Aboriginal community; and</i></p>	Section 7
<p>(f) <i>consider cumulative impacts and potential for developing joint initiatives with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural heritage values.</i></p>	Section 7

Table A-3
Condition 55, Schedule 3 of NSW Project Approval (09_0182)
Requirements for Boggabri Coal Mine

NSW Project Approval Condition	AHCS Section
<p>Aboriginal Heritage Conservation Strategy</p> <p>55. <i>The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset Strategy areas to the satisfaction of the Director-General. This Strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The Strategy must:</i></p> <p>(a) <i>be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;</i></p> <p>(b) <i>be prepared in consultation with OEH, the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 18 months from the date of project approval;</i></p> <p>(c) <i>identify the Aboriginal cultural heritage values of the Biodiversity Offset Strategy areas;</i></p> <p>(d) <i>identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;</i></p> <p>(e) <i>identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within either the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural heritage significance to the Aboriginal community; and</i></p> <p>(f) <i>consider cumulative impacts and potential for developing joint initiatives with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural heritage values.</i></p>	<p>This document</p> <p>Section 1.1</p> <p>Section 1.2</p> <p>Section 3</p> <p>Section 4</p> <p>Section 7</p> <p>Section 7</p>

**ATTACHMENT 2 - ABORIGINAL HERITAGE CONSERVATION STRATEGY FOR THE BTM
COMPLEX AND BIODIVERSITY OFFSET AREAS [DRAFT ONLY] (RPS, 2014)**

Aboriginal Heritage Conservation Strategy for the BTM Complex and Biodiversity Offset Areas

**Prepared for Boggabri, Tarrawonga and Maules
Creek Mines**

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**IDEMITSU AUSTRALIA RESOURCES
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MINES)**

Client Manager: Tessa Boer-Mah
Report Number: PR115434-1
Version / Date: Draft August 2014

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Draft C	For RAP review	Jeremy Hill	T.Boer-Mah	18.08.2014	T.Boer-Mah	18.08.2014

Executive Summary

RPS was engaged by the Boggabri-Tarrawonga-Maules Creek Complex (BTM Complex) to prepare an Aboriginal Heritage Conservation (AHCS) Strategy for their Project areas and Biodiversity Offset Areas (BOAs). The AHCS must be prepared under the Director General's Requirements for the BOAs. The Director General's Requirements were issued under Section 75J *Environmental Planning and Assessment Act 1979*.

The project methodology involved three main components: desktop study, values assessment and development of options for conservation. The desktop study involved a review of archaeological information; as well as mapping of registered sites from the Aboriginal Heritage Information Management System (AHIMS). The desktop study was then used as a basis for the archaeological values assessment and was presented as base information for the Aboriginal cultural values assessment. The Aboriginal cultural values assessment involved an extensive consultation process, which involved five formal opportunities for input, as well as informal opportunities to provide information via written correspondence or by phone. The options for conservation are derived from discussions with the Registered Aboriginal Parties (RAPs), as well as from the archaeological values assessment. The more detailed evaluation and subsequent implementation of options is not part of this strategy as such, but will form part of the implementation of the strategy.

Consultation with the RAPs was undertaken as part of the process to develop the AHCS and the Ministers Conditions of Approvals (MCoA). Three workshop series were designed so that the Registered Aboriginal Parties could provide cultural input into the AHCS in person, as well as numerous opportunities to provide input in writing or via phone. The first workshop was designed to present an overview of the project and an opportunity for RAPs to provide input into the proposed consultation strategy. The second workshop aimed to give RAPs an opportunity to provide input into the AHCS and information regarding cultural values for the BOAs. Options were put forward by the RAPs for the long-term management and protection of those values. These options for the BTM Complex and BOAs are listed below. OEH and mine representatives were consulted throughout the development of the strategy.

Arising from the analysis of the desktop study, possible key means of enhancing archaeological value include:

- Better documentation and understanding of bush foods would contribute to understanding the archaeological record in the region and therefore contribute to enhancing archaeological values in the BTM Complex and BOAs; and
- Further investigation of the lower Nandewar Range would contribute to understanding the regional context of the archaeological assemblages in the BTM complex and therefore enhance the archaeological value of the BTM Complex and the BOAs.

The RAPs were asked if there were any particular areas within the BOAs and BTM Complex which were of cultural value; however, no specific geographic areas were nominated. The RAPs expressed an opinion that in general the land within the BTM Complex and BoAs had some cultural value and was therefore important on the basis that:-

- The general area was occupied by Aboriginal people and is therefore important for connection to country; and
- Bush foods have been known to grow in these environments and have some cultural value.

Nine options were identified for enhancing and preserving cultural heritage. Four that meet both the cultural and archaeological values were identified; they are: Nandewar Range sample survey, access agreements for the biodiversity offset areas, oral history collections and bushfood / land management.

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- Appendix 2 AHIMS Searches
- Appendix 3 Glossary of Site Types
- Appendix 4 RAP Consultation Documentation

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Abbreviations and Acknowledgements

Abbreviation	Definition
Aboriginal Object	“Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains” (DECCW 2010:18).
Aboriginal Place	“A place declared under s.84 of the NPW Act that, in the opinion of the Minister, is or was of special significance to Aboriginal culture” (DECCW 2010:18). Aboriginal places are gazetted by the minister.
ACHCR	Aboriginal Cultural Heritage Consultation Requirements for Proponents.
AHCS	Aboriginal Heritage Conservation Strategy
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System.
AHIP	Aboriginal Heritage Impact Permit.
ATSIHP Act	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> , as amended
BOAs	Biodiversity Offset Area
BTM Complex	Boggabri-Tarrawonga-Maules Creek Complex
DECCW	Department of Environment, Climate Change and Water (is now the Office of Environment and Heritage – OEH).
DoPI	Department of Planning and Infrastructure (from April 2011) previously known as Department of Planning (DoP).
Eoi	Expression of Interest
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i> .
EPRG	Environmental Protection & Regulation Group
GDA	Geodetic Datum Australia.
ICOMOS	International Council on Monuments and Sites
ILUA	Indigenous Land Use Agreement
LALC	Local Aboriginal Land Council
LGA	Local Government Area.
MCoA	Ministers Conditions of Approval
NNTT	National Native Title Tribunal
NPW Act	<i>NSW National Parks and Wildlife Act 1974</i> (administered by OEH).
NPW Regulation	<i>NSW National Parks and Wildlife Regulation 2009</i> (administered by OEH).
NPWS	National Parks and Wildlife Service.
NSW	New South Wales
NTR	Native Title Register
OEH	Office of Environment and Heritage (formerly DECCW).
PAD	Potential Archaeological Deposit.
RAPs	Registered Aboriginal Parties
SSD	State Significant Development
WHC	Whitehaven Coal

Acknowledgements

The production of this report would not have been possible without the time and energies given by the Project members, the Aboriginal community and the BTM Complex representatives. These include:

- The Aboriginal Community.
- Belinda Bird (Parsons Brinckerhoff)
- Lachlan Johnson, Brian Cole, Jill Johnson, Dan Martin, Tim Muldoon, Rob Sullivan and Danny Young (all of Whitehaven Coal); and
- Chase Dingle and Jan Green (both of Idemitsu).

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1.0 Introduction

RPS was engaged by the Boggabri-Tarrawonga-Maules Creek Complex (BTM Complex; **Figure 1**) to prepare an Aboriginal Heritage Conservation Strategy (AHCS) for the BTM Complex and the Biodiversity Offset Areas (BOAs). RPS was approved by Department of Planning and Environment (DP&E) to prepare the AHCS (**Appendix 1**) in accordance with the Ministers Conditions of Approval (MCoA). Consultation was undertaken with the Office of Environment and Heritage (OEH) and the Registered Aboriginal Parties (RAPs).

The AHCS was prepared in accordance with guiding principles of the *Aboriginal Cultural Heritage Consultation Requirements* (ACHCRs) for Proponents (DECCW 2010a) and the *Ask First Principles* (Australian Heritage Commission 2002). The AHCS is required under the Project Approval for the BTM Complex issued under Section 75J of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Project Location

The BOAs encompass parcels of land within 50 kilometres of Boggabri (**Figure 2**). The northernmost offset area is located in the Nandewar Range and incorporates the Maules Creek catchment in the vicinity of the Lindsay Township. The offset areas also incorporate portions of land to the north, east and west of the Leard State Forest, and in the vicinity of Maules Creek and the Namoi River. The easternmost portion of the offset area includes Rioters Hill. The southern offset areas include parcels of land to the north and west of the Kelvin State Forest. The BTM Complex is located within portions of the Leard State Forest, as well as some surrounding lands in the Narrabri Shire Local Government Area, 15 kilometres to the north of the Boggabri Township.

In order to gain an archaeological understanding of the region; the Study Area encompasses the BTM Complex, the BOAs, as well as the landscape in between these elements and thus incorporates the lower Nandewar Range in the north near the Maules Creek Offset Area and the Kelvin State Forest in the South near the Kelvin State Forest (**Figure 2**).

1.2 Project Brief and compliance with the Ministers Conditions of Approval (MCoA)

The MCoA for this regional strategy are common across Boggabri, Maules Creek and Tarrawonga. For ease of reference the below conditions have been sourced from the Boggabri Project, but the content is the same for each mine. The MCoA were issued under Part 75J of the EP&A Act. **Table 1** summarises the compliance with the MCoA.

Table 1 Compliance with Heritage Components of the Ministers Conditions of Approval

MCoA Requirements Boggabri MCoA, page 27, Condition 55 Maules Creek, page 26, Condition 57 Tarrawonga, page 24, Condition 52	Addressed in this Report
The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset areas to the satisfaction of the Director-General. This strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The strategy must:	
(a) Be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;	Section 1.7 and Appendix 1.
(b) Be prepared in consultation with OEH the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 12 months;	Section 1.6, 6.0 and 7.0; Appendix 4
(c) Identify the Aboriginal cultural values of the Biodiversity Offset Strategy areas;	Sections 6.0 and 7.0.
(d) Identify areas of high Aboriginal cultural heritage significance within both the site* and the Leard Forest Mining Precinct;	Section 7.0.
(e) Identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural significance to the Aboriginal community; and	Section 8.0.
(f) Consider cumulative impacts and potential for developing joint initiative with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural values.	Section 8.0.

*Site and the Leard Forest Mining Precinct have been referred to in this document as the BTM Complex

1.3 Project Aims

The aims of this ACHS are to:

- Provide an overview of the archaeological context and the archaeological values associated with the BTM Complex and Biodiversity Offset Areas; this will include providing mapping of the registered sites in the Aboriginal Heritage Information Management System (AHIMS) located in the Study Area, the creation of a predictive model and an assessment of values on the basis of desktop information;
- Undertake Aboriginal value assessment with the BTM Complex RAPs;
- Provide a plan for enhancing and conserving cultural heritage within the BTM complex area and BOA's, and
- Identify a range of options for enhancing and conserving Aboriginal cultural heritage values.

1.4 Project Methodology

The project methodology involved three main components: desktop study, values assessment and development of options for conservation. The desktop study involved a review of archaeological and historical information; as well as mapping of registered sites from the AHIMS database. The desktop study was then used as a basis for the archaeological values assessment and was presented as base information for the Aboriginal cultural values assessment. The Aboriginal cultural values assessment involved a process encompassing many opportunities for consultation, which included five formal opportunities for input from RAPs, as well as informal opportunities to provide information via written correspondence or by phone. The options for conservation are derived from discussions with the RAPs and the archaeological values

assessment. The evaluation and implementation of these options is not part of this strategy, as such but will form part of the implementation of the strategy.

1.5 Structure of this Report

A summary of the project aims, location, requirements and team is provided in this section (Section 1.0). Section 2.0 outlines the legislative context and guidelines which were used as a framework for this document. Section 3.0 presents the results of the Desktop Study. Section 4.0 outlines the archaeological values methodology and Section 5.0 presents archaeological values assessment. Section 6.0 outlines the Aboriginal values methodology and Section 7.0 documents how this methodology was followed and what was undertaken. Section 8.0 outlines the options put forward for enhancing and conserving Aboriginal cultural heritage values and the conclusions for the study area are presented in Section 9.0.

1.6 Consultation with OEH, DP&E and BTM Complex

The OEH and DP&E were consulted throughout the preparation of the AHCS. A project inception meeting was held on 25 February 2014 with Phil Purcell (OEH) and Stephen O'Donoghue (DP&E). Updates following each workshop and correspondence regarding any key matters were provided to OEH. The BTM complex was consulted throughout the AHCS, BTM complex representatives attended the workshops, and reviewed documents sent to the RAPS.

1.7 RPS Project Team

The RPS Project team comprised:

- Tessa Boer-Mah, Newcastle Cultural Heritage Manager; and
- Jeremy Hill, Cultural Heritage Consultant.

This report was written by suitably qualified heritage professionals and prepared in accordance with s1.6 and r1 of the Code of Practice for Archaeological Investigation (DECCW 2010b:4,20). The RPS Cultural Heritage Consultants were approved by the Department of Planning and Infrastructure (DoPI) to prepare this AHCS on 31 March 2013 (**Appendix 1**).

Legend

Project Application Areas

- Boggabri
- Maules Creek
- Tarrawonga

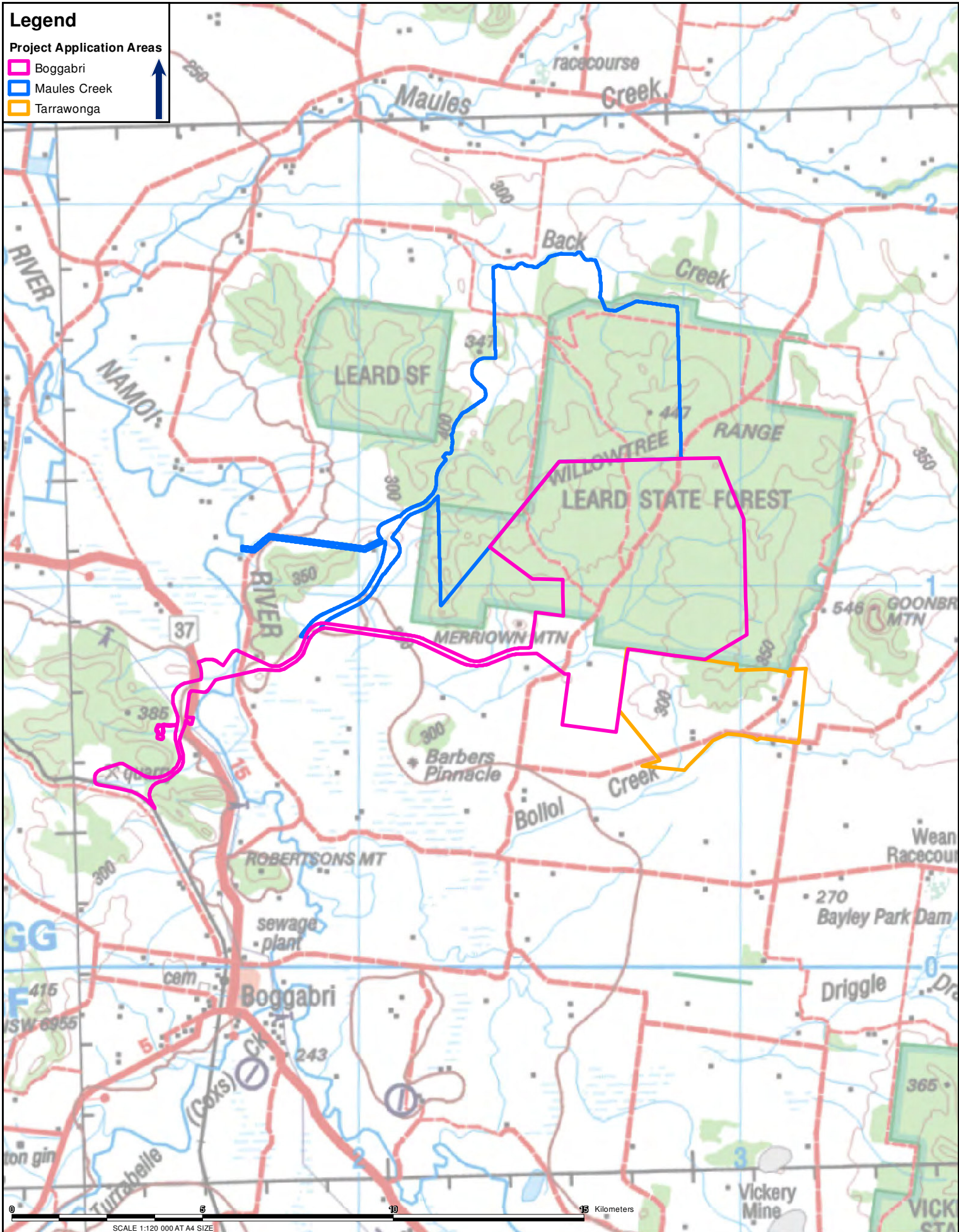


Figure 1: BTM Complex Locations

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: 115434-1	Data Sources: Bing Maps 2011
PURPOSE: Heritage Technician: jeremy.hill	Date: 18/07/2014

CLIENT: Parsons Brinckerhoff

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Legend

Project Application Areas

- Boggabri
- Maules Creek
- Tarrawonga

Biodiversity Offset Areas

- Shared (Maules Creek and Boggabri)
- Boggabri
- Maules Creek
- Tarrawonga

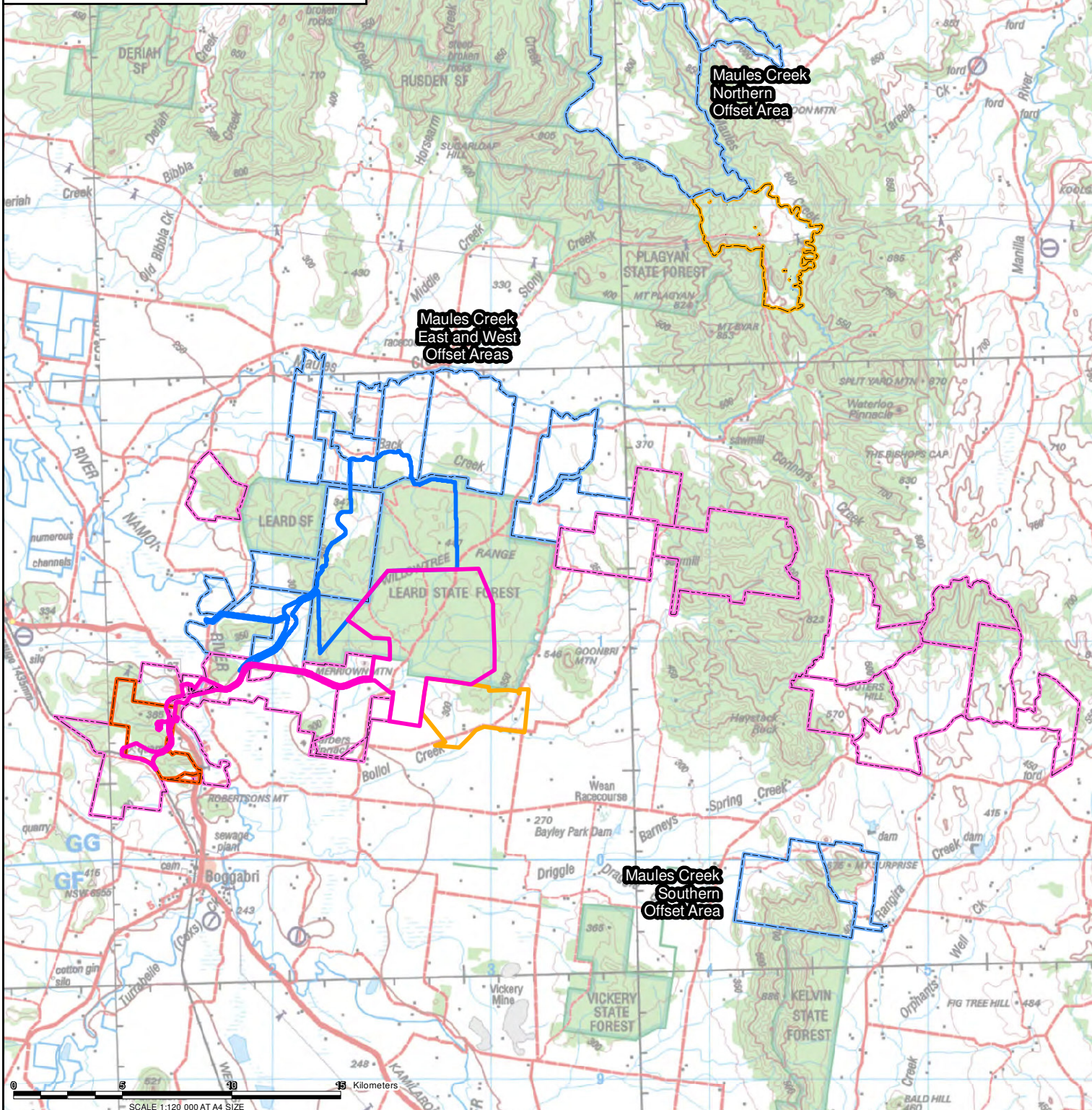


Figure 2: Biodiversity Offset Area Locations

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: 115434-1	Data Sources: Bing Maps 2011
PURPOSE: Heritage Technician: jeremy.hill	Date: 18/07/2014

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2.0 Legislative Context and Guidelines

This section provides an outline of the legislative context for the protection of Aboriginal heritage, as well as the guidelines for managing Aboriginal heritage.

2.1 Environmental Planning and Assessment Act 1979

The EP&A Act regulates a system of environmental planning and assessment for New South Wales. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage and specifically Aboriginal heritage. Within the EP&A Act, Parts 3, 4 and 5 relate to Aboriginal heritage.

The MCoA have been used under Section 4.1 of EP&A Act, as the mines in the BTM complex are State Significant Developments (SSDs).

2.2 NSW Legislation Regulating Aboriginal Cultural Heritage

Although a number of Acts and regulations protect and manage cultural heritage in New South Wales; the primary ones that apply to this report include:

- *National Parks and Wildlife Act 1974* (as amended)
- *National Parks and Wildlife Regulation 2009*
- *Environmental Planning and Assessment Act 1979*

In brief, the NPW Act (as amended) protects Aboriginal heritage (places, sites and objects) within NSW; and the *National Parks and Wildlife Regulation 2009* provides a framework for undertaking activities and exercising due diligence.

2.2.1 National Parks & Wildlife Act 1974 (as amended)

The *National Parks and Wildlife Act 1974* (as amended) (NPW Act) protects Aboriginal heritage (places, sites and objects) within NSW. Protection of Aboriginal heritage is outlined in s86 of the NPW Act, as follows:

- "A person must not harm or desecrate an object that the person knows is an Aboriginal object" s86(1),
- "A person must not harm an Aboriginal object" s86(2)
- "A person must not harm or desecrate an Aboriginal place" s86(4).

Penalties apply for harming an Aboriginal object or place. The penalty for knowingly harming an Aboriginal object (s86[1]) and/or an Aboriginal place (s86[4]) is up to \$550,000 for an individual and/or imprisonment for 2 years; and in the case of a corporation the penalty is up to \$1.1 million. The penalty for a strict liability offence (s86[2]) is up to \$110,000 for an individual and \$220,000 for a corporation.

Harm under the NPW Act is defined as any act that: destroys defaces or damages the object, moves the object from the land on which it has been situated; or causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate 1) that harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) (and the permit was properly followed), or 2) that the proponent exercised due diligence in respect to Aboriginal heritage. The '**due diligence' defence (s87(2))**, states that if a person or company has exercised due diligence to ascertain that no Aboriginal object was likely to be harmed as a result of the activities proposed for the Project Area; then liability from prosecution under the NPW Act will be removed or mitigated if it later transpires that an Aboriginal object was harmed. If any Aboriginal objects are identified during the activity, then works should cease in that area and Office of

Environment and Heritage (OEH) should be notified (DECCW 2010c:13). The due diligence defence does not authorise the continuation of harmful activities.

Notification of Aboriginal Objects

Under section 89A of the NPW Act, an Aboriginal object (or site) must be reported to the Director-General of OEH within a reasonable time (unless it has previously been recorded and submitted to AHIMS). Penalties of \$11,000 for an individual and \$22,000 for a corporation may apply for each object not reported.

2.2.2 National Parks and Wildlife Regulation 2009

The *National Parks and Wildlife Regulation 2009* (NPW Regulation) provides a framework for undertaking activities and exercising due diligence with respect to Aboriginal heritage. The NPW Regulation outlines the recognised due diligence codes of practice which are relevant to this report, but it also outlines procedures for AHIP applications and ACHCRs (DECCW 2010a); amongst other regulatory processes.

2.2.3 Aboriginal Land Rights Act 1983

The purpose of this legislation is to provide land rights for Aboriginal people within NSW and to establish Local Aboriginal Land Councils (LALCs). The land able to be claimed by LALCs, on behalf of Aboriginal people, includes Crown Land that (s36):

- Is able to be lawfully sold, leased, reserved or dedicated;
- Is not lawfully used or occupied;
- Does not comprise lands which, in the opinion of the Crown Lands Minister, are needed or are likely to be needed for residential purposes;
- Are not needed, nor likely to be needed for an essential public purpose;
- Does not comprise land under determination by a claim for native title; and
- Is not the subject of an approved determination under Native Title.

Claims for land are by application to the Office of the Registrar, Aboriginal Land Rights Act (1983).

2.3 Federal Legislation regulating Aboriginal Cultural Heritage

2.3.1 Native Title Act

The Commonwealth Government enacted the *Native Title Act (1993)* to formally recognise and protect native title rights in Australia following the decision of the High Court of Australia in *Mabo & Ors v Queensland* (No. 2) (1992) 175 CLR 1 ("Mabo").

Although the presumption of native title can be in any area where an Aboriginal community or group can establish a traditional or customary connection with that area, native title can be extinguished by a number of ways:

- land that was designated as having freehold title before 1 January 1994
- any commercial, agricultural, pastoral or residential lease.
- Land that has been used for the construction or establishment of public works for as long as they are used for that purpose.

Other land tenure, such as mining leases, may be subject to native title, depending on when the lease was granted.

Overview of Native Title Claims, Agreements and Determinations

Native Title Claim

When a native title claim is lodged with the National Native Title Tribunal (NNTT) it undergoes a registration test as stipulated in the Native Title Act 1993. If a claim passes the registration test then it becomes a 'registered claim' which means it is eligible to be heard in Court. This is not the same as a native title determination, although it does give registered claimants the right to negotiate with others about the grant of some mining tenements in relation to the area covered by the application and certain other procedural rights while their claim is pending.

Indigenous Land Use Agreement

An Indigenous Land Use Agreement (ILUA) is an agreement with a native title group about the use and management of land and waters (National Native Title Tribunal 2011). The ILUA process is overseen by the NNTT. An ILUA can be used in an area with or without a native title determination. Agreements can incorporate how future development will proceed (under the Future Acts in the Native Title Act 1993), how land be accessed and can include negotiations for compensation. An 'In Notification' ILUA or an 'Accepted for notification' ILUA does not apply to an area until it has been registered. An ILUA of this type is in consultation with the broader community.

Native Title Determination

A native title determination is a decision by the Federal Court of Australia or the High Court of Australia that native title does or does not exist, in relation to a particular area of land or waters. In order to seek a native title determination, an applicant must file the relevant application in a registry of the Federal Court of Australia. If native title is determined to exist on a particular area of land or water, this may include rights to: live in the area; access the area for traditional purposes, such as camping or ceremonial activities; to protect important places and sites, and to procure wood, ochre and stone. In some cases, native title includes the right to possess and occupy an area to the exclusion of all others (often called 'exclusive possession'). This includes the right to control access to, and use of, the area concerned. However, this right can only be recognised over certain parts of Australia, such as unallocated or vacant Crown Land and some areas already held by, or for, Indigenous Australians.

Native Title and the BOAs

The BOAs are situated within the Gomeri People Native Title claim area (NC2011/006). This claim has been accepted for registration but has not been determined; therefore a Native Title Determination or ILUA does not exist in the BOAs.

2.3.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (ATSIHIP Act Amendment 2006)

The purpose of this Act is to preserve and protect all heritage places of particular significance to Aboriginal and Torres Strait Islander people. This Act applies to all sites and objects across Australia and in Australian waters (s4).

The intention of this Act is to provide national baseline protection for Aboriginal places and objects where State legislation is absent. It is not to exclude or limit State laws (s7(1)). Should State legislation cover a matter already covered in the Commonwealth legislation, and a person contravenes that matter, that person may be prosecuted under either Act, but not both (s7(3)).

The Act provides for the preservation and protection of all Aboriginal objects and places from injury and/or desecration. A place is construed to be injured or desecrated if it is not treated consistently with the manner of Aboriginal tradition or is or likely to be adversely affected (s3).

2.4 Guidelines Managing Aboriginal Cultural Heritage

2.4.1 ICOMOS Burra Charter

The ICOMOS Burra Charter defines the basic principles and procedures to be followed in the conservation of cultural heritage in Australia. Article 2 declares “The aim of conservation is to retain the cultural significance of a place’ and must include provision for its security, its maintenance and its future.” The principles that are set out in the Burra Charter guide and inform the assessment of significance of a place. ‘Cultural significance’ means aesthetic, historic, scientific, or social value of past, present or future generations. Significance assessments are a helpful tool in the management of cultural heritage resources through allowing managers to make informed decisions, especially in land use issues. The definitions of these concepts of significance are (Australia ICOMOS 2013):

- Aesthetic value (visual aspects of site);
- Scientific value or research potential (rarity, quality and representativeness of site);
- Social value (spiritual, political and cultural aspects of site); and
- Historic value (aesthetic, scientific and social values combined).

Aesthetic value encompasses aspects of sensory perception including form, scale, colour, texture and material of the fabric. Scientific value is the importance of the item in relation into its rarity, quality or representativeness. Social value encompasses the spiritual, political, national or other associations to a majority or minority group. Historic value is the history of the place, its association with historic figure/s and/or its role in a historical event.

2.4.2 Ask First: A guide to respecting Indigenous heritage places and values

Ask First (2002) was commissioned by the Australian Heritage Commission to help Australians protect different aspects of their natural and cultural heritage places, and is intended to be complementary to the Australia ICOMOS Burra Charter and the Australian Natural Heritage Charter. Ask First is a practical guide for land developers, land users and managers, cultural heritage professionals and others who may have an impact on Indigenous heritage. The main focus of the guidelines is to emphasise that consultation and negotiation with Indigenous stakeholders is the best means of addressing Indigenous heritage issues. The guidelines also emphasise the need to comply with relevant Territory and Commonwealth Indigenous cultural heritage legislation and statutory authorities.

Ask First states that in recognising the rights and interests of Indigenous peoples in their heritage, all parties concerned with identifying, conserving and managing this heritage should acknowledge, accept and act on the principles that Indigenous people:

- Are the primary source of information on the value of their heritage and how it is best conserved;
- Must have an active role in any Indigenous heritage planning process;
- Must have input into primary decision-making in relation to Indigenous heritage so that they can continue to fulfil their obligations towards this heritage; and
- Must control intellectual property and other information relating specifically to their heritage, as this may be an integral aspect of its heritage value.

3.0 Desktop Study

The purpose of the desktop study is to provide the necessary information for the archaeological values assessment and to contribute to the cultural value assessment. The desktop study includes an analysis of the AHIMS data, an overview of the environmental context of the area and a literature review. The interpretation of site patterning in the area was used as a basis to understand archaeological values in the area.

3.1.1 Aboriginal Heritage Information Management System (AHIMS)

AHIMS searches were conducted over the region to gain an understanding of the overall site patterning. For the purposes of clarity this has been referred to as the Study Area.

A search of the AHIMS database on 21 March 2014 was divided into seven polygons due to the extent of the Study Area. The polygon coordinates used for the search are listed in the **Table 2**. The results of those searches revealed 418 registered sites in the general location of the study area. These results are summarised in **Table 3** and presented on maps (**Figure 3** to **Figure 10**). The original searches and glossary of site types are presented in **Appendix 2** and **Appendix 3**.

Table 2 Summary of AHIMS polygon searches

RPS Polygon	Easting from	Northing from	Easting to	Northing to
Polygon 1	209634.32	6590180.66	257228.28	6601114.4
Polygon 2	209634.32	6623553.62	257228.28	6647707.86
Polygon 3	232283.00	6601114.00	257228.00	6623587.00
Polygon 4	209634.32	6601053.23	223175.95	6623553.62
Polygon 5	223071.85	6610160.45	232283.00	6623587.00
Polygon 6	223071.85	6606881.84	232335.24	6610160.45
Polygon 7	223175.95	6601053.23	232335.24	6606881.84

Table 3 Summary of AHIMS Sites within the searched coordinates

Sites	Frequency	Percent
Isolated Find	186	44.50%
Artefact Scatter	80	19.14%
Scarred Tree	64	15.31%
Artefact Site (number unspecified)	62	14.83%
Grinding Groove	6	1.44%
Art	4	0.96%
Artefact Site (number unspecified) & Scarred Tree	4	0.96%
Rockshelter & Potential Archaeological Deposit (PAD)	4	0.96%
Aboriginal Ceremony and Dreaming	1	0.24%
Artefact Site (number unspecified) & Grinding Grooves	1	0.24%
Artefact Site (number unspecified), Scarred Tree, Water Hole, PAD, Non-Human Bone and Organic Material	1	0.24%
PAD	1	0.24%
Resource Gathering, Shell Midden, Scarred Tree and Water Hole	1	0.24%
Rockshelter	1	0.24%
Stone Arrangement	1	0.24%
Water Hole	1	0.24%
Grand Total	418	100.00%

Source: AHIMS searches Polygons1-7, 21 March 24, grey shading indicates artefact sites

Surface artefacts are the most common site type (n=334, 80%) and are generally composed exclusively of stone artefacts, although they sometimes occur with scarred trees, grinding grooves and other features. The next most common site type occurs more than four times less frequently than the artefact sites. Scarred tree sites and variants constitute 17% (n=70) of the site types within the searched coordinates. Rock shelters and variants (n=5, 1%) are the next most common site type. The remaining site types constitute approximately 2% of the recorded sites within the Study Area. A fully glossary of site types is located in **Appendix 3**.

The search revealed that 217 Aboriginal sites were present in the BTM Complex and BOAs (**Table 4**).

Table 4 Summary of AHIMS Sites within the BTM Complex and Biodiversity Offsets

Sites	Frequency	Percent
Isolated Find	111	51.15%
Artefact Scatter	41	18.89%
Scarred Tree	38	17.51%
Artefact Site (number unspecified)	21	9.68%
Art	3	1.38%
Aboriginal Ceremony and Dreaming	1	0.46%
Grinding Groove	1	0.46%
Rockshelter	1	0.46%
Grand Total	217	100.00%

Source: AHIMS searches Polygons1-7, 21 March 24

The AHIMS site patterning within the BTM Complex and BOAs is similar to the overall Study Area. Artefact sites and variants (n=173, 80%) are the most common site type within the BTM Complex and BOAs. There are four times as many artefact sites as there are scarred tree sites, which are the next most commonly

occurring site type. Scarred tree sites constitute 17.5% (n=38) of the site types within the BTM Complex and BOAs. It should be noted; however, that some sites originally registered in AHIMS have been subject to further assessment and are no longer considered cultural sites. This is particularly the case for scarred trees (Global Soil Systems 2014). However, the overall site patterning, whereby surface artefacts are the dominant site type, remains the same.

DRAFT

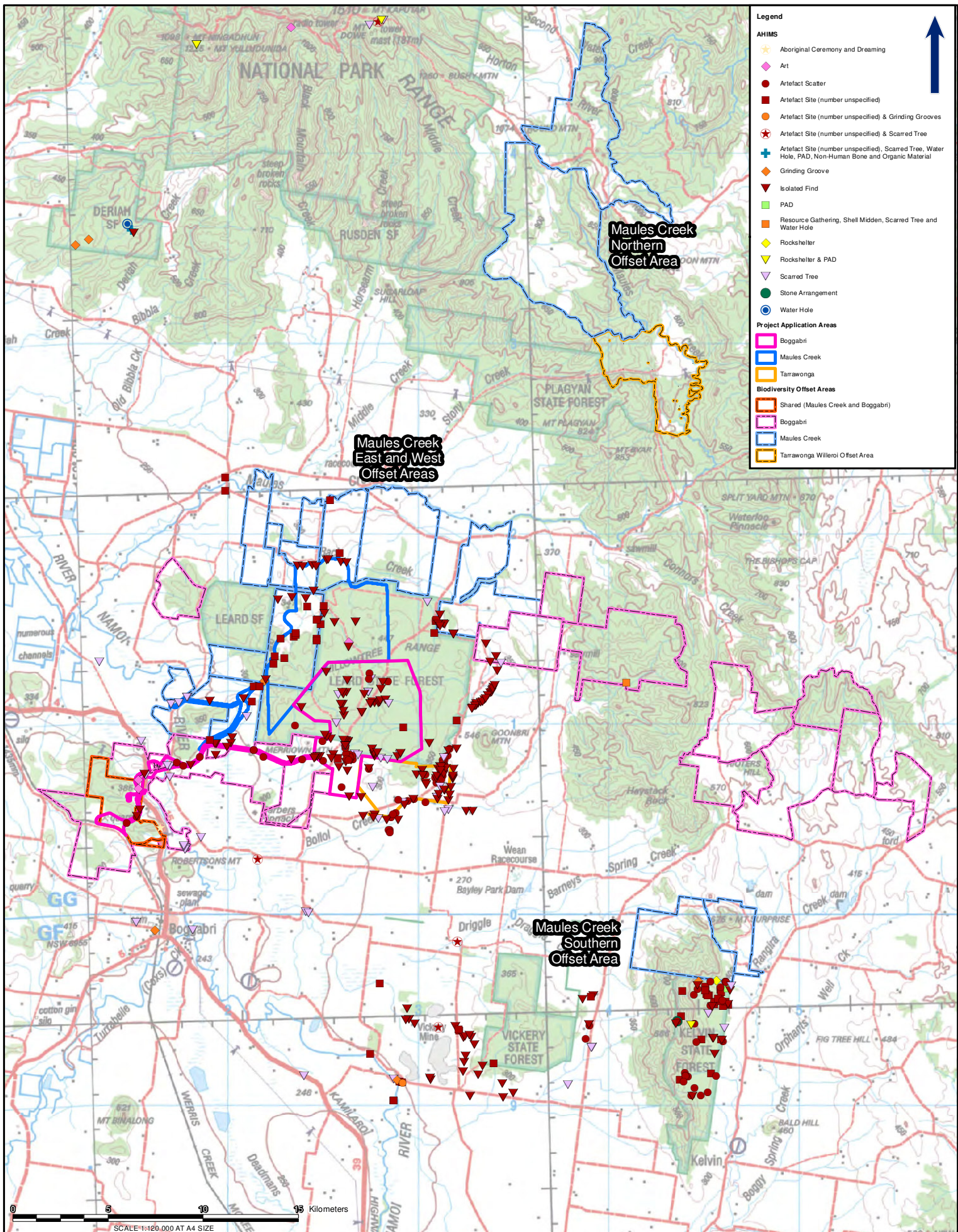


Figure 3: Biodiversity Offset Area Locations

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: 115434-1	Data Sources: Bing Maps 2011
PURPOSE: Heritage	Technician: Natalie Wood Date: 19/08/2014

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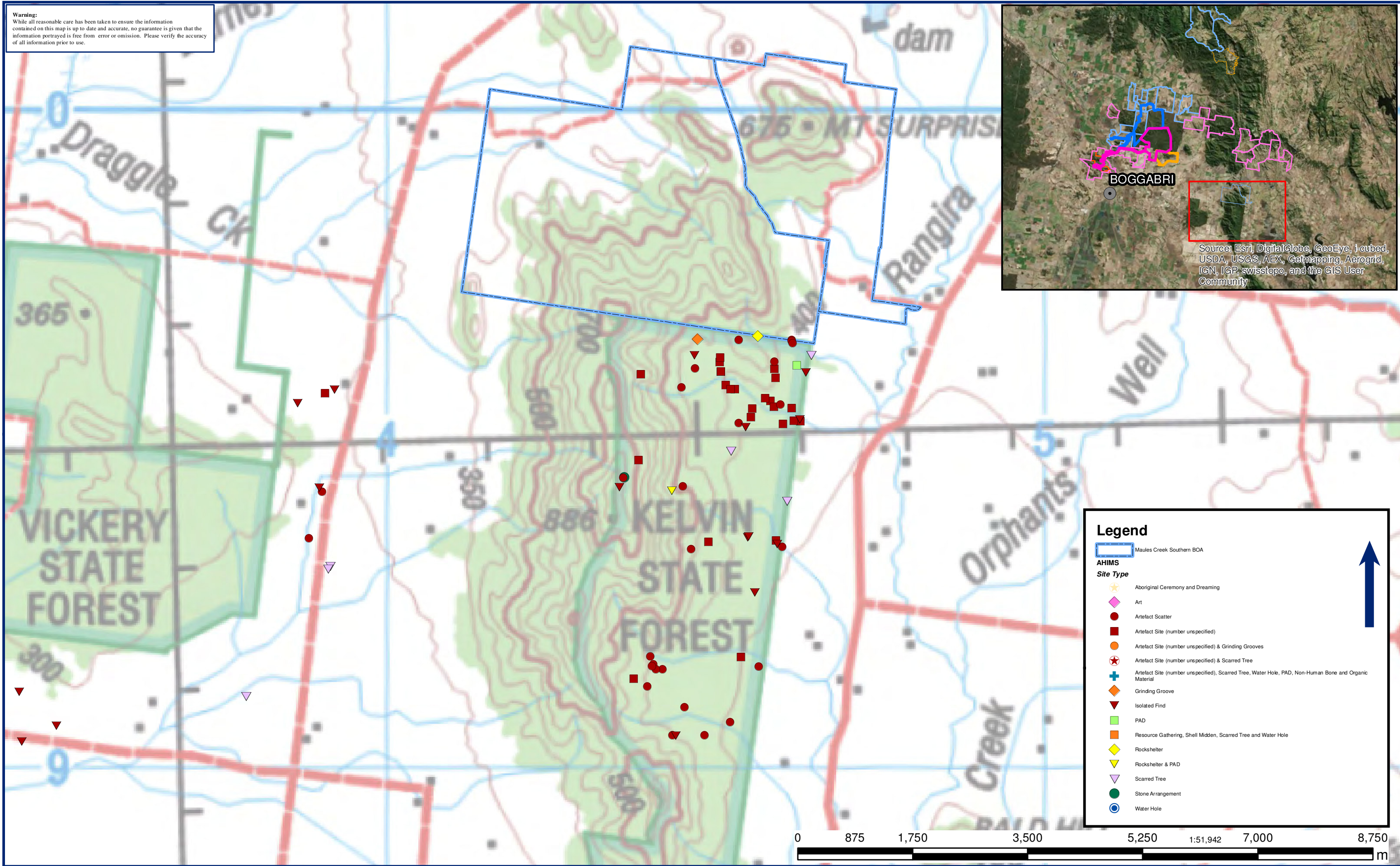


FIGURE 4: MAP SHEET 1

LOCATION : **BTM COMPLEX**

DATUM:GDA 1994

DATE : 18/07/2014

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PURPOSE: **HERITAGE**

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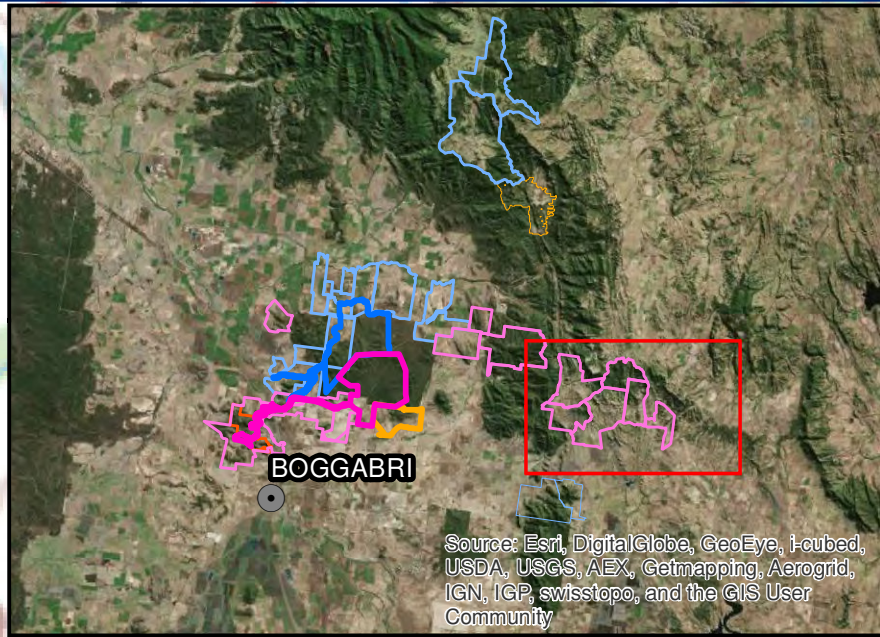
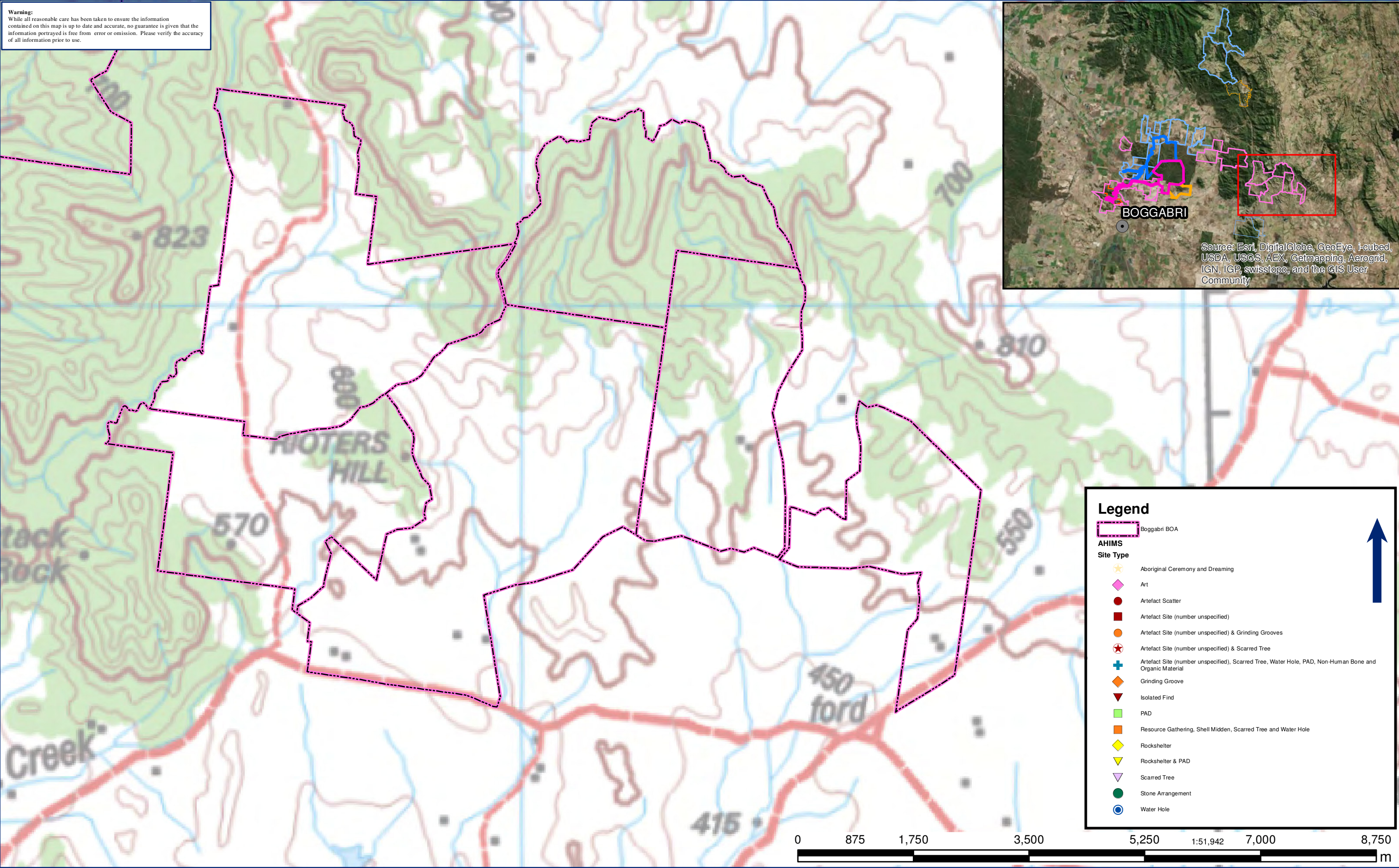
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Legend

Boggabri BOA
AHIMS
Site Type

- ★ Aboriginal Ceremony and Dreaming
- ◆ Art
- Artefact Scatter
- Artefact Site (number unspecified)
- Artefact Site (number unspecified) & Grinding Grooves
- ★ Artefact Site (number unspecified) & Scarred Tree
- + Artefact Site (number unspecified), Scarred Tree, Water Hole, PAD, Non-Human Bone and Organic Material
- ◆ Grinding Groove
- ▼ Isolated Find
- PAD
- Resource Gathering, Shell Midden, Scarred Tree and Water Hole
- ◆ Rockshelter
- ▼ Rockshelter & PAD
- ▼ Scarred Tree
- Stone Arrangement
- Water Hole

↑

0 875 1,750 3,500 5,250 7,000 8,750
1:51,942 m

FIGURE 5: MAPSHEET 2 | LOCATION : **BTM COMPLEX** | DATUM:GDA 1994 | DATE : **18/07/2014** | VERSION (PLAN BY): A A3 (jeremy.hill) | **Copyright:** "This document and the information shown shall remain the property of RPS Australia East Pty. Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited"

PROJECTION: GDA 1994 MGA Zone 56 | PURPOSE: **HERITAGE** | PATH: J:\JOBS\115k\115434 Gunnedah\10 - Drafting\Arcgis Map Documents\Arch\Report Figures\115434-1 Figure 5 (Mapsheet 2) 20140714 JH.mxd

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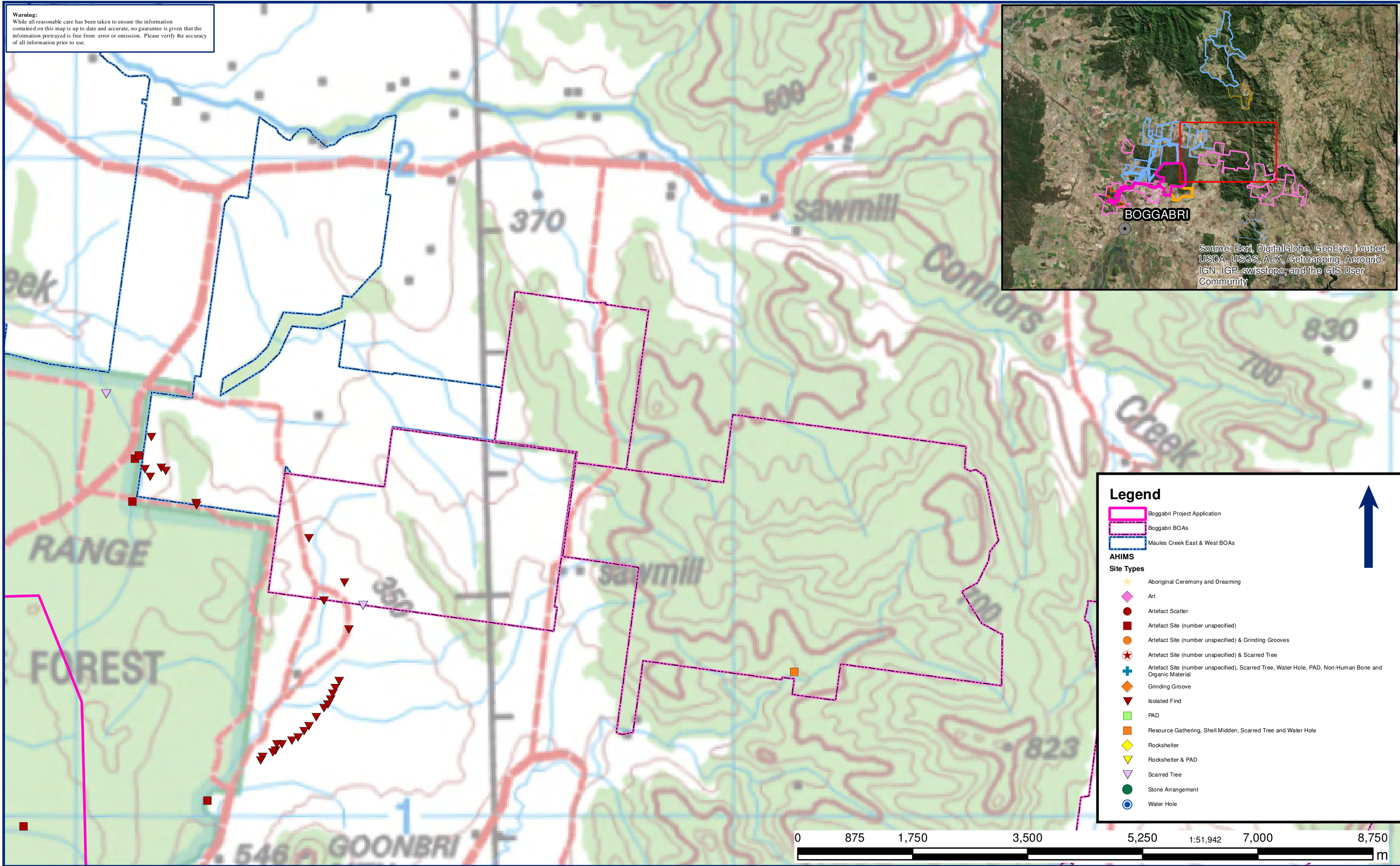


FIGURE 6: MAPSHEET 3 | LOCATION : **BTM COMPLEX** | DATUM:GDA 1994 | DATE : **18/07/2014** | VERSION (PLAN BY): A A3 (jeremy.hill) | **Copyright:** This document and the information shown shall remain the property of RPS Australia East Pty. Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited

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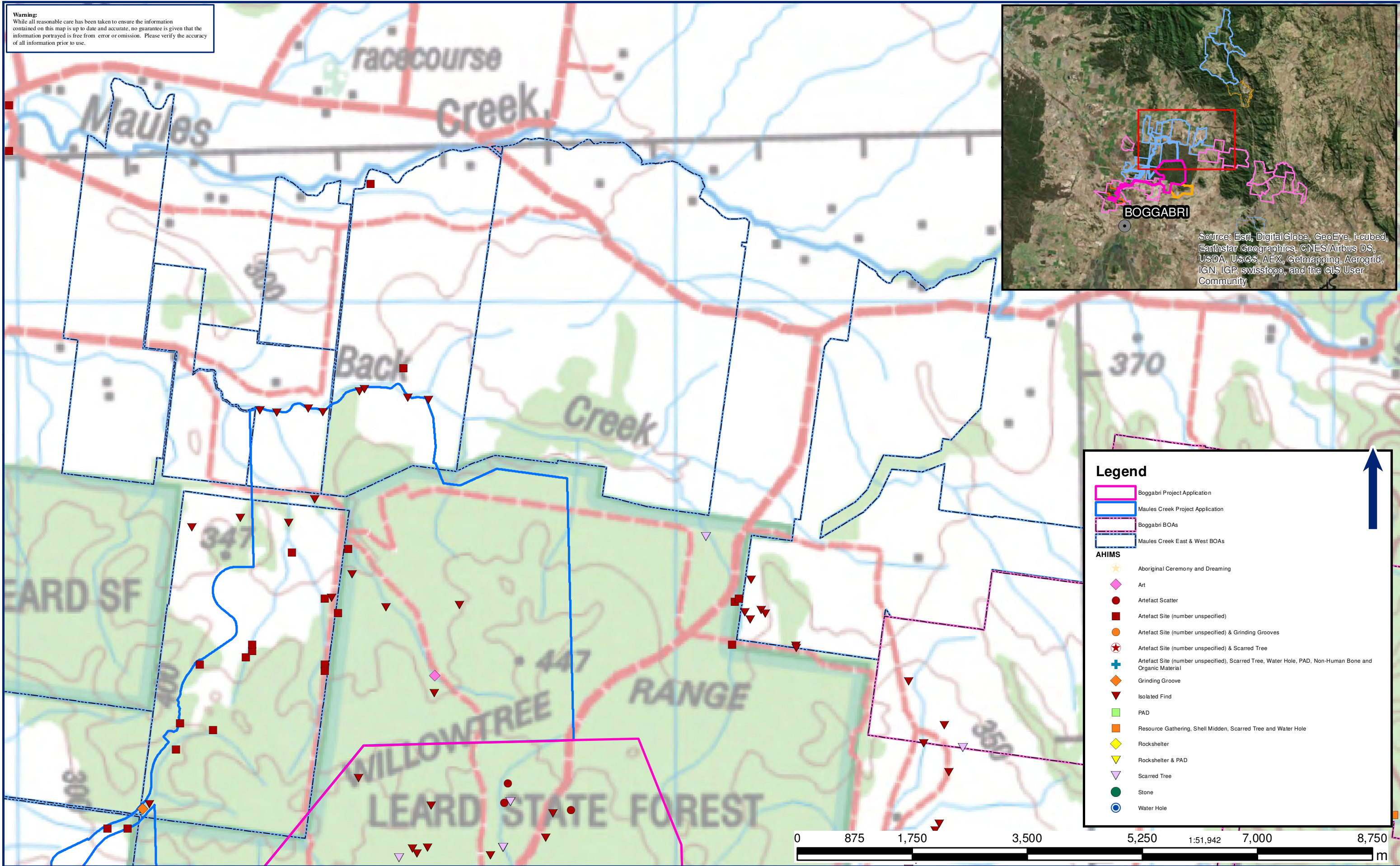


FIGURE 7: MAPSHEET 4

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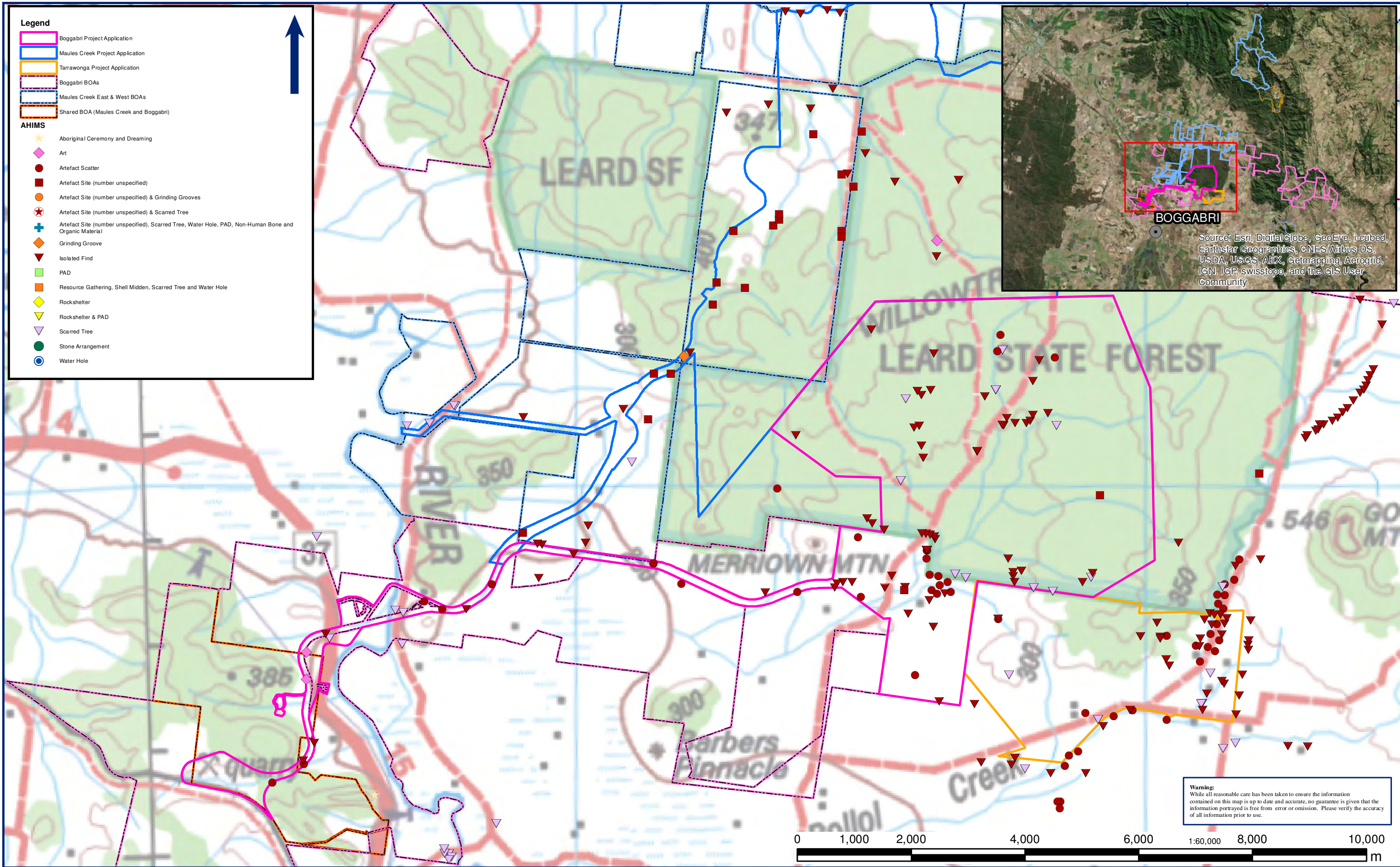


FIGURE 8: MAPSHEET 5

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PURPOSE: HERITAGE

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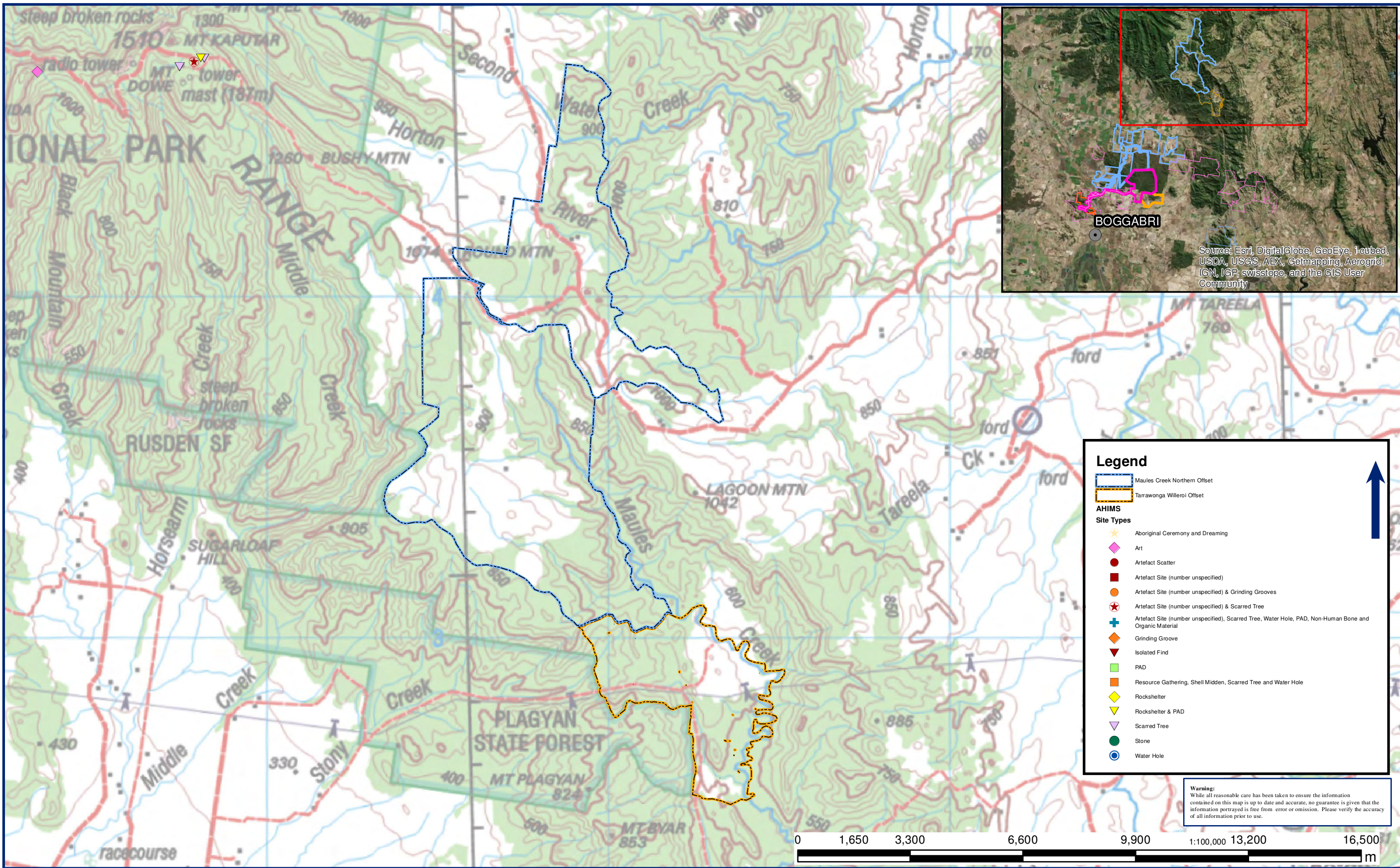


FIGURE 9: MAPSHEET 6

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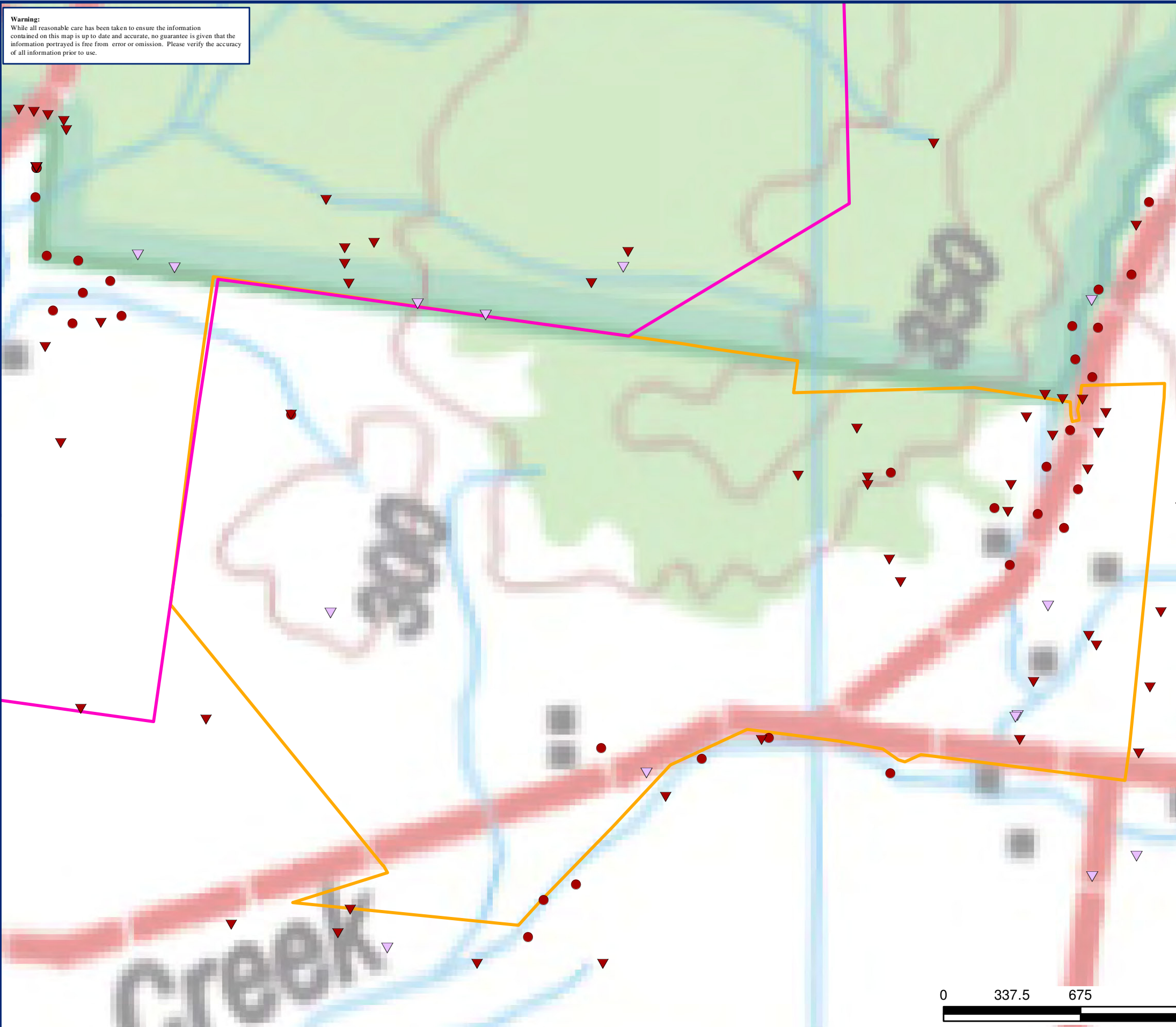
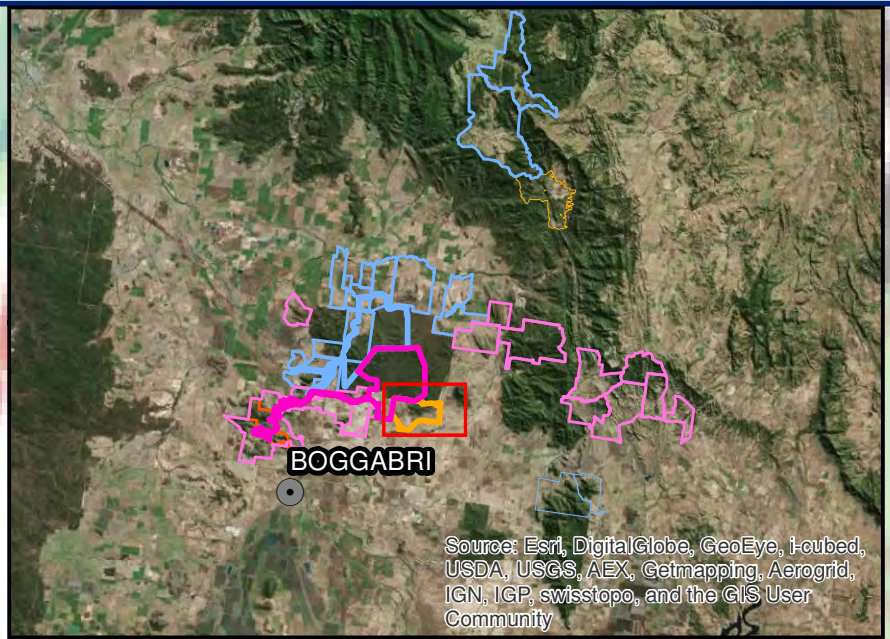
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Legend

- Boggabri Project Application
- Tarrawonga Project Application

AHIMS

Site Types

- ★ Aboriginal Ceremony and Dreaming
- ◆ Art
- Artefact Scatter
- Artefact Site (number unspecified)
- Artefact Site (number unspecified) & Grinding Grooves
- ★ Artefact Site (number unspecified) & Scarred Tree
- + Artefact Site (number unspecified), Scarred Tree, Water Hole, PAD, Non-Human Bone and Organic Material
- ◆ Grinding Groove
- ▼ Isolated Find
- PAD
- Resource Gathering, Shell Midden, Scarred Tree and Water Hole
- ◆ Rockshelter
- ▼ Rockshelter & PAD
- ▽ Scarred Tree
- Stone Arrangement
- Water Hole



FIGURE 10: MAP SHEET 7 | LOCATION : **BTM COMPLEX** | DATUM:GDA 1994 | DATE : **18/07/2014** | VERSION (PLAN BY): A A3 (jeremy.hill) | Copyright: This document and the information shown shall remain the property of RPS Australia East Pty. Ltd. The document may only be used for the purpose for which it was supplied and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited

PROJECTION: GDA 1994 MGA Zone 56 | PURPOSE: **HERITAGE** | PATH: J:\JOBS\115k\115434 Gunnedah\10 - Drafting\Arcgis Map Documents\Arch\Report Figures\115434-1 Figure 10 (Mapsheet 7) 20140714 JH.mxd

3.2 Environmental Background

The purpose of reviewing the relevant environmental information is to assist in understanding the distribution of Aboriginal objects or places within the Study Area and to use this as a basis for modelling the site patterning.

Geology and Soils

Aboriginal people often made stone tools using siliceous, metamorphic or igneous rocks and therefore understanding the local geology can provide important information regarding resources in the Study Area. The nature of the stone exploitation by Aboriginal people depends on the characteristics of the source, for example whether it outcrops on the surface (a primary source), or whether it occurs as gravels (a secondary source) (Doelman et al. 2008). The purpose of the following summary is to provide an indication of the available raw materials for stone tool manufacture which would have been available to past Aboriginal people. The soil descriptions in the area can be an indication of the presence of Potential Archaeological Deposit (PAD). The following summaries do not replace more detailed geological and soil studies. The BOAs are located on the Liverpool Plains, Pilliga, Upper Darling Castlereagh-Barwon, Kaptur and Peel landscapes (Mitchell 2002) (**Figure 11**).

The Liverpool Plains geological landscape is characterised by three major areas: flood plains, swamps and lagoons and basalt caps. The floodplains consist of Quaternary alluvial plains over tertiary basalt caps and the swamps consist of Quaternary fluvial sediments. Areas with higher relief usually consist of basalt caps overlain with Jurassic quartz sandstone. Soils include stony black or red brown loam and clay loams on the basalt caps. The floodplain's soils include deep black and brown cracking clays and alluvial soils. Soils in the swampy areas include grey clays (Mitchell 2002:10 & 11)

The Pilliga geological landscape consists of three major areas, which includes stony ridges; low cliffs and lower out washed slopes. The ridgelines consist of Jurassic quartz sandstone with conglomerate, shale and interbedded basalt. The low cliff faces consist of sandstone and the lower slope areas consist of sandy soils derived from the sandstone cliffs. Soil landscapes along the ridgelines include shallow sandy soil profiles. The low cliffs and out washed areas have clay subsoils over laid with sandy soils (Mitchell 2002:12 & 13).

The Upper Darling Castlereagh-Barwon geological landscape consists of quaternary alluvial sediments usually consisting of grey silt, cracking clays and red-brown sandy soils. There is some evidence for Holocene alluvial sediments along stream channels (Mitchell 2002:54 & 58).

The Kaptur geological landscape consists of tertiary basalt outcrops with shallow brown loams. The basalt overlies Permian and Triassic quartz sandstone, conglomerate and coal measures. Trachyte is located in areas in the north of the BOAs. Soils in these areas include shallow stony red-brown loam and thin brown loam. These overlie clayey loams (Mitchell 2002:75).

The Peel geological landscape includes carboniferous sandstone, conglomerate, rhyodacite and tuff. Other sedimentary and metamorphic rocks also characterise this geological unit. Soils in these areas include sandy loams and colluvial deposits with clay subsoils (Mitchell 2002:76 & 77).

Topography and Hydrology of the Offset and Biodiversity Areas

The purpose of the following summary is to provide an indication of the hydrology which may have been available to Aboriginal people in the past.

A number of factors influence Aboriginal occupation of an area, including landscape features such as ridges, flat elevated areas and rock shelters and ease of access to those landscape features. In addition, cultural

activities, such as corroborees and initiations may have taken place at certain locations in the landscape, while other locations may have been considered mythological places.

The Namoi River is the major river in this area. It is fed by smaller rivers and creeks such as Maules, Back, Whiskey, Goonbri Creek, Cox Creek, Stewarts and Gins Gully, the Slush Holes and Henrendi Lagoons. Numerous lower order tributaries of these creeks and rivers that run through the Study Area would have provided a source of permanent fresh water, making the BOAs suitable for Aboriginal occupation. The higher order tributaries, located in the upper slope catchments, would have been steeper and harder to traverse. The higher order tributaries and major rivers tend to be located in the valley flats and flood plains, whereas the first and second order tributaries tend to originate in ridgelines and slopes. A large number of Aboriginal sites (all site types) is located in the valley flat areas. The flood plains would have been easier to traverse and therefore have more evidence of occupation.

The Leard State Forest has numerous ridges, including the Willow Tree Range. Ridgelines typically have sandstone pagodas, which when eroded, can create rock shelters. Ridgelines were also sometimes used as sites for Aboriginal ceremonial activities.

Flora and Fauna

The purpose of the following summary is to provide an indication of the types of flora and fauna which may have been available, for sustenance and raw material resources, to Aboriginal people in the past. It is based on Mitchell's *Description for NSW Landscapes* (2002). The BOAs are located in the Liverpool Plains, Pilliga, Upper Darling Castlereagh-Barwon, Kaptur and Peel landscapes (Mitchell 2002).

The Liverpool Plains landscape is characterised by white box, Cypress pine, rough barked apple, broad-leaf hopbush trees and grasses along ridgelines. Along the plains, windmill, plains, blue and myall grasses exist. White, yellow and bumble box trees exist on the plains and red river gums, river oaks and common reeds populate streams (Mitchell 2002:10 & 11). The Pilliga landscape is characterised by a large variety of eucalyptus trees, including iron bark and mallee, Cypress pines and acacia trees. A shrubby understorey also includes mint bush and spider flowers, blue lilies and rock ferns. The northern portion of this landscape consists of a large variety of box eucalypts, rosewoods and oak trees (Mitchell 2002:12 & 13).

In the Upper Darling Castlereagh-Barwon landscape river gums, coolabahs and river paper barks occur close to rivers. Floodplains are scattered with black, yellow and bumble boxes, rough barked apple trees, rosewoods and grasses (Mitchell 2002:58). The Kaputar Landscape is characterised by a large variety of eucalyptus trees and angophoras, with little to no understorey or grasses (Mitchell 2002:75). The Peel landscape is characterised by a large variety of eucalypts, casuarinas and Cypress pines (Mitchell 2002:76 & 77).

A number of plants have been identified in the region which had Aboriginal uses and are briefly summarised below based on McKerney and White (2011). The Gomeri plant name is followed by the common name in brackets.

- Dhiil (Wilga) – Medicinal use including pain relief and for sore eyes
- Gidjiirr (Wattle) – Inner bark used for rope or twine and resin used as cement for implements and construction of shelters. Medicinal use includes use of gum for treating diarrhoea
- Buubiyala or Gii (Waterbush) – Fruit is edible and used to treat ailments
- Gudiebah (Euraba bush or Quinine tree) – Medicinal uses of bark include treatment of diabetes, diarrhoea, fever, snake bite; latex used for sore throats and fever. Bruised stems and leaves are used to stupefy fish.
- Wudhugaa (Tarvine) – Roots are edible.

- Bibil (White box) – Bark used for making implements and carrying containers. Young roots may be roasted and eaten, while nectar can provide a sweet drink. The plant gum has medicinal uses as well as being used as glue or for tanning animal hides.

The vegetation communities in the region provide habitats for a variety of animals and potential food and raw material sources for Aboriginal people. Typical animals inhabiting this vegetation community include kangaroos, wallabies, sugar gliders, possums, echidnas, a variety of lizards and snakes, birds, as well as rats and mice (Cumberland Ecology 2011:3.25, Parsons Brinckerhoff 2010:96-98, Resource Strategies 2011:35). The bones of these animals have been recovered from excavations of Aboriginal sites suggesting that they were sources of food (Attenbrow 2003:70-76), although the hides, bones and teeth of some of the larger mammals may have been used for Aboriginal clothing, ornamentation, or other implements.

DRAFT

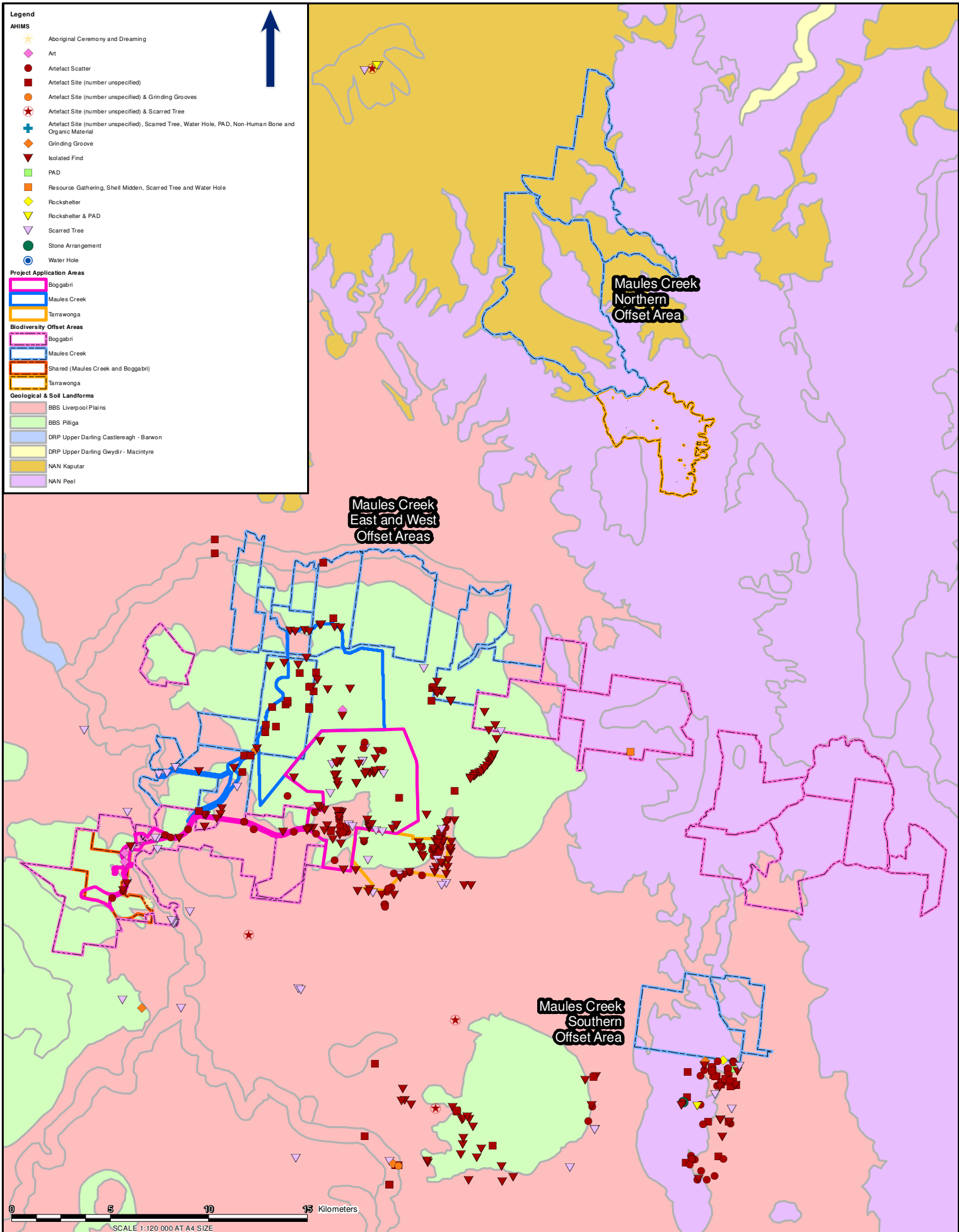


Figure 11: Geological and Soil Landscapes

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex

DATUM: GDA94
PROJECTION: MGA Zone 56

JOB NO.: 115434-1

Data Sources:
Bing Maps 2011

PURPOSE: Heritage

Technician: Natalie Wood Date: 19/08/2014

CLIENT: Parsons Brinckerhoff

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Climate

About 18,000 years ago climatic conditions began to change, affecting the movement and behaviour of past human populations in their environments. During this time, notably at the start of the Holocene (11,477 years ago), the melting of the ice sheets in the Northern Hemisphere and Antarctica caused sea levels to rise, with a corresponding increase in rainfall and temperature. The change in climatic conditions reached its peak about 6,000 years ago (Lambeck, Yokoyama and Purcell 2002; Short 2000:19-21). Up until 1,500 years ago, temperatures decreased slightly before stabilising about 1,000 years ago. Consequently, for the past 1,000 years, the climate in the locality of the Study Area would have been much the same as the present day, providing a year round habitable environment.

Average temperatures in the Gunnedah Basin range from a maximum of 32.0 degrees Celsius in January to a minimum of 4.7 degrees Celsius in July. January is the wettest month with an average rainfall of 84.0 mm and the driest is August with 34.9 mm (Australian Bureau of Meteorology 2010).

3.3 Archaeological Literature Review

A number of investigations have been undertaken in the archaeological study area. Summaries of the investigations undertaken for the BTM complex are presented first, followed by other relevant studies.

Insite Heritage (2010). Boggabri Coal Project Aboriginal Cultural Heritage Assessment Report

Insite Heritage recorded 62 artefact sites during the Aboriginal Cultural Heritage Assessment and salvage, with archaeological excavation occurring at BC35 and BC41. Grader scraping was also used with soil retrieved from scrapes being sieved and checked for artefacts. Surface artefacts were observed on the lower slopes and slope bases in both the Leard State Forest and the Baan Baa hills. Soil profile modification was noted throughout the survey area. The potential for PADs was considered high in the Leard State forest particularly in the upper slope sections, where disturbance was considered to be less likely than on the lower slopes. The investigation identified 62 sites (artefact scatters and isolated finds), from which 453 artefacts were recorded, all of which were complete or broken flakes. Artefacts were manufactured from mudstone, tuff and silcrete. Concentrations of artefacts were observed in the lower drainage areas of the Leard State Forest and Baan Baa range, the spatial distribution of artefacts then became sparser with fewer sites found on the plain. Fourteen scarred trees, a possible stone cairn and one possible grinding groove site, in addition to the artefact sites, brought the total of sites in the study area to 78. It was noted that site preservation was varied throughout the study area, due to the eroded soil depths and previous land use practices (Insite Heritage 2010).

ARAS (2005). Boggabri Coal Project Aboriginal Cultural Heritage Assessment Report

An Aboriginal site survey was conducted in the existing Boggabri Coal Mine (ARAS 2005). The survey resulted in the documentation of 30 open artefact scatters, 26 isolated finds and four scarred trees. Four sites were considered to have subsurface deposit potential, BC38, BC43, BC46, BC54. BC16 and BC50-52 were considered to have moderate significance, while a high significance rating was attributed to sites BCV 34, BC38 & BC54. The assessment of significance was based on artefact quantities and densities. It was recommended that 35 sites be subject to Section 90 Consent, including: Sites BC1-16 within the mine footprint, BC34 adjacent to mine footprint and BC38 & BCHR 1-8 by the haul road, amongst others. Scientific significance assessment identified that open sites were unlikely to be stratified, artefacts would be confined to the bioturbation and that artefacts had been subjected to surface dispersal, down-slope movement and differential exposure or burial by bioturbation processes. It was considered that the exposure of artefacts was an ongoing process and as such, it was likely that more artefacts would be revealed by erosion. It was also noted that the dating of sites was unlikely to be possible.

Kayandal (2011). Tarrawonga Coal Project. Aboriginal Cultural Heritage Assessment.

Fifty-seven sites were identified within the Tarrawonga Mine. An additional four sites had been previously recorded at the mine. These sites comprised artefact scatters, modified trees and isolated artefacts. The landform types in the subject area were identified and this was used to correlate the frequency of sites. Through management and mitigation measures, it was advised that where avoidance of known Aboriginal sites was not practicable, sites should be subject to baseline recordings in consultation with the RAPs. Baseline recording of sites would include completing an Aboriginal Site Impact Recording Form (or equivalent) and submitting it to AHIMS. Culturally modified trees subject to direct disturbance were to be salvaged and a suitable location for their storage would be managed in consultation with the RAPs.

AECOM (2010). Aboriginal Archaeological and Cultural Heritage Impact Assessment for the Maules Creek Coal Project

Hansen Bailey, on behalf of Aston Resources Pty Limited, engaged AECOM to conduct an Aboriginal archaeological and cultural heritage impact assessment for the Maules Creek Coal Project. Prior to the assessment being undertaken, 25 known Aboriginal sites were registered within the complex and nineteen RAPs were consulted.

A desktop assessment was undertaken of the Maules Creek Coal Project and it found that artefact sites, scarred trees, burials and quarries were likely to be present in the Maules Creek mine. A pedestrian field survey was conducted subsequent to the desktop assessment over a period of 18 days in August and October 2010 with approximately 85% effective coverage. A total of 103 Aboriginal sites was recorded during the survey, including: 49 artefact scatters, 28 isolated finds, 21 scarred trees and three grinding grooves. A recent assessment; however, has identified that the scars on the trees within the project boundary were not of cultural origin and therefore have been listed as not valid in AHIMS (Global Soil Systems 2014). Fifty-seven of those sites were not at risk of impact. The report identified five heritage values in the Study Area:

- (1) Aboriginal site patterning concluded that occupation was evident close to rivers and creeks,
- (2) Occupation was evident in the mid to upper slopes of the Namoi River catchments,
- (3) An artefact site in the Leard State Forest had a variety of stone tool technologies,
- (4) Grinding tools were found at three different sites, and
- (5) A large number of scarred trees was identified (although this has now been superseded by the recent assessment (Global Soil Systems 2014)).

As a result of the survey, 21 sites were given a high significance rating. Of these, 13 were scarred trees (although these have subsequently been identified as not being cultural in origin), six were artefact scatters and two were grinding stones. Nineteen sites were given a moderate significance rating. These included grinding stones and artefact scatters. The remaining sites, isolated finds and artefact scatters were given a low significance rating.

The report concluded that 51 sites were at risk of harm by the mining development and recommended that these sites be subject to surface collections, and salvage excavation.

Further assessment of the artefact assemblage identified that the Maules Creek sites exhibit low to moderate cultural significance on a local level, due to the diverse range of activities present at sites and do not exhibit any significance on a regional or national level. This is attributable to high levels of artefact attrition, average richness, and no evidence for intact stratigraphy or sub-surface cultural change (Clarkson 2014:ii-iii).

Goorie Aboriginal Cultural Heritage Consultancy (1994). An Investigation of Aboriginal Sites and Relics for the Proposed Upgrading of Barraba Track – Mount Kaputar National Park

Goorie Aboriginal Cultural Heritage Consultancy Terry Griffith was engaged by Integrated Site Planning to assess the proposed upgrading of the Barraba – Mount Kaputar track. The predictive model concluded that quarries, artefact scatters, scarred trees, bora rings, and grinding grooves would be identified along the track. The visual inspection showed that the track had been previously disturbed and all Aboriginal sites (known and unknown) had been destroyed or partially destroyed. No new sites were identified during the visual inspection. Goorie Aboriginal Cultural Heritage Consultancy (1994) recommended that if unrecorded Aboriginal objects were identified then all works were to cease and the NPWS notified.

Heritage Concepts (2009). Aboriginal Heritage Study: Moree Plains Shire Council Local Environmental Plan

Heritage Concepts were engaged by Moree Plains Shire Council to prepare an Aboriginal Heritage Study that was part of the Moree Shire Plains LEP review. The heritage study comprised the entire Moree Plains Shire and aimed to identify further Aboriginal heritage to be added to the LEP. As part of the study a desktop assessment was undertaken and concluded that:

- Pleistocene occupation of floodplains was rare due to a lack of physical evidence (2009:37 & 70);
- There was evidence for the occupation of tributaries and subsistence was centred on Riverina resources;
- Occupation of ranges and plateaux was more intense, due to a higher amount of artefact densities;
- Carved trees were used to mark graves and bora grounds and were generally found within one kilometre of water sources, but averaged approximately 150 metres;
- Artefact sites usually consisted of chert, porcellanite and quartz. Artefact sites had a higher density along the ridgelines and Plateaus; and,
- The majority of Aboriginal sites were located within 100 metres of water (2009:37 & 39).

Gunnedah Community Members (2010). Kelvin Community Conservation Area Zone 2 BBS – Regional Assessment Continued

The Gunnedah Community Members were engaged to assess the Aboriginal sites within the Kelvin Area Zone 2, which was covered on foot. The assessment identified scarred trees and artefact scatters. The report recommended that further assessment be undertaken, due to the inability to access some areas.

Knight, T (2010). Stepping Stones to the Sky: Archaeological Perspectives on the Cultural Significance of the Weddin Mountains in Recent Prehistory. MPhil Thesis.

This thesis focussed on the connections of notable landscape features to Aboriginal spirituality in the Weddin Mountains. The thesis involved a cultural study of landscapes and their tie to Aboriginal cosmology, as well as field work. The study area for Knight's thesis was about 200 kilometres to the south of the BTM Complex and BOAs. Knight's study concluded that carved and scarred trees were highly important as they marked burial mounds and that the spirit of an initiated man would climb the carved tree (2010:88).

The thesis also created a predictive model arguing that the flat areas surrounding Weddin Mountain would be occupied more intensely than the flood plains and the mountain itself. Knight argued that the flood plains would be occupied only after flooding events and the only Aboriginal site types to be identified in that area would be scarred trees and hearths in elevated areas. Knight also argues that in drier times occupation would occur on a permanent waterhole to permanent waterhole basis. This occupation style could occur up to 80 kilometres inland from a flowing river and was dependent on two things: traditional knowledge of the availability of water and food.

Knight's fieldwork included excavations and survey on the Weddin Mountains itself and recorded 221 sites, of which only four site types were identified: artefact sites, scarred trees, rockshelters and stone arrangements. The excavation identified 47 artefacts. The quartz artefacts and production of quartz blades were considered a high level of tool technology in the area. The field survey identified the remainder of the sites and the site pattern is listed below:

- Rockshelters had no surface evidence and little PAD;
- The flat areas surrounding Weddin Mountain would have been suitable for occupation;
- Creek banks would have been occupied after flood waters receded;
- Ninety-one percent of sites were located on toe slopes, indicating occupation close to flood plains;
- Ninety-two percent of sites were located within 120 metres of a water source; and
- Forty-one percent of sites on Weddin Mountain contained quartz artefacts and less on the lower areas (2010:153, 160, 169-178, 229).

OzArk Environmental & Heritage Management Pty Ltd (2011). Environmental Overview of the Iron Bridge Replacement Project.

OzArk Environmental and Heritage Management Pty Ltd were engaged by the NSW Roads and Traffic Authority (RTA) to conduct an environmental overview, which included a heritage assessment for the Iron Bridge Replacement Project. The heritage assessment was conducted in two study areas, the western (study area one) and the eastern (study area two) sides of the Namoi River. A visual inspection of study area one identified four scarred trees located on a flood plain. These were in addition to four other previously recorded sites. Three of the four scarred trees were white box eucalypts and the other was a red gum eucalypt. NR-ST1 was a white box tree containing a single oval southwest facing scar with no axe marks. NR-ST2 contained one cultural scar and one possible cultural scar. The cultural scar was north-east facing and the possible scar was east facing, but it was an irregular shape. NR-ST3 consisted of a north facing oval scar on a white box eucalypt and NR-ST4 consisted of a north facing oval scar on a red gum eucalypt. These trees were subject to an archaeological assessment, but not assessed by an arborist.

The visual inspection of study area two did not reveal any Aboriginal objects or places. No scarred trees were located on the eastern side of the Namoi River, but eight were identified on the western side of the Namoi River. The report recommended that RTA determine if an AHIP was required for the proposed project to proceed.

AECOM (2012). Aboriginal Due Diligence Assessment for Proposed Boreholes within EL7435

AECOM was engaged by Hansen Bailey to conduct an Aboriginal due diligence assessment for 39 boreholes at Goonbri NSW. A desktop study included an AHIMS search, which showed that one Aboriginal site was located within the study area. The desktop study also concluded that artefact scatters and isolated finds were the most common site type and there was potential for scarred trees and grinding grooves. AECOM also noted that quartz was the dominant raw material and rivers were sensitive landforms. The visual inspection identified seven boreholes with archaeological constraints. These were moved and the relocated borehole was re-inspected. The reinspected areas did not have any archaeological constraints.

Landskape Natural and Cultural Heritage Management (2012). Vickery Coal Project Aboriginal Cultural Heritage Assessment.

Landskape Natural and Cultural Heritage Management were engaged in 2012 by Whitehaven Coal Ltd to conduct an Aboriginal cultural heritage assessment for the Vickery Coal Project. A desktop study revealed that extensive Aboriginal occupation occurred in the area. The report predicted the presence of artefact scatters in the study area. Fresh water shell middens were predicted to occur along the Namoi River, while

scarred trees and burial sites were not predicted to be in the study area due to the extensive vegetation clearing and acidic soils. Rock shelters, art sites, axe-grinding grooves and quarries were not predicted to be in the area due to a lack of sandstone outcropping.

The assessment identified 35 new AHIMS sites (20 artefact scatters and 15 isolated finds) in addition to five previously recorded sites. The report concluded that 24 sites would suffer a total loss of value and eight sites would have partial loss of value due to mining impact. It was recommended that these 32 sites should be salvaged prior to mine works proceeding.

3.3.1 Synthesis of Archaeological Background

Surface artefacts are the most common site type in the region and have been identified in association with watercourses. Scarred trees have also been frequently identified, although further assessment of some of these trees by an arborist has shown that they are not culturally scarred trees. The next section will draw on the desktop information to form the framework from which the archaeological value assessment is conducted.

DRAFT

4.0 Archaeological Values Methodology

The information in archaeological background has been synthesised to produce a model of site patterning in the archaeological study area. The model of site patterning has been used to assess archaeological values for the BTM Complex and BOAs and to identify ways to conserve and enhance archaeological value.

In order to discuss the site patterning, the Study Area has been split into two areas: the Namoi River Landscape (Alluvial Plain and Associated Hillocks); and the Lower Nandewar Range (Maules Creek Northern and Boggabri Eastern Offset Areas) (**Figure 12**).

4.1.1 Namoi River Landscape (Alluvial Plain and Associated Hillocks)

This area is characterised by the alluvial plain associated with the Namoi River. Dominant vegetation types include the Western Slopes Grasslands and the Western Slopes Dry Sclerophyll Forests. Elevation of the alluvial plain ranges from 230m-250m Australian Height Datum (AHD), and associated hillocks from 250m-450m AHD. This area contains the BTM Complex and Vickery Mine; as such this area has been subject to intensive archaeological survey. In addition, the Kelvin State forest was surveyed by the Gunnedah Community Members group.

Artefact Sites

Artefact sites (and their variants) are the most common type of Aboriginal site in the region. These sites occur close to major rivers, ephemeral creek lines, valley flats and lower slopes. A weaker site patterning for artefact sites is located along ridgelines and plateaux, as well as steep gullies. Artefact sites located in steep gullies are usually associated with grinding grooves. The majority of artefact sites are located within 200 metres of a water source. Artefact sites can represent base camps, where Aboriginal people camped for longer periods of time and which they used as a base from which to make expeditions further afield (Attenbrow 2006:217-247). At locations that were inhabited for longer periods, a range of activities would have been undertaken. This includes food preparation, skin working, tool manufacture and/or maintenance, as well as other campsite activities. Archaeological evidence for such activities is sometimes preserved in the usewear, or residues on stone tools, or can be inferred from the types of stone tools present and/or features on flakes.

Activity locations/transit camps, by contrast were occupied short term (day/s), as part of a mobile hunter-gatherer strategy and may have been used when moving between base camps or resource areas. Activities undertaken at these camps were less varied and often specific to the exploitation of a particular resource. The archaeological evidence that distinguishes base camps from transit camps may include size (area in square metres) as well as the diversity, richness and nature of artefact types and faunal remains. Meehan (1988:179-80) identified that base camps had a wider range of food species, but may not have the remains of whole animals since these may have been partially consumed at dinner-time (transit) camps. Nelson (1991:79-81,85) asserted that base camps are likely to have evidence for particular activities and potentially a greater diversity and richness of artefacts.

The spatial distribution of artefact sites appears to indicate that locations close to water courses were commonly used as base camps. Artefact sites along ridges, plateaux and steep gullies are, potentially, evidence for activity locations and transit camps.

Scarred and Carved Trees

The AHIMS data shows that scarred trees are generally located close to major rivers, although there is some evidence for scarred trees along low and mid slopes associated with the upper catchment (1st and 2nd order

tributaries). Generally, scarred trees on average are located within 200 metres of a water source. The lengths of scars average one metre long and are located approximately 350 metres AHD on average. On the basis of the AHIMS data, scarred trees are three times more likely to occur near rivers than in the upper catchment. Scarred trees are the only site types to be located within 200 metres of the Namoi River.

On the basis of previous archaeological works, carved trees, if present in the landscape, are likely to be burial markers. These have been previously located close to permanent water sources. No carved trees were identified during the AHIMS searches. Two carved trees were noted in Gunnedah, approximately 40 kilometres to the south of the BTM Complex and BOAs and those scarred trees were identified as burial markers (Etheridge 1918).

It should be noted that “most ‘authentic’ Aboriginal scarred trees are now well over a hundred years old and are becoming increasingly less commonplace as the host trees age, die or are removed. As these older trees disappear, traditional and historical scars are being replaced in the landscape with a wide range of natural and incidental wounds on both old and young trees which are often mistaken for evidence of Aboriginal activity.” As such, some scarred trees recorded with AHIMS are not derived from Aboriginal cultural activity and this should be considered in the interpretation of Aboriginal landscape use.

Grinding Grooves

Grinding grooves in the region are located in steep gullies, where suitable sandstone platforms occur, but are also associated with a watercourse, as water is essential to the mechanics of the grinding and sharpening process. These sites generally occur on valley bottoms at lower altitude (240 – 460 metres AHD), although, some instances of this site type are seen further up the catchment on the mid to upper slopes. There is weaker patterning for these site types to be located mid to upper slope in steep gullies with a water source.

Rockshelters

This site type in the region is located along steep gullies at higher altitudes (430 – 1100 metres AHD) where suitable sandstone pagodas or boulders outcrop. Some of these sites contain PADs, artefacts or art.

Ceremonial Sites

Few ceremonial sites have been recorded. However, those present are situated on ridgetops, upper slopes and mountaintops. One ceremonial site was identified during the AHIMS search (AHIMS Site 20-4-0010) and the site card was obtained from OEH. The site card revealed three additional cultural areas. These areas included:

- Bullabalakit –connected to death and was situated on a small hill approximately three kilometres to the north of AHIMS site 20-4-0010. The small hill is raised above the Namoi River flood plain.
- Tanguilda –located five kilometres to the east of AHIMS site 20-4-0010. It was situated on a small hill that rises above the Namoi River flood plain. This site has a connection to mussels.
- Einerguendi –located six kilometres to the north of AHIMS site 20-4-0010. It was situated on a small hill that rises above the Namoi River flood plain. This site has a connection to women.

AHIMS site card 20-4-0010 was the only obtained site card to reveal culturally sensitive areas. These areas were mapped and are located in **Appendix 4**. That map was produced during Workshop One for RAP comment. The cultural sites were located on the tops of small hills, adding to the site patterning of ceremonial sites.

4.1.2 Patterning of Aboriginal Sites in the Namoi River Landscape

Due to the number of investigations undertaken in the Namoi River landscape, the patterning of Aboriginal sites in relation to landforms can be identified. A summary of site type to landform is provided in **Table 5**.

Table 5 Summary of Archaeological Site Types and Landforms

Site Type	Landform								
	Major Waterways	Creeks	Steep Gullies	Flats	Lower Slopes	Mid Slopes	Upper Slopes	Ridges/ Plateaus	
Artefact Scatters									
Isolated Finds									
Scarred Trees									
Grinding Grooves									
Rockshelters									
PADs									
Art									
Ceremonial									
Key									
Likely present in Landform					Occasionally present in landform				

Lower Nandewar Range Landscape

The Lower Nandewar Range Landscape comprises the Maules Creek Northern and Eastern Boggabri Offset areas and incorporates the lower reaches of the Nandewar Range. These areas are dominated by slopes and typical elevations are between 450m and 900m AHD, although some flatter areas occur between rises. Dominant vegetation types include the North-West Slopes Dry Sclerophyll Woodlands and Temperate Montane Grasslands. These areas have not been surveyed in any detail that has been published and therefore there is little to no available archaeological data available for them.

- Legend**
- AHIMS**
- ★ Aboriginal Ceremony and Dreaming
 - ◆ Art
 - Artefact Scatter
 - Artefact Site (number unspecified)
 - Artefact Site (number unspecified) & Grinding Grooves
 - ★ Artefact Site (number unspecified) & Scarred Tree
 - ⊕ Artefact Site (number unspecified), Scarred Tree, Water Hole, PAD, Non-Human Bone and Organic Material
 - ◇ Grinding Groove
 - ▼ Isolated Find
 - PAD
 - Resource Gathering, Shell Midden, Scarred Tree and Water Hole
 - ◆ Rockshelter
 - ◆ Rockshelter & PAD
 - ▽ Scarred Tree
 - Stone Arrangement
 - Water Hole
- Project Application Areas**
- Boggabri
 - Maules Creek
 - Tarrawonga
 - Boggabri
- BOA Locations**
- BOAs in the Lower Nandewer Range Landscape
 - BOAs in the Namoi River Landscape

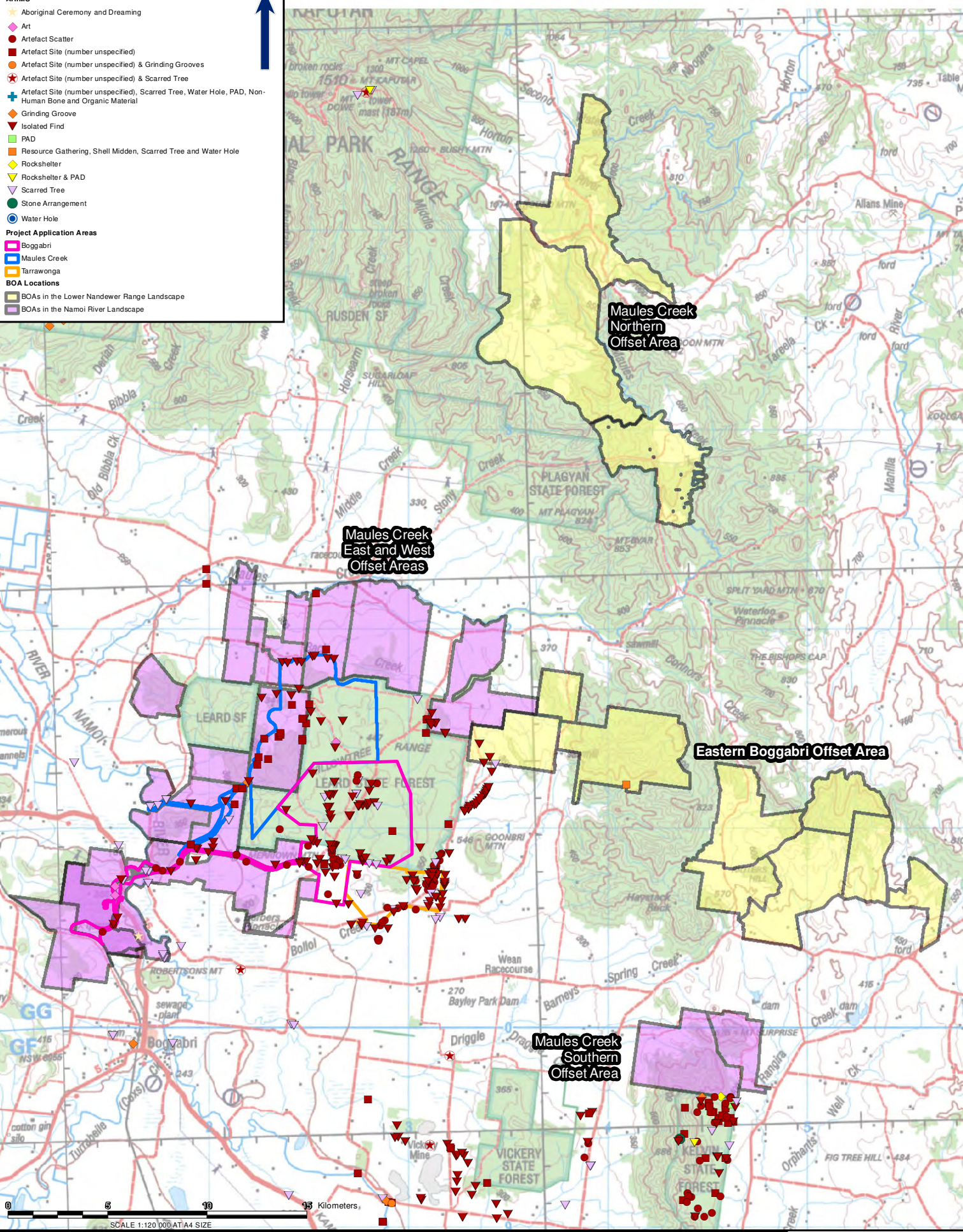


Figure 12: BOAs in the Lower Nandewer Ranges and the Namoi River Landscapes

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94
JOB NO.: 115434-1	PROJECTION: MGA Zone 56
PURPOSE: Heritage	Data Sources: Bing Maps 2011
Technician: Natalie Wood	Date: 19/08/2014

CLIENT: Parsons Brinckerhoff

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5.0 Archaeological Value Assessment Results

The interpretation of landscape in the context of archaeological research relies upon data and survey coverage across large areas. Different landscapes were used by Aboriginal people in different ways, in order to exploit their resource potential most effectively; topography, hydrology, vegetation and landform play a role in how a landscape was occupied (Ridges 2006). Section 3 established that two landscapes are present in the archaeological study area, the Namoi River landscape and the Lower Nandewar Range landscape. Each of these landscapes has its own features (**Table 6**), which were likely to have been used or occupied by Aboriginal people in different ways. While it has been demonstrated that the Namoi River landscape was regularly occupied, it is as yet unclear whether it was occupied because of its proximity to the Namoi River, or whether other factors such as the availability of bush foods also contributed to the occupational pattern in this landscape. More research into the availability of resources such as bush foods would contribute to a better understanding of the true archaeological value of the Namoi River landscape.

Very little is known about the Lower Nandewar Range due to the lack of data. As such, understanding the archaeological value of this landscape would be enhanced by further investigation of the Lower Nandewar Range area. The key archaeological questions that could be addressed by this are: 1) is the Aboriginal occupation pattern of the Lower Nandewar Range similar to that of the Namoi River, 2) did the different vegetation communities in the Lower Nandewar Range landscape influence the Aboriginal occupation patterns, and 3) do other natural resources present in the Nandewar Range landscape differ from the Namoi River and did this affect the manner in which the landscape was occupied.

Table 6 Archaeological Landscape Features Comparison

Environmental Features and /Data	Namoi River Landscape	Lower Nandewar Range Landscape
Elevation	230m-450m AHD	450m and 900m AHD
Vegetation	Western Slopes Dry Sclerophyll Forests /Western Slopes Grasslands	North-west Slopes Dry Sclerophyll Woodlands/ Temperate Montane Grasslands
Data Available for area	Excellent	Virtually None
Bushfood Knowledge	Reasonable	Virtually None

5.2 Conclusions from the Archaeological Value Assessment

The desktop assessment identified that many archaeological and cultural studies have been conducted within the region. It may be that during the implementation phase of the strategy that the results of other studies became available. In general the only detailed analysis of the artefacts (Clarkson 2014:ii-iii) suggests that the surface artefact assemblage in the Namoi River region is of low to medium cultural significance.

There are some gaps in the archaeological knowledge of the area and a goal of the strategy would be to undertake the collection and evaluation of information to attempt to cover some of these gaps. This would enhance the values of the BTM Complex and BOAs by contextualising the knowledge of the region.

Arising from the analysis of the archaeological background the key means of enhancing archaeological value could include:

- Better documentation of the vegetation communities and available bush foods would contribute to understanding the archaeological record in the area and therefore also to the knowledge of the archaeological value of the land in BTM Complex and BOAs; and

-
- Further investigation of the Lower Nandewar Range would contribute to understanding the regional context of the archaeological assemblages in the BTM complex and therefore enhance knowledge of the archaeological value of the BTM Complex and the BOAs.
 - Address the key archaeological questions articulated above.

DRAFT

6.0 Aboriginal Values Assessment Methodology

Conventionally, historic, archaeological and anthropological frameworks and specified criteria have been used by governments/institutions to assess the significance of places, people and events. These methods, however, do not necessarily respond to the intrinsic values in the history and culture of Aboriginal people. Conducting workshops was considered the most effective way to consult with the RAPs, in addition to mailing out information, making phone calls and receiving written feedback.

The methodology for Aboriginal consultation for the AHCS was mailed to the RAPs (7 April 2014) to allow all knowledge holders the opportunity for input into the proposed framework for consultation. The methodology adopted for this AHCS is provided below and is followed by a summary of the documentation of consultation.

6.1 Methodology for Aboriginal Consultation

The methodology for Aboriginal consultation followed the Ask First Principles and adhered to the guiding principles of the ACHCR process. Five formal opportunities for input into the strategy were provided to the RAPs as part of this AHCS process (**Figure 13**). Informal opportunities for input (written or verbal) were also provided throughout the six month process.

The first formal opportunity for input by the RAPs was to provide comment on the ACHS methodology (**Figure 13**). The second opportunity was to attend the project inception workshop (Workshop 1). The aim of this workshop was to present the project outline and methodology; not to replace the mailed methodology, rather provide another opportunity for RAPs to have verbal input into the process. The third formal opportunity for input was Workshop 2, which was intended to be an opportunity for the RAPs to contribute information about cultural values associated with the BTM complex and BOAs, as well as to make suggestions for proposed methods for offsetting impact to cultural heritage. A fourth formal opportunity for feedback was provided as part of the draft AHCS mail out and a fifth opportunity was provided during Workshop 3, which involved the discussion of the draft AHCS.

The aims of the workshops are set out below.

6.1.1 Workshop 1 Aims

This workshop aimed to present an overview of the project, outline the MCoA, identify the offset areas, present the results of the Desktop Study (Section 3.0) and provide an opportunity for RAPs to seek clarification on the project. Options for enhancing and conserving Aboriginal cultural heritage values were also documented in this session.

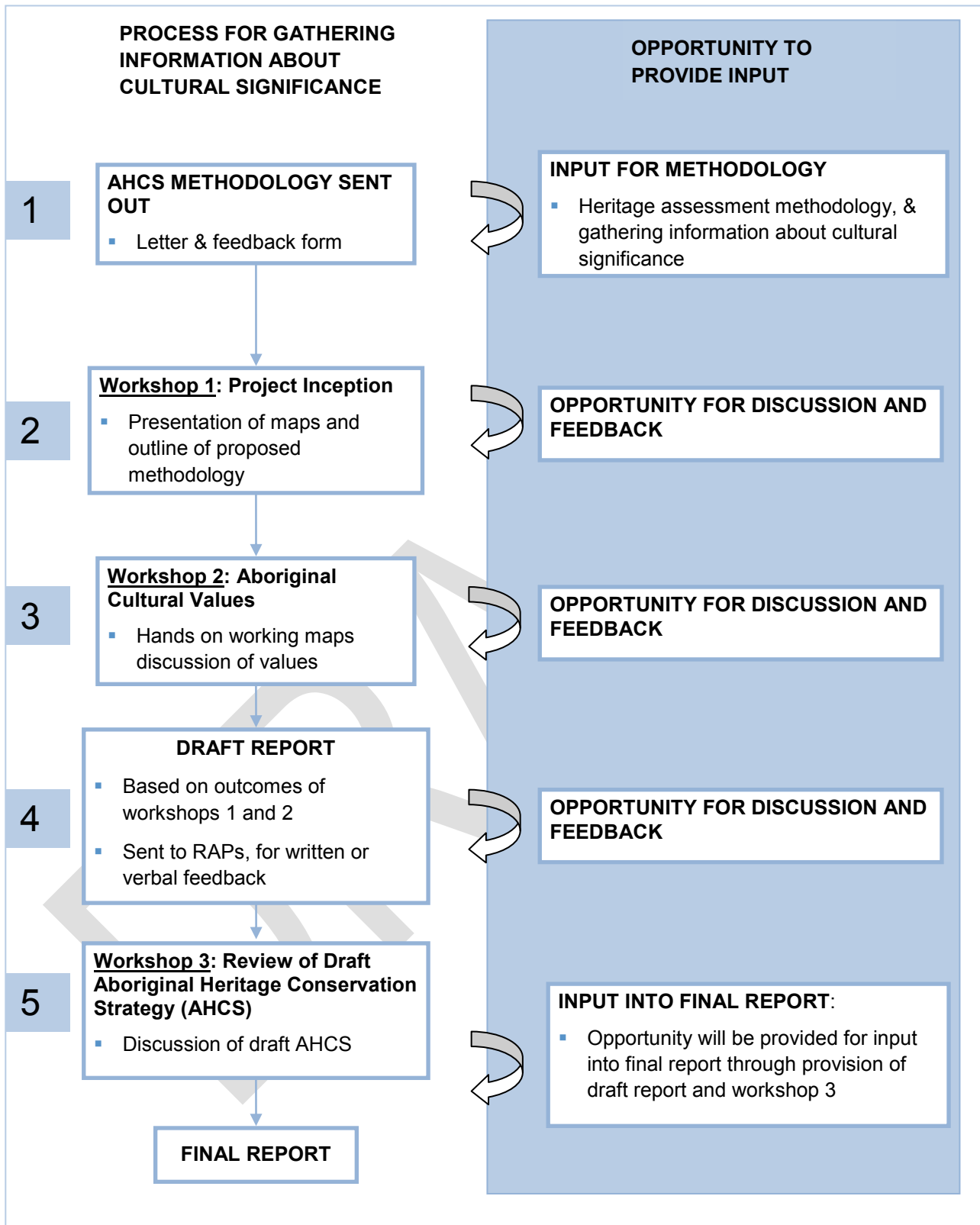
6.1.2 Workshop 2 Aims

The purpose of this workshop was to provide an opportunity for the RAPs to identify a range of options for enhancing and conserving Aboriginal cultural heritage values within the BTM Complex and BOAs. As part of this aim, specific consideration was given to the long-term management and protection of those values. Maps were provided in order to identify key landforms and key features/ values associated with those landforms.

6.1.3 Workshop 3 Aims

The aim of this workshop was to present the results of the AHCS and an opportunity to provide input into the final conservation strategy.

Figure 13 Aboriginal Consultation Process



7.0 Aboriginal Values Assessment

Consultation for this process was undertaken in accordance with the OEH ACHCRs guideline and the Australian Heritage Commission's *Ask First* guideline. The BTM Complex had already completed Stage One of the ACHCR process and was able to provide RPS with a list of identified RAPs. The identification of RAPs was drawn from government regulatory bodies which included: Registrar (*Aboriginal Land Rights Act, 1983*), relevant OEH Environmental Protection Regulation Group (EPRG) Regional Office, National Native Title Tribunal, Native Title Services Corporation Limited, relevant Catchment Management Authority, Local Aboriginal Land Council and relevant local councils.

A summary of Aboriginal consultation is provided in **Table 7** with further detail presented in **Appendix 1**. A RAP Tender Document, identifying the processes for the AHCS, was sent to the RAPs. The RAP tender document was the first opportunity for the RAPs to express interest in the AHCS. A second opportunity for participation in the AHCS was Workshop 1, which outlined the AHCS in more detail. Workshop 2, the third opportunity to participate in the AHCS, provided an opportunity to put forward conservation strategies and culturally map the BOAs. The draft report was sent to all RAPs and a 28 day review period was given (in accordance with the ACHCR process) so RAPs could comment on the draft AHCS. The review period was the fourth opportunity for the RAPs to comment on the AHCS. Following the draft report, the third workshop (and fifth opportunity) was for the RAPs to comment on the draft AHCS. The third workshop was the final opportunity for the RAPs to supply comments on the AHCS and inclusion into the final report. The table below summarises the five opportunities for the RAPs to supply comments on the AHCS.

Table 7 Summary of Aboriginal Consultation

Formal Opportunity for Input	Date	Method
RAP Tender Document	7 th April 2014	Mail
Workshop 1	14 th April 2014	Meeting
Workshop 2	11 th and 12 th June	Meeting
Responses to Draft AHCS	Yet to complete	Phone, Mail and Email
Workshop 3	Yet to complete	Meeting

7.2 Aboriginal Cultural Heritage Significance within the BTM Complex

This section draws upon three Aboriginal Cultural Heritage Impact Assessments prepared for each mine in the BTM Complex. These include AECOM (2010), Insite Heritage (2010) and Kayandel (2011). According to these previous studies, the Aboriginal cultural heritage significance across the BTM Complex is high overall. A summary of the Aboriginal values assessment and RAPs input for each of these assessments is provided below.

7.2.1 Insite Heritage (2010), Aboriginal Cultural Heritage Assessment Report for the Continuation of Boggabri Coal Mine.

This report indicates, that in the opinion of the RAPs, all Aboriginal sites are of high significance to the RAPs. Based on the view of the RAPs, the sites in the Boggabri Coal Mine provide a link to the recent past. The RAPs stated that the Leard State Forest provided a suitable area for occupation. The flora and fauna resources, in conjunction with fresh water springs, may have provided suitable habitats for animals and would therefore a suitable hunting ground - according to the study. The area also formed part of a seasonal migration pattern. The natural land formations would have created boundaries with spiritual meanings, thus increasing the cultural significance in the area - according to the RAP feedback on this assessment. Artefact sites located in the Leard State Forest were, in the opinion of the RAPs, indicative of the Leard State Forest being a highly significant cultural area.

The opinions of the RAPs is that the Leard State Forest is of high cultural significance; however, other than identifying it as a potential hunting and gathering ground, there was no specific cultural reason documented in the report with regards to its significance.

7.2.2 Kayandel Archaeological Services (2011), Tarrawonga Coal Project: Aboriginal Cultural Heritage Assessment

RAP opinions on the entirety of the Tarrawonga Coal Mine indicated that the entire landscape was considered to be of high cultural significance to them. Sections of the Leard State Forest were, in the opinion of the RAPs, to be of very high cultural significance. While these values were identified in the Kayandel report, specific documentation providing evidence for these opinions was not documented.

7.2.3 AECOM (2010), Maules Creek Coal Project: Aboriginal Archaeological and Cultural Heritage Impact Assessment

This AECOM report identified that all sites are of cultural significance in the opinion of the RAPs. Two overall areas of significance were:

- Scarred Trees and grinding tools were of very high cultural significance; and,
- Evidence of occupation in Leard State Forest demonstrated that the area is of cultural significance.

Subsequent assessment; however, has identified that these trees were not culturally scarred (Global Soil Systems 2014).

RAP opinions on the entirety of the Maules Creek Coal Project indicated that the entire landscape was of high cultural significance. The Leard State Forest was considered, in the opinion of the RAPs, to be of very high cultural significance; although the report does not document any specific evidence in support of these opinions.

Further assessment of the artefact assemblage identified that the Maules Creek sites exhibit low to moderate archaeological significance on a local level, due to the diverse range of activities present at sites and do not exhibit any significance on a regional or national level. This is attributable to high levels of artefact attrition, average richness, and no evidence for intact stratigraphy or sub-surface cultural change (Clarkson 2014:ii-iii).

7.3 Cultural Values in the Biodiversity Offset Areas

The following section documents the information presented in the workshops, and the Aboriginal values and options put forward for the conservation and enhancement of Aboriginal values.

As per the MCoA, the workshops (Plate 1) provided an opportunity to identify a range of options for enhancing and conserving cultural heritage in the BOAs. Opportunities to comment on Aboriginal cultural values were provided in Workshop 1 and in Workshop 2 as well as in two mail outs for the project inception and Workshop 2 (**Appendix 4**). RAPs were also provided with a feedback form to comment on the project when the Tender Document was sent prior to Workshop 1. No specific geographic areas in the biodiversity offsets were identified as having specific cultural value, it was stated that in the opinion of the RAPs all the land had cultural value and was all important.



Plate 1 Workshop Presentation

7.3.2 Summary Aboriginal Cultural Heritage Values

All the maps and archaeological information were presented during this workshop to assist in the identification of areas of Aboriginal cultural value. All RAP representatives were asked whether there were areas of particular importance in the BTM Complex and BOAs. However, no specific places or locations were identified.

The Aboriginal values identified were:

- (1) All lands within the BTM Complex and BOAs were important to the RAPs as they felt that the whole area would have been occupied by Aboriginal people and therefore was part of their connection to country.
- (2) The native vegetation was important as a source of bush food and any areas with native vegetation had high cultural value.

8.0 Options for the Conservation and Enhancement of Aboriginal Archaeological and Cultural Values

As per the MCoA this AHCS identified a range of options for enhancing and conserving Aboriginal cultural heritage values. Opportunities to comment on Aboriginal cultural values were provided in Workshop 1 (attended by 12 RAPs) and in Workshop 2 (attended by 8 RAPs). Opportunities for input into cultural values were also provided in the two mail outs for the project inception and Workshop 2.

8.1 Archaeological Values

Arising from the analysis of the archaeological background the key means of enhancing archaeological value could include:

- Better documentation and understanding of bush foods would contribute to understanding of the archaeological record in the region and therefore contribute to enhancing archaeological values in the BTM Complex and BOAs; and
- Further investigation of the lower Nandewar Range would contribute to understanding the regional context of the archaeological assemblages in the BTM complex and therefore enhance the archaeological value of the BTM Complex and the BOAs.

8.2 Cultural Values

No specific geographic areas in the biodiversity offsets were identified as having specific cultural value. It was stated that all the land had cultural value and was therefore all important. However, the following non-geographically specified values were identified for the BOAs:

- The area was used for Aboriginal occupation and is therefore culturally important and is part of the connection to country; and
- Bush foods have been known to grow in these areas and have high cultural value.

8.3 Conservation Options for Archaeological and Aboriginal Cultural Values

The archaeological values were identified on the basis of the review of archaeological information. The cultural values were identified through the workshops held with the RAPs and other correspondence. The options put forward by the RAPs enhance the identified cultural values in different ways. **Table 8** summarises how each option presented would enhance the cultural values and which of these options would also enhance the identified archaeological values.

Table 8 Summary of Conservation Options and how they relate to the identified Cultural and Archaeological Values

Option	Cultural Value	Archaeological Value	How Option would enhance Cultural Values	How Option would enhance Archaeological Values
Nandewar Range Sample Survey	√	√	This option links to the overall values of the land and enhancing connection to country and education.	A sample survey of the Nandewar Range would contribute to archaeological knowledge of the region.

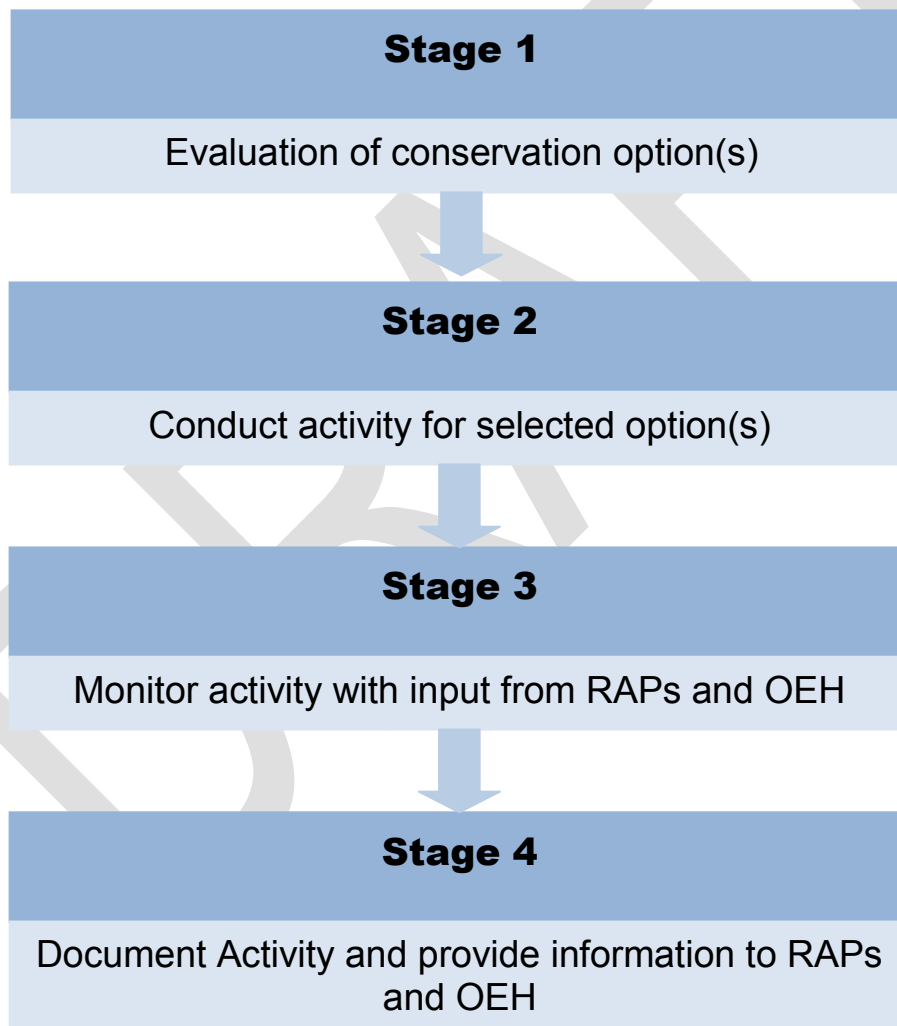
Option	Cultural Value	Archaeological Value	How Option would enhance Cultural Values	How Option would enhance Archaeological Values
<u>Access Agreements for the Biodiversity offset Areas</u>	√	√	This option would enhance connection to country through access and allow for educational and traditional practices to be continued.	This option could enhance archaeological values by providing more information on regional patterning.
<u>Oral History Collections of Knowledge Holders</u>	√	√	This option proposes to link to the overall values of the land and enhancing connection to country and education. This option will also allow traditional practices to be continued.	This option could be used to inform future archaeological reports and identify areas of cultural sensitivity. Identification of these culturally sensitive areas could aid in the planning of future development.
<u>Bushfood / Land management</u>	√	√	Option 3 would enhance education and connection to country. It could potentially assist with the preservation and continuation of bush foods in the area. It will also provide the RAPs with employment opportunities in the agricultural industry. This option will also allow traditional practices to be continued.	A dossier containing information regarding different types of native plant and their uses could be used in ranking the archaeological values in the broader Gunnedah Basin and assisting in the archaeological interpretation of Aboriginal occupation patterns.
Walk on Country	√	N/A	This option links to the overall values of the land and enhancing connection to country and education.	The walk on country is not an archaeological survey and therefore would not contribute to archaeological knowledge of the area; a sample survey of the Lower Nandewar Range Area would enhance archaeological knowledge of the region.

Option	Cultural Value	Archaeological Value	How Option would enhance Cultural Values	How Option would enhance Archaeological Values
<u>Serpent Fountain</u>	√	N/A	This option would enhance education and connection to country through the display of local plants and animals important to the Aboriginal community. It is the only option that solely represents the women of the Aboriginal community.	This option does not directly enhance the identified archaeological values.
<u>Production of Traditional Objects</u>	√	N/A	This option would enhance education and connection to country through the manufacture of traditional craft objects using local materials. This option will allow traditional practices to be continued.	This may contribute to the enhancement of identified archaeological values by the practice of making wooden items which are rarely preserved in the archaeological record and may give insight into raw material procurement practices.
<u>Collection Agreement</u>	√	N/A	This option would enhance connection to country through access and collection practices of local raw materials and allow traditional practices to be continued.	This may contribute to the enhancement of identified archaeological values by the practice of making wooden items which are rarely preserved in the archaeological record and may give insight into raw material procurement practices.
<u>Formal Education Course Development</u>	√	N/A	This option would enhance connection to country through access and allow for educational and traditional practices to be continued.	This option could contribute to archaeological knowledge by including education units on lithics.

9.0 Implementation

This AHCS will be implemented using a staged approach (**Figure 14**). Stage 1 will involve evaluation of conservation options. This evaluation process would assess the effectiveness of the options in conserving archaeological and Aboriginal cultural values, as well as considering the practicalities of their implementation. Options would be prioritised on this basis. The most practicable and effective option(s) would be selected. Stage 2 will involve conducting the activity associated with the selected conservation option(s). Stage 3 will monitor the activity during implementation, to ensure it is meeting its purpose and will consider inputs from the RAPs and OEH, where relevant. Stage 3 would also evaluate if changes to the implementation of the activity are required, or if additional conservation options should be considered. Stage 4 will document the activities undertaken for the conservation option(s) in an appropriate format and provide this information to the RAPs and OEH at end of the implementation phase.

Figure 14 Staged Approach to Implementation



10.0 Conclusion

A Cultural Heritage Strategy for the BTM Complex and BOA's has been developed in compliance with the approval conditions for the three mines. Its objective is to enhance and preserve cultural heritage. The strategy has been developed on the basis of an extensive desktop analysis complemented by the provision of extensive opportunities for consultation.

The strategy includes a high level implementation plan which will be implemented in the future.

The next step in finalising the strategy is another round of consultation followed by submission to DoPE.

Four principal options are identified and they satisfy both the cultural and archaeological values, they are:

- Nandewar Range Sample Survey,
- Access Agreements for the Biodiversity Offset Areas,
- Oral history collections; and
- bushfood / land management.

This AHCS has fully complied with the MCoA and a summary is located in **Table 9**.

Table 9 Compliance with Heritage Components of the Ministers Conditions of Approval and RPS Comments

MCoA Requirements	RPS Comments
Requirements for compliance:	
(a) Be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Director-General;	Appendix 1
(b) Be prepared in consultation with OEH the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Director-General for approval within 12 months;	Aboriginal Consultation (Section 6.0 and 7.0, Appendix 4) for this project was undertaken in accordance with the ACHCR Process (DECCW 2010a). Steps were also taken to ensure that all RAPs were provided with an opportunity to participate. Steps included, but were not limited to, extension of submission and flyers advertising the workshops. Consultation with OEH has been maintained throughout the development of this AHCS (Section 1.6). Consultation with the mines has also been undertaken; throughout the workshop process.
(c) Identify the Aboriginal cultural values of the Biodiversity Offset Strategy areas;	Archaeological cultural values were identified in Section 7.0. The Aboriginal cultural values were identified in Section 7.0.
(d) Identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;	No specific areas were identified by the RAPs as having higher significance than others. Although areas with native vegetation and potential for bush foods were identified as having high Aboriginal cultural value (Section 7.0).
(e) Identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural significance to the Aboriginal community; and	Nine possible conservation options have been outlined and are under consideration by the BTM Complex (Section 8.0).
(f) Consider cumulative impacts and potential for developing joint initiative with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural values.	This AHCS has identified that inter-generational equity is an opportunity to allow future generations to access cultural areas in the BOAs. Several AHCS options allow for inter-generational equity.

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Appendix I

Director General's Endorsement

DRAFT

Mining & Industry Projects

Contact: Stephen O'Donoghue

Phone: 0477 345 626

Email: stephen.o'donoghue@planning.nsw.gov.au

Belinda Bird
Principal Environmental Scientist
Parsons Brinckerhoff
PO Box 1162
NEWCASTLE NSW 2300

Dear Ms. Bird

**Boggabri Precinct Coal Mines
Approval of expert(s) to prepare the Aboriginal Heritage Conservation Strategy**

I refer to the letter from Parsons Brinckerhoff dated 15 July 2013 sent on behalf of Boggabri Coal Mine, Maules Creek Coal Mine and Tarrawonga Coal Mine which provided details including CV's on the team from RPS proposed to prepare the Aboriginal Heritage Conservation Strategy (AHCS)¹.

An addendum to this information was also provided by Dr Jan Green on 30 July 2013 identifying additional team members from RPS with expertise and/or qualifications in anthropology, to further enhance the assessment of cultural values in the preparation of the AHCS. The RPS team identified includes Darrell Rigby, Tessa Boer-Mah, Laraine Nelson and Jeremy Hill supported as needed by Erin Williams, Cheng Yen Loo and Aaron Fogel.

The Department has reviewed the information you provided and the Director-General has approved the appointment of the RPS team to prepare the AHCS.

The Department would like to emphasise the importance of undertaking effective consultation with the Registered Aboriginal Parties (RAPs) across all the mines and the broader Aboriginal community, particularly elders and knowledge holders, to ensure that cultural values are comprehensively considered in the preparation of the AHCS.

Yours sincerely


Mike Young
Acting Director
Mining and Industry Projects
as the Director-General's nominee

31.7.13

Cc:
Dr Jan Green, Idemitsu Australia Resources (Boggabri Coal)
Mr Brian Cole, Whitehaven Coal Limited (Maules Creek Coal Mine)
Mr Danny Young, Whitehaven Coal Limited (Tarrawonga Coal Mine)

¹ As required under Schedule 3 condition 55 for Boggabri Coal Mine, Schedule 3 condition 57 for Maules Creek Coal Mine and Schedule 3 condition 51 for Tarrawonga Coal Mine.

Appendix 2
AHIMS Searches

DRAFT

RPS Australia East Pty Ltd -Hamilton

Date: 21 March 2014

Accounts Payable Fortitude Valley PO Box 237

Brisbane Queensland 4006

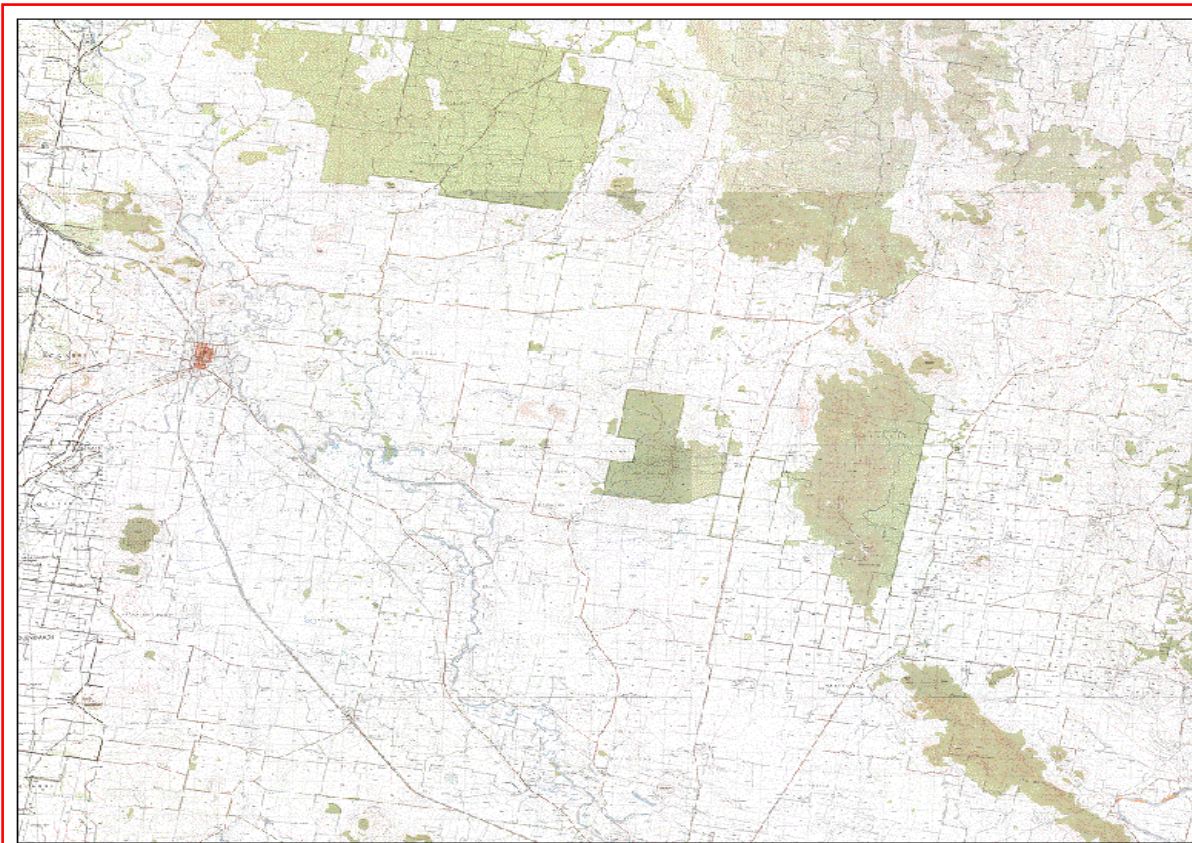
Attention: Jeremy Hill

Email: jeremy.hill@rpsgroup.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

117	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- 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.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

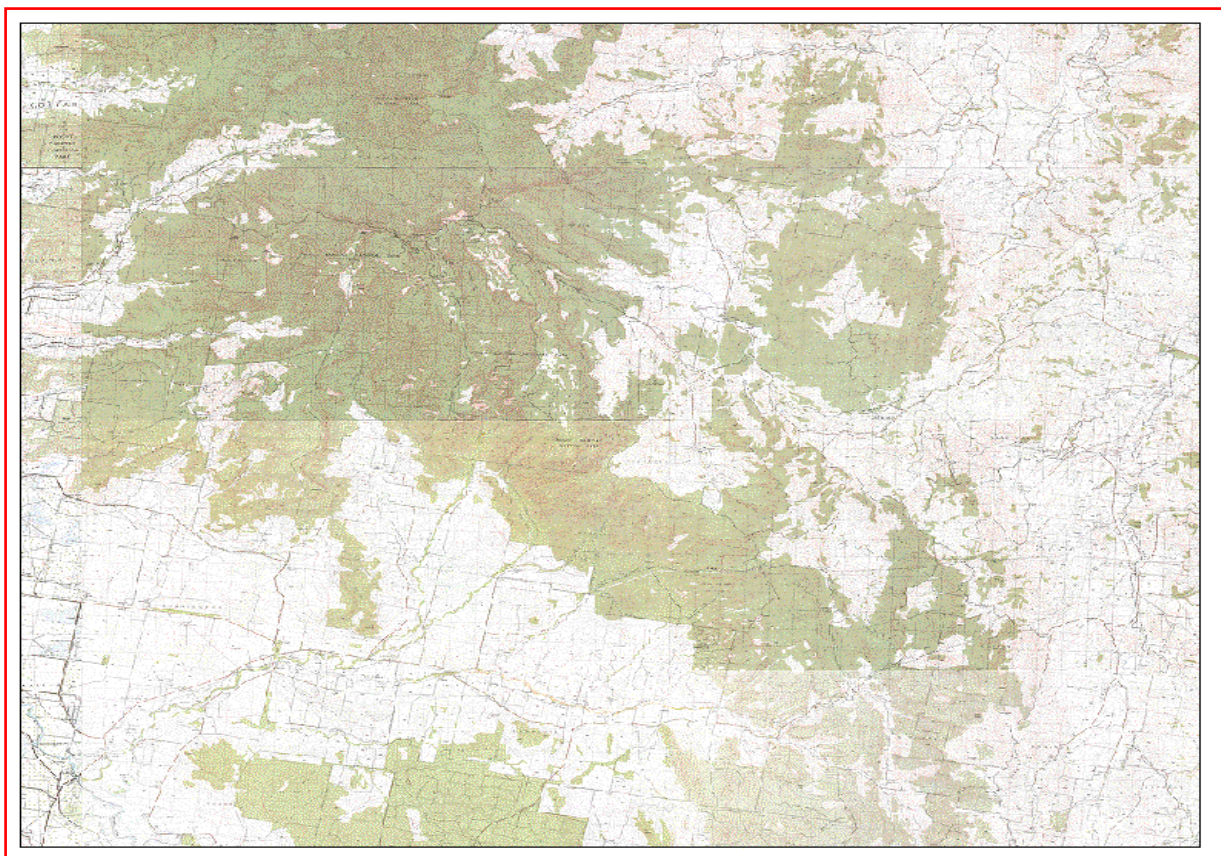
RPS Australia East Pty Ltd -Hamilton
Accounts Payable Fortitude Valley PO Box 237
Brisbane Queensland 4006
Attention: Jeremy Hill
Email: jeremy.hill@rpsgroup.com.au

Date: 21 March 2014

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6623553 - 6647707 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

13	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- 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.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

RPS Australia East Pty Ltd -Hamilton

Date: 21 March 2014

Accounts Payable Fortitude Valley PO Box 237

Brisbane Queensland 4006

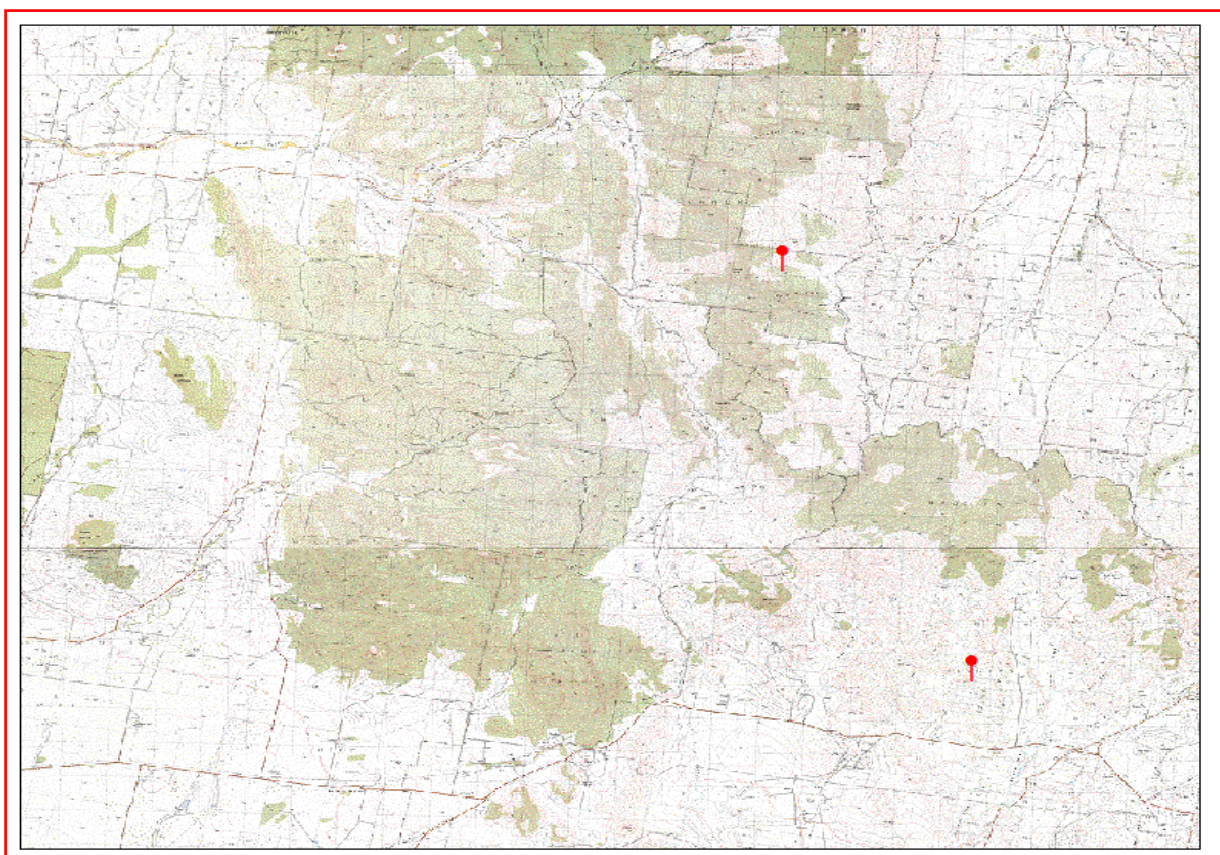
Attention: Jeremy Hill

Email: jeremy.hill@rpsgroup.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 232283 - 257228, Northings : 6601114 - 6623587 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

25	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

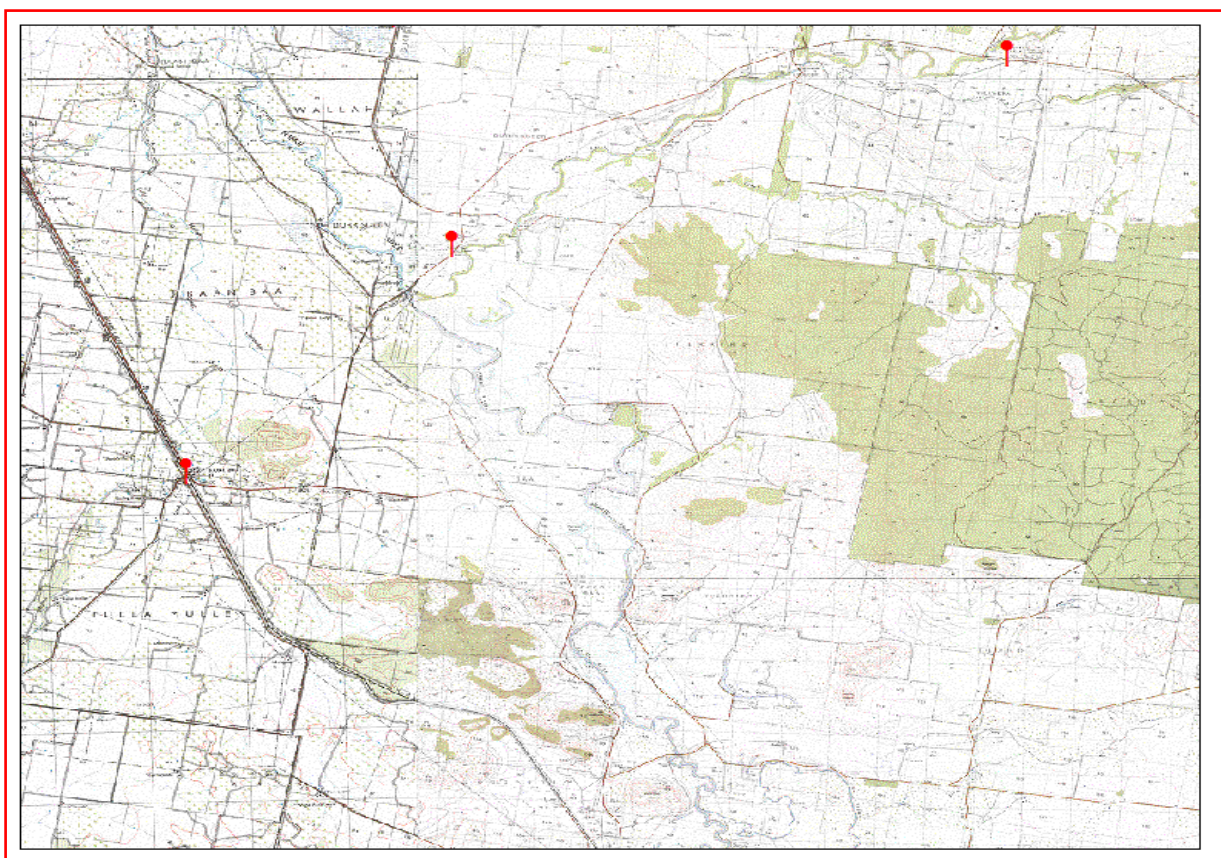
RPS Australia East Pty Ltd -Hamilton
Accounts Payable Fortitude Valley PO Box 237
Brisbane Queensland 4006
Attention: Jeremy Hill
Email: jeremy.hill@rpsgroup.com.au

Date: 21 March 2014

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

59	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- 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.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

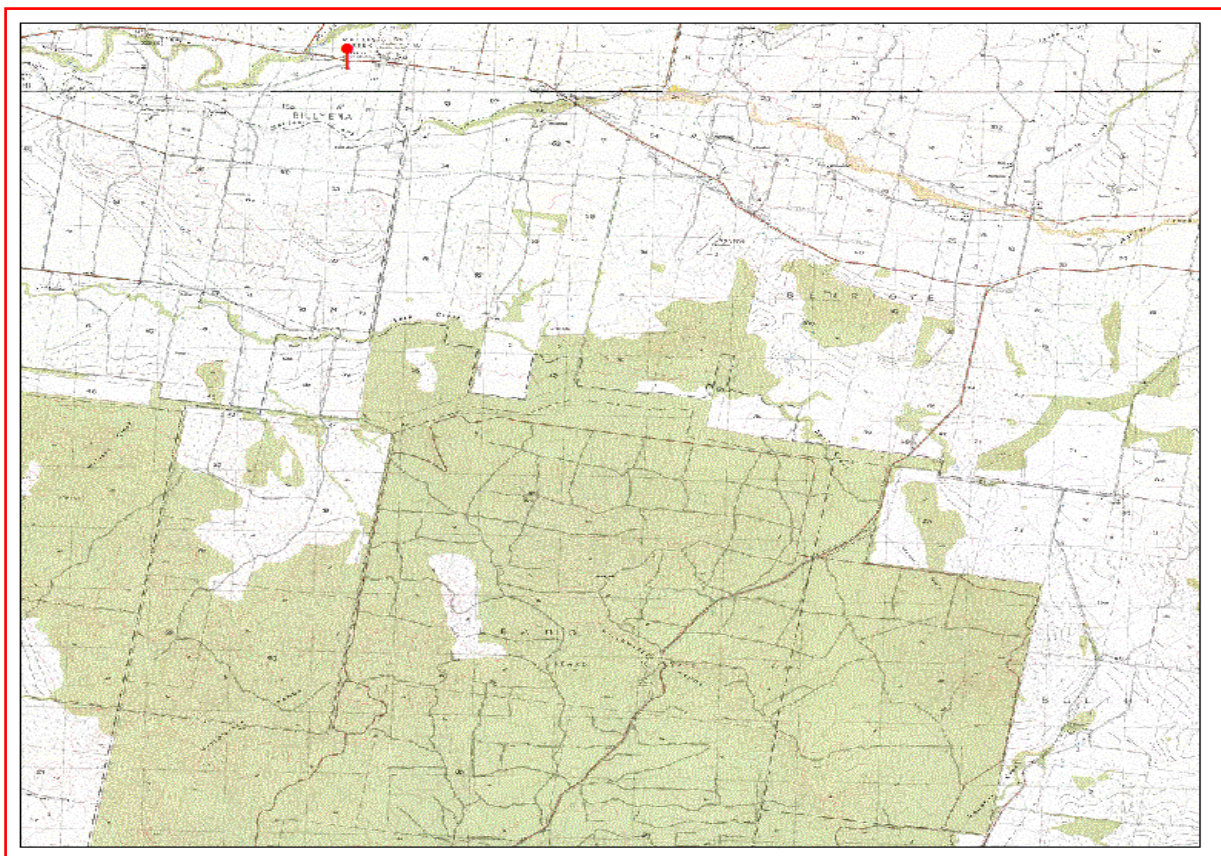
RPS Australia East Pty Ltd -Hamilton
Accounts Payable Fortitude Valley PO Box 237
Brisbane Queensland 4006
Attention: Jeremy Hill
Email: jeremy.hill@rpsgroup.com.au

Date: 21 March 2014

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

74	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- 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.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

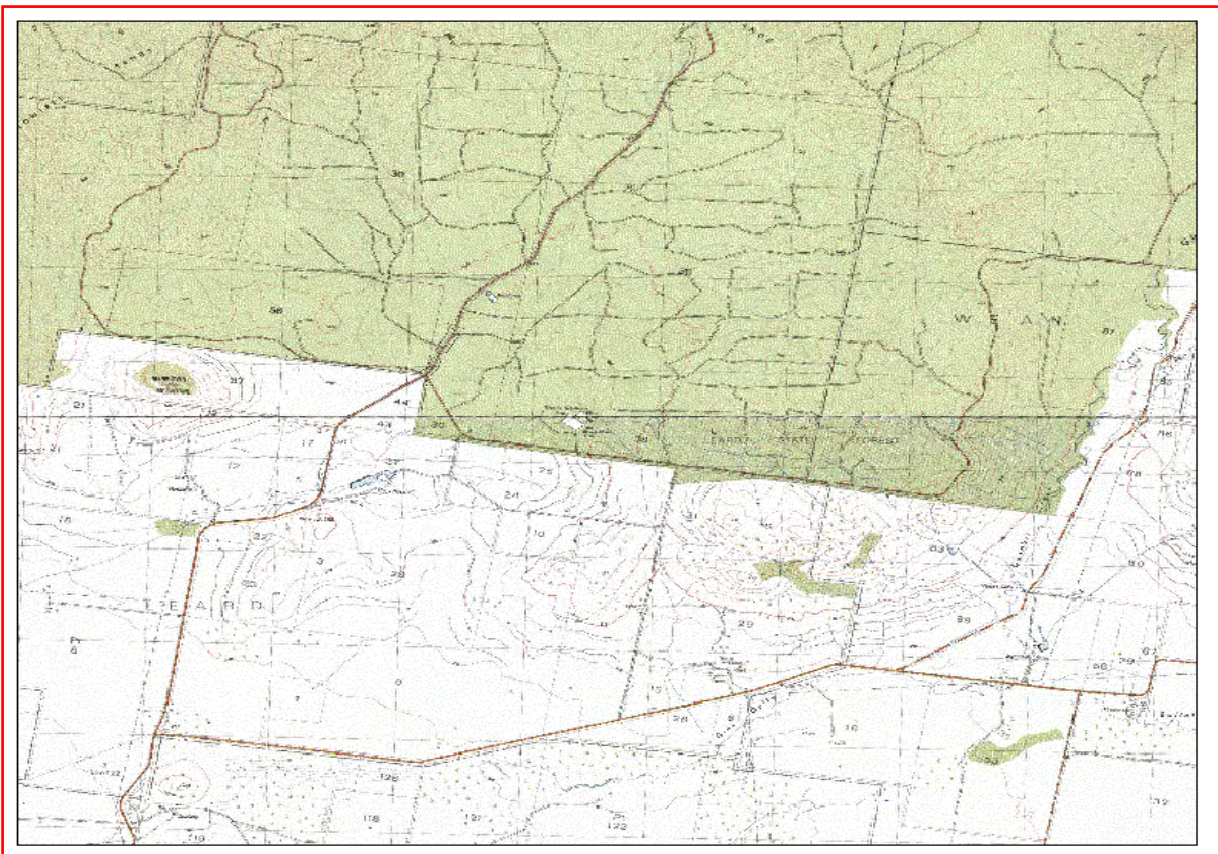
RPS Australia East Pty Ltd -Hamilton
Accounts Payable Fortitude Valley PO Box 237
Brisbane Queensland 4006
Attention: Jeremy Hill
Email: jeremy.hill@rpsgroup.com.au

Date: 21 March 2014

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

97	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

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- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

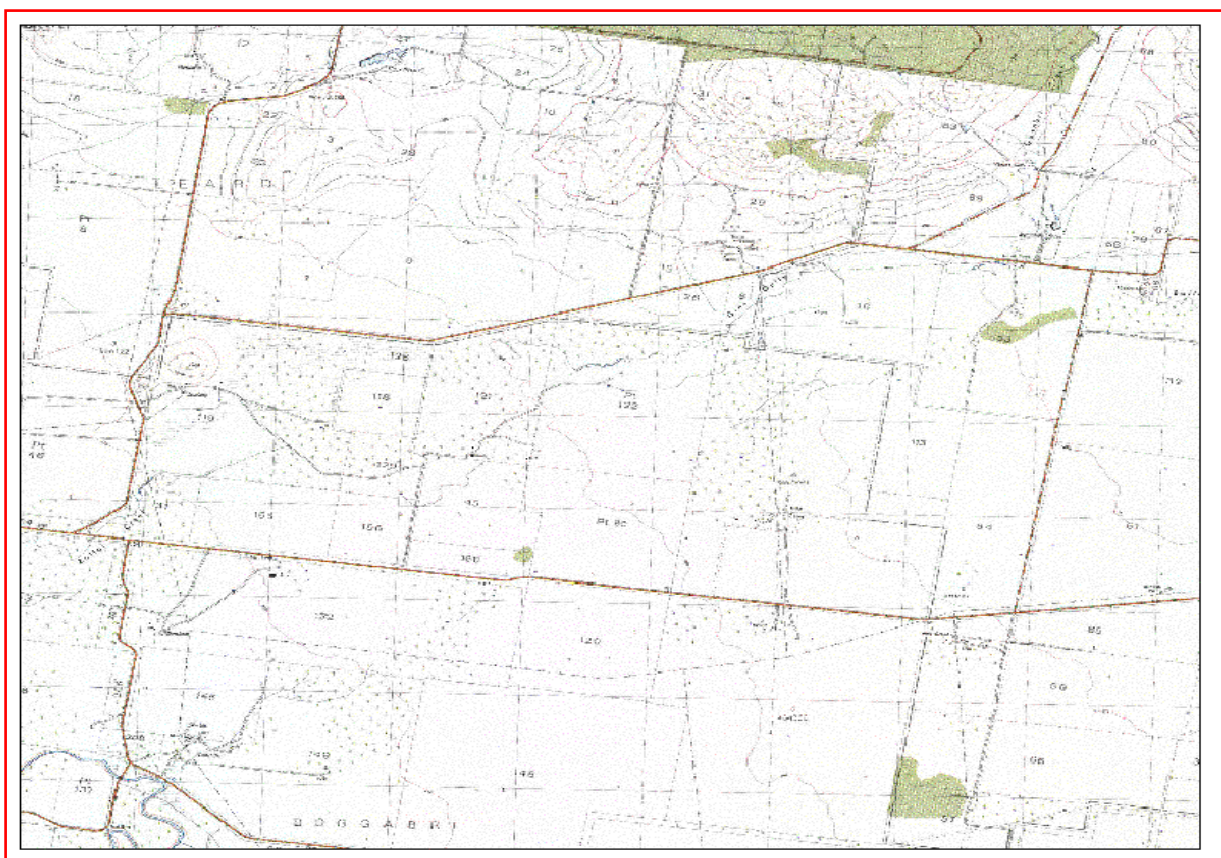
RPS Australia East Pty Ltd -Hamilton
Accounts Payable Fortitude Valley PO Box 237
Brisbane Queensland 4006
Attention: Jeremy Hill
Email: jeremy.hill@rpsgroup.com.au

Date: 21 March 2014

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 223175 - 232335, Northings : 6601053 - 6606881 with a Buffer of 0 meters, conducted by Jeremy Hill on 21 March 2014.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

36	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(http://www.nsw.gov.au/gazette\)](http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- 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.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0063	BBS; Red Chief LALC; Kelvin SF ST 1	AGD	56	245076	6594626	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0065	BBS; Red Chief LALC; Whitehaven Rd 1	AGD	56	231986	6593729	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0066	BBS; Red Chief LALC; Vickery SF 1	AGD	56	233780	6592016	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0068	BBS; Red Chief LALC; Barkers Lagoon ST 2	AGD	56	223950	6599986	Open site	Valid	Modified Tree (Carved or Scarred) : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0071	BBS; Red Chief LALC; Undoola ST 1	AGD	56	223820	6591370	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0073	BBS; Red Chief LALC; Barkers Lagoon ST 1	AGD	56	224074	6599919	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0081	BBS; Red Chief LALC; Kelvin SF 1	AGD	56	245846	6593171	Open site	Valid	Artefact : 2		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0082	BBS; Red Chief LALC; Kelvin SF 2	AGD	56	246126	6595083	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0166	yarral 11 dthinawan	GDA	56	245836	6596068	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Mr.Bruce Potter,Mr.Leonard Talbott,Ms.Joanne Shephard				Permits			
20-4-0167	yuundu1 dthinnawan	GDA	56	245851	6595930	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Mr.Bruce Potter,Mr.Leonard Talbott,Ms.Joanne Shephard				Permits			
20-4-0168	yurral 11 dthinawan	GDA	56	245005	6596165	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Mr.Bruce Potter,Mr.Leonard Talbott,Ms.Joanne Shephard				Permits			
20-4-0169	yarral 13	GDA	56	245010	6596237	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Mr.Bruce Potter,Mr.Leonard Talbott,Ms.Joanne Shephard				Permits			
20-4-0170	yarral	GDA	56	245026	6596027	Open site	Valid	Artefact : -		
	Contact Searle	Recorders	Mr.Bruce Potter,Mr.Leonard Talbott,Ms.Joanne Shephard				Permits			
20-4-0171	yarral16	GDA	56	246178	6596121	Open site	Valid	Potential Archaeological Deposit (PAD) : -		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact Searle	Recorders								Permits
20-4-0172	grinding grooves 1 guda	GDA	56	244666	6596516	Open site	Valid	Grinding Groove : -		
	Contact Searle	Recorders								Permits
20-4-0165	Flake 1 Kelvin CCA Zone 2	GDA	56	245329	6591682	Open site	Valid	Artefact : -		
	Contact	Recorders								Permits
20-4-0181	flake1	GDA	56	245862	6593456	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0182	yarral 1 Dthinnawan	GDA	56	243700	6591355	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0183	yarral 2 Dthinnawan	GDA	56	246133	6595273	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0184	Yarral 3 Dthinnawan	GDA	56	243768	6594677	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0185	yarral 3a Dthinnawan	GDA	56	245964	6595231	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0186	yarral 4 Dthinnawan	GDA	56	245778	6595578	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0187	yarral 5 Dthinnawan	GDA	56	243803	6595979	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0188	yarral 9 Dthinnawan	GDA	56	246099	6595468	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0173	yarral x guda	GDA	56	245827	6595486	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0174	yarral x1	GDA	56	245477	6595332	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0175	yarralx2guda	GDA	56	245498	6595464	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0176	yarralx3biggabilla	GDA	56	245696	6595617	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0177	yarral e2	GDA	56	245097	6595817	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0178	Yarral Kelvin b	GDA	56	245231	6595755	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0179	Yarral Kelvin a	GDA	56	245169	6595755	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.



SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact Searle	Recorders								Permits
20-4-0180	Yarral Kelvin c	GDA	56	245026	6596027	Open site	Valid	Artefact : -		
	Contact Searle	Recorders								Permits
20-4-0232	Boonalla Artefacts 25110901	AGD	56	244729	6593250	Open site	Valid	Artefact : -		
	Contact	Recorders								Permits
20-4-0231	Boonalla Artefact #4 241109	AGD	56	245325	6593314	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0233	Boonalla Artefact 25110902	AGD	56	244462	6593133	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0234	Boonalla Artefact 25110903	AGD	56	245433	6592478	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0235	Boonalla Artefact	AGD	56	244027	6591308	Open site	Valid	Artefact : 12		
	Contact	Recorders								Permits
20-4-0236	Boonalla Artefact Scatter 25110905	AGD	56	243842	6591508	Open site	Valid	Artefact : 20		
	Contact	Recorders								Permits
20-4-0237	Boonalla Artefact 25110906	AGD	56	243888	6591385	Open site	Valid	Artefact : 10		
	Contact	Recorders								Permits
20-4-0238	Boonalla Artefact 25110907	AGD	56	243927	6591310	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0239	Boonalla Artefact 25110908	AGD	56	243871	6591361	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0240	Boonalla Artefact 25110909	AGD	56	243796	6591053	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0241	Boonalla Artefact 25110910	AGD	56	244178	6590307	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0242	Boonalla Artefact 2611091	AGD	56	244234	6590300	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0243	Boonalla Artefact 2901101	AGD	56	244668	6590307	Open site	Valid	Artefact : 7		
	Contact	Recorders								Permits
20-4-0244	Boonalla Artefact 0102101	AGD	56	244336	6594089	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0245	Boonalla Artefact 00102102	AGD	56	245186	6595057	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0246	Boonalla Artefact 0102103	AGD	56	245295	6594987	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders								Permits
20-4-0251	Boonalla Artefact 2411097	AGD	56	244317	6595596	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0252	Boonalla Artefact 24110096	AGD	56	244523	6595884	Open site	Valid	Artefact : 4		
	Contact	Recorders								Permits
20-4-0253	Boonalla Artefact 2411092	AGD	56	245777	6593212	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0254	Boonalla Artefact 2411093	AGD	56	245342	6593324	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0255	Boonalla Artefact 24110091	AGD	56	246119	6595109	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0256	Boonalla Axe Head 2411091	AGD	56	246212	6595816	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0257	Boonalla Artefact 2311096	AGD	56	245490	6591355	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0258	Boonalla Artefact 2311095	AGD	56	245056	6590503	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0259	Boonalla Artefact 2311094	AGD	56	244364	6590733	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0262	Boonalla Artefact 2411095	AGD	56	244514	6596085	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0277	RPS ROCGLEN AS2	GDA	56	238589	6595542	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits 3512
20-4-0278	RPS ROCGLEN IF1	GDA	56	239147	6595752	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0289	Broadwater 1	AGD	56	228834	6591040	Open site	Valid	Artefact : -		
	Contact Ms.Jane Bender	Recorders								Permits
20-4-0290	Broadwater 2	AGD	56	228997	6591013	Open site	Valid	Artefact : -		
	Contact Mr.Peter Beale	Recorders								Permits
20-4-0291	Broadwater ST1	AGD	56	228547	6591205	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact Mr.Les J Draper	Recorders						-		Permits
20-4-0292	Broadwater Grinding Grooves	AGD	56	228716	6591128	Open site	Valid	Grinding Groove : 18		
	Contact Mr.Les J Draper	Recorders								Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0265	Boonalla Scatter 517102422	AGD	56	245818	6595341	Open site	Valid	Artefact : 12		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0266	Boonalla Shelter 51891936	AGD	56	245478	6596372	Open site	Valid	Habitation Structure : 1		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0267	Boonalla Scatter 51812854	AGD	56	245188	6596312	Open site	Valid	Artefact : 4		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0268	Boonalla Scatter 520103253	AGD	56	245729	6595985	Open site	Valid	Artefact : 2		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0269	Boonalla Scatter 520104253	AGD	56	245992	6596314	Open site	Valid	Artefact : 6		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0270	Boonalla Scatter 52011140	AGD	56	245991	6596302	Open site	Valid	Artefact : 5		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0271	Boonalla Scatter 520111832	AGD	56	246008	6596268	Open site	Valid	Artefact : 2		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0272	Boonalla Scar Tree 51014652	AGD	56	246296	6596080	Open site	Valid	Modified Tree (Carved or Scarred) : 1		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0273	Boonalla Fire Pit 510224343	AGD	56	243445	6594230	Open site	Valid	Stone Arrangement : 1		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0274	Boonalla Scatter 510232223	AGD	56	243431	6594225	Open site	Valid	Artefact : 4		
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0275	Boonalla Core 510234726	AGD	56	243377	6594080	Open site	Valid	Artefact : 1		102045
	Contact	Recorders	Ms.Tammy Bush					Permits		
20-4-0282	Boonalla Scar Treet 170610	AGD	56	245926	6593861	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Ms.Daphne Cubby					Permits		
20-4-0276	RPS ROCGLEN AS1	GDA	56	239004	6595700	Open site	Valid	Artefact : -		
	Contact	Recorders	RPS Australia East Pty Ltd -Hamilton, Miss.Philippa Sokol					Permits	3512	
20-4-0091	Whitehaven 4	AGD	56	229250	6594910	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.John Appleton					Permits	2051	
20-4-0190	Startford ST2	AGD	56	237700	6590900	Open site	Valid	Modified Tree (Carved or Scarred) : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
20-4-0191	B3- Wean Rd	AGD	56	238650	6593300	Open site	Valid	Artefact : 40		
	Contact	Recorders						Permits	2993	
20-4-0192	B2- Wean Rd	AGD	56	238850	6594010	Open site	Valid	Artefact : 8		
	Contact	Recorders						Permits	2993	
20-4-0193	B1 - Wean Rd	AGD	56	238810	6594070	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	2993	
20-4-0194	BTREE 2 - WEAN RD	AGD	56	238980	6592870	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders						-	Permits	
20-4-0195	BTREE 1 WEAN RD	AGD	56	238950	6592830	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders						1	Permits	
20-4-0354	VCP-OS-001	GDA	56	229440	6594509	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0359	VCP-OS-036	GDA	56	234390	6590393	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0360	VCP-OS-046	GDA	56	233105	6591613	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0361	VCP-OS-049	GDA	56	233320	6592067	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0362	-VCP-OS-051	GDA	56	232376	6592277	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0363	VCP-OS-055	GDA	56	232333	6593553	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0364	VCP-IF-090	GDA	56	232414	6592595	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0365	VCP-IF-043	GDA	56	234352	6591156	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0370	VCP-IF-034	GDA	56	232656	6590482	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0371	VCP-IF-040	GDA	56	234920	6590639	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0372	VCP-IF-055	GDA	56	230603	6591344	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
20-4-0373	VCP-IF-060	GDA	56	230558	6591433	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0374	VCP-IF-070	GDA	56	232300	6591777	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0375	VCP-IF-095	GDA	56	232911	6593192	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0376	VCP-OS-056	GDA	56	232714	6593566	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0377	VCP-OS-057	GDA	56	232409	6593609	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0378	VCP-OS-058	GDA	56	232623	6593691	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0379	VCP-OS-067	GDA	56	231876	6594149	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0380	VCP-OS-069	GDA	56	229280	6594481	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0386	VCP-IF-109	GDA	56	229771	6594288	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0038	Mirrabinda;	AGD	56	228560	6590060	Open site	Valid	Artefact : -	Open Camp Site	1169
	Contact	Recorders						Permits		
20-4-0042	Mirrabinda;	AGD	56	228560	6590060	Open site	Valid	Artefact : -	Open Camp Site	1169
	Contact	Recorders						Permits		
20-4-0048	Mirrabinda;	AGD	56	228560	6590060	Open site	Valid	Artefact : -	Open Camp Site	1169
	Contact	Recorders						Permits		
20-4-0001	Coutt's Mill;Boggabri;	AGD	56	216000	6599000	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders						Permits		
20-4-0006	Boggabri;	AGD	56	218000	6599000	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	
	Contact	Recorders						Permits		
20-4-0007	Boggabri;	AGD	56	215000	6599400	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders						Permits		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6590180 - 6601114 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 117

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AHIMS Web Services (AWS)

Extensive search - Site list report

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0008	Wilga;	AGD	56	227300	6592500	Open site	Valid	Artefact : -	Open Camp Site	812
	Contact									
	Recorders							Permits		
20-4-0009	Wilga;	AGD	56	229000	6591000	Open site	Valid	Artefact : -, Grinding Groove : -	Axe Grinding Groove,Open Camp Site	812
	Contact									
	Recorders							Permits		
20-4-0013	Whitehaven;Driggle Draggie Creek;	AGD	56	227800	6596200	Open site	Valid	Artefact : -	Open Camp Site	
	Contact									
	Recorders							Permits		
20-4-0014	Greenwood Creek;	AGD	56	230900	6593900	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	Contact									
	Recorders							Permits		
20-4-0018	Driggle Draggie Creek;	AGD	56	231900	6598400	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	Contact									
	Recorders							Permits		
16-4-0002	VM-OS-1	AGD	56	231950	6593800	Open site	Valid	Artefact : -		
	Contact									
	Recorders							Permits		
20-4-0197	Boonalla Cave	AGD	56	244175	6594019	Closed site	Partially Destroyed	Habitation Structure : 1, Potential Archaeological Deposit (PAD) : 1		102727,102833
	Contact									
	Recorders							Permits	3278	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-1-0012	Ningadhun;	AGD	56	218200	6645500	Closed site	Valid	Artefact : -	Shelter with Deposit	3554
	<u>Contact</u>									
	<u>Recorders</u>		Brown						<u>Permits</u>	
20-1-0013	Ningadhun;	AGD	56	218200	6645500	Closed site	Valid	Artefact : -	Shelter with Deposit	3554
	<u>Contact</u>									
	<u>Recorders</u>		Brown						<u>Permits</u>	
20-1-0014	Dawson's Spring;	AGD	56	228000	6646800	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	3554
	<u>Contact</u>									
	<u>Recorders</u>		Geoff Cahill						<u>Permits</u>	
20-1-0015	Dawson's Spring;	AGD	56	227700	6646700	Open site	Valid	Modified Tree (Carved or Scarred) : -, Artefact : -	Open Camp Site, Scarred Tree	3554
	<u>Contact</u>									
	<u>Recorders</u>		Brown						<u>Permits</u>	
20-1-0070	Deriah Goanna Site	AGD	56	214777	6635797	Open site	Valid	Non-Human Bone and Organic Material : -, Potential Archaeological Deposit (PAD) : -, Modified Tree (Carved or Scarred) : -, Water Hole : -, Artefact : -		
	<u>Contact</u>									
	<u>Recorders</u>		Ms.Suzanne Hudson						<u>Permits</u>	
20-1-0029	Dawsons Spring Camp	AGD	56	227282	6646550	Open site	Valid	Modified Tree (Carved or Scarred) : 3		
	<u>Contact</u>		Searle							
	<u>Recorders</u>		Mr.Marcus Leslie						<u>Permits</u>	
20-1-0071	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<u>Contact</u>									
	<u>Recorders</u>		Giles Hamm Archaeology						<u>Permits</u>	
20-1-0026	Mt Kaputar	AGD	56	227900	6646800	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>									
	<u>Recorders</u>		G Bush						<u>Permits</u>	
20-1-0017	Derriah State Forest	AGD	56	212500	6635300	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	3554
	<u>Contact</u>									
	<u>Recorders</u>		Sabu Dunn						<u>Permits</u>	
20-1-0018	Derriah State Forest Wave Hill	AGD	56	211800	6635000	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	3554
	<u>Contact</u>									
	<u>Recorders</u>		Sabu Dunn						<u>Permits</u>	

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6623553 - 6647707 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 13

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-1-0031	HAND STENCIL (OCHRE ART) - BT - MT CORYAH	AGD	56	223118	6646415	Open site	Valid	Art (Pigment or Engraved) : 1		
	<u>Contact</u>									<u>Recorders</u> Mr.B Trindall
20-1-0032	Water Hole Deriah Aboriginal Area CCA Zone 2	AGD	56	214552	6636101	Open site	Valid	Water Hole : 1		<u>Permits</u>
	<u>Contact</u> Searle									<u>Recorders</u> Mr.B Trindall
20-1-0033	Murri Yuundu (Stone Axe) - Deriah CCA Zone 2 (Aboriginal Area)	AGD	56	214879	6635627	Open site	Valid	Artefact : 1		<u>Permits</u>
	<u>Contact</u> Searle									<u>Recorders</u> Mr.B Trindall

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 257228, Northings : 6623553 - 6647707 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 13

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0429	T5/2	GDA	56	233079	6611092	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0430	T5/3	GDA	56	232983	6611000	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0431	T5/1	GDA	56	233003	6611091	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0432	T4/5	GDA	56	233231	6611151	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0445	T13/1	GDA	56	233721	6613277	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0446	T13/2	GDA	56	233490	6614226	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0304	TCEP-IF-003	GDA	56	232451	6605436	Open site	Valid	Artefact : 1		
	Contact	Recorders		Kayandel Archaeological Services,Mr.Warwick Wright						Permits
20-4-0414	T2/1&T2/13	GDA	56	233722	6611648	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0415	T2/2	GDA	56	233782	6611699	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0416	T2/7&T2/8	GDA	56	233894	6611953	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0417	T2/10-12&T3/1-2&4	GDA	56	233600	6611511	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0418	T2/3	GDA	56	233824	6611776	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0419	T2/4_T2/5_T2/9	GDA	56	233852	6611865	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0420	T2/6	GDA	56	233955	6612056	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0421	T4/1-3-	GDA	56	233416	6611297	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0422	T4/4	GDA	56	233324	6611201	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits
20-4-0423	T3/5	GDA	56	233490	6611371	Open site	Valid	Artefact : 1		
	Contact	Recorders		Mrs.Angela Besant,Insite Heritage Pty Ltd						Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 232283 - 257228, Northings : 6601114 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 25

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0426	T6/1-2	GDA	56	232784	6610901	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0427	T6/3	GDA	56	232942	6610976	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0428	T6/4	GDA	56	232759	6610848	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0300	TCEP-IF-019	GDA	56	232793	6605428	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0095	Dripping Rock Cave Site	AGD	56	240767	6612008	Closed site	Valid	Aboriginal Resource and Gathering : -, Shell : -, Modified Tree (Carved or Scarred) : 1, Water Hole : -		
	Contact	T Russell								Permits
20-4-0470	T18/1	GDA	56	234033	6613556	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0473	T1/1	GDA	56	234101	6612839	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0476	T18/2	GDA	56	234314	6613213	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact									Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 232283 - 257228, Northings : 6601114 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 25

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0057	BBS; Red Chief LALC; Gunnedah & Narrabri Rd TSR 1	AGD	56	215285	6608929	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0058	BBS; Red Chief LALC; Boggabri TSR 1	AGD	56	213078	6613097	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0064	BBS; Red Chief LALC; Iron Bridge ST 2	AGD	56	217603	6603365	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0072	BBS; Red Chief LALC; Iron Bridge ST 1	AGD	56	218438	6603895	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031,102245
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0074	BBS; Red Chief LALC; Daiseymead ST 1	AGD	56	216802	6607597	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0075	BBS; Red Chief LALC; Daiseymead ST 2	AGD	56	216782	6607044	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0201	HR NV64,66-70	GDA	56	221790	6608296	Open site	Valid	Artefact : 12		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0202	HRNV20 & 75	GDA	56	217277	6607988	Open site	Valid	Artefact : 2		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0203	HRNV21	GDA	56	218459	6608295	Open site	Valid	Artefact : 8		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0204	7HRNV22	GDA	56	217588	6607848	Open site	Valid	Artefact : 7		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0206	HRNV 35 & 36	GDA	56	215619	6607338	Open site	Valid	Modified Tree (Carved or Scarred) : 2		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0207	HRNV 37-39	GDA	56	215541	6607407	Open site	Valid	Artefact : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 59

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0208	HR NV 65	GDA	56	221304	6608652	Open site	Valid	Artefact : 8		101940
	Contact								Permits	
20-4-0209	HR NV 71-74	GDA	56	221304	6608652	Open site	Valid	Artefact : 5		101940
	Contact								Permits	
20-4-0210	HRNV76	GDA	56	216773	6607827	Open site	Valid	Modified Tree (Carved or Scarred) : 2		101940
	Contact								Permits	
20-4-0211	HRNV 40	GDA	56	215209	6607087	Open site	Valid	Art (Pigment or Engraved) : 2		101940
	Contact								Permits	
20-4-0212	HRNV 41 - 44	GDA	56	215206	6606618	Open site	Valid	Art (Pigment or Engraved) : 5		101940
	Contact								Permits	
20-4-0213	HRNV 45	GDA	56	215339	6605495	Open site	Valid	Artefact : 1		101940
	Contact								Permits	
20-4-0214	HRNV 46,47,23	GDA	56	215158	6605133	Open site	Valid	Artefact : 4		101940
	Contact								Permits	
20-4-0215	HRNV 48	GDA	56	214606	6604800	Open site	Valid	Artefact : 13		101940
	Contact								Permits	
20-4-0285	Namoi River Scarred Tree #1	GDA	56	217756	6603495	Open site	Valid	Modified Tree (Carved or Scarred) : -		102245
	Contact								Permits	
20-4-0286	Namoi River Scarred Tree #2	GDA	56	217710	6603449	Open site	Valid	Modified Tree (Carved or Scarred) : -		102245
	Contact								Permits	
20-4-0287	Namoi River Scarred Tree #3	GDA	56	217636	6603558	Open site	Valid	Modified Tree (Carved or Scarred) : -		102245
	Contact								Permits	
20-4-0288	Namoi River Scarred Tree #4	GDA	56	217626	6603642	Open site	Valid	Modified Tree (Carved or Scarred) : -		102245
	Contact								Permits	
20-4-0390	BCS 1	GDA	56	219285	6608390	Open site	Valid	Artefact : 1		
	Contact								Permits	

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 59

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0391	BCS 2	GDA	56	218010	6607841	Open site	Valid	Artefact : 1		
	Contact	Recorders				Mrs.Angela Besant,Insite Heritage Pty Ltd				Permits
20-4-0394	Velyama IA1	GDA	56	220156	6609314	Open site	Valid	Artefact : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0447	Namoi River ST1	GDA	56	216971	6611063	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0448	Namoi River TSR ST1	GDA	56	217817	6611408	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0449	Namoi River TSR ST2	GDA	56	217800	6611420	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0450	Namoi River TSR ST3	GDA	56	217469	6611246	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0451	Namoi River TSR ST4	GDA	56	217437	6611193	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0452	Namoi River TSR ST5	GDA	56	217300	6611054	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0453	Namoi River TSR ST6	GDA	56	217375	6611118	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0454	Namoi River TSR ST7	GDA	56	217374	6611117	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits
20-4-0455	Namoi River TSR ST8	GDA	56	217386	6611137	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders				AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood				Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 59

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0458	Velyama IA2	GDA	56	220106	6609009	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0459	Velyama IA3	GDA	56	219344	6608973	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0460	Velyama IA4	GDA	56	219264	6608993	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0461	Velyama IA5	GDA	56	219012	6611213	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0462	Velyama ST1	GDA	56	220926	6610422	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0409	Teston AS4	GDA	56	222585	6616561	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mr.Adam Kirby,AECOM Australia Pty Ltd (previously HLA-Envirosciences) Permits							
20-4-0412	Teston GG2	GDA	56	221838	6612286	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0413	Teston Grindstone 1	GDA	56	221942	6612352	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood Permits							
20-4-0026	Velyama;Manilla;	AGD	56	221200	6611800	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Ms.Laila Haglund Permits							
20-4-0027	Velyama;Manilla;	AGD	56	221500	6611800	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Ms.Laila Haglund Permits							
20-1-0023	Maules Creek;Mardi Gras;Manilla;	AGD	56	219700	6622100	Open site	Valid	Artefact : -	Open Camp Site	3554
	Contact	Recorders	Ms.Laila Haglund Permits							
20-1-0024	Maules Creek;Elfins Crossing;Manilla;	AGD	56	219700	6622800	Open site	Valid	Artefact : -	Open Camp Site	3554
	Contact	Recorders	Ms.Laila Haglund Permits							
20-4-0010	Gins Leap;Gagabaayindaay;	AGD	56	216300	6604400	Open site	Valid	Aboriginal Ceremony and Dreaming : -	Natural Mythological (Ritual)	
	Contact	Recorders	Karen Flick Permits							
20-4-0011	Barbers Stockyard;	AGD	56	221400	6602700	Open site	Valid	Artefact : -, Modified Tree (Carved or Scarred) : -	Open Camp Site,Scarred Tree	
	Contact	Recorders	Karen Flick Permits							
20-4-0020	Willow Tree Range;Teston;Therribri;	AGD	56	222300	6613400	Open site	Valid	Artefact : -	Open Camp Site	415
	Contact	Recorders	Ms.Laila Haglund Permits							

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 59

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0021	Willowtree Range;Tiston;Therribri; Contact	AGD	56	222240	6613010	Open site	Valid	Artefact : - Permits	Open Camp Site	415
20-4-0022	Willow Tree Range;Tiston;Therribri; Contact	AGD	56	222800	6613300	Open site	Valid	Artefact : - Permits	Open Camp Site	415
20-4-0023	Willowtree Range;Tiston;Therribri; Contact	AGD	56	222600	6614300	Open site	Valid	Artefact : - Permits	Open Camp Site	
20-4-0024	Velyama;Manila; Contact	AGD	56	218900	6609000	Open site	Valid	Artefact : - Permits	Open Camp Site	
20-4-0025	Velyama;Manila; Contact	AGD	56	221100	6611000	Open site	Valid	Artefact : - Permits	Open Camp Site	
20-4-0153	BCHR7 Contact Searle	GDA	56	219896	6608809	Open site	Valid	Artefact : 1 Permits		
20-4-0154	BCHR8 Contact Searle	GDA	56	215153	6605186	Open site	Valid	Artefact : 1 Permits		
20-4-0475	Teston South AS1 Contact	GDA	56	220776	6611357	Open site	Valid	Artefact : 1 Permits		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 209634 - 223175, Northings : 6601053 - 6623553 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 59

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0076	BBS; Red Chief LALC; Leard SF 1	AGD	56	230304	6616233	Open site	Valid	Modified Tree (Carved or Scarred) : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0077	BBS; Red Chief LALC; Leard SF 4	AGD	56	224856	6616055	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0078	BBS; Red Chief LALC; Leard SF 3	AGD	56	224706	6615077	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0079	BBS; Red Chief LALC; Leard SF 2	AGD	56	230737	6615251	Open site	Valid	Artefact : -		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0080	BBS; Red Chief LALC; Leard SF - Goonbri Ck	AGD	56	231841	6610044	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0090	BBS; Red Chief LALC; Leard SF 5	AGD	56	227346	6610886	Open site	Valid	Artefact : 1		99031
	Contact	Recorders	Archaeological Surveys & Salvage ,Red Cheif LALC - BBS Survey Team				Permits			
20-4-0221	LFNV12	GDA	56	223805	6610902	Open site	Valid	Artefact : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0223	LFNV28, 29 & 31	GDA	56	227436	6612395	Open site	Valid	Modified Tree (Carved or Scarred) : 3		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0225	LFNV30	GDA	56	227321	6611700	Open site	Valid	Modified Tree (Carved or Scarred) : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0226	LFNV32	GDA	56	225740	6611543	Open site	Valid	Modified Tree (Carved or Scarred) : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0227	LFNV33	GDA	56	225971	6611066	Open site	Valid	Artefact : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0205	HRNV34	GDA	56	227321	6611700	Open site	Valid	Modified Tree (Carved or Scarred) : 1		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0217	LFNV5,6,14,15,16,18 & 19	GDA	56	228350	6612270	Open site	Valid	Artefact : 9		101940
	Contact	Recorders	Mrs.Angela Besant				Permits			
20-4-0218	LF NV 7,8,9	GDA	56	227396	6612675	Open site	Valid	Artefact : 3		101940

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 74

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0219	LF NV10	GDA	56	227341	6612386	Open site	Valid	Artefact : 4		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0220	LFNV11	GDA	56	225126	6612750	Open site	Valid	Artefact : 1		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0395	Back Creek AS1	GDA	56	223621	6618342	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0396	Back Creek AS2	GDA	56	223882	6618305	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0397	Back Creek AS3	GDA	56	224360	6618368	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0398	Back Creek AS4	GDA	56	224584	6618315	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0399	Back Creek AS5	GDA	56	225871	6618537	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0400	Back Creek AS6	GDA	56	226184	6618503	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0401	Back Creek IA1	GDA	56	225135	6618633	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0402	Back Creek IA2	GDA	56	225211	6618669	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0403	Leard SF AS1	GDA	56	226284	6614316	Open site	Valid	Art (Pigment or Engraved) : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0404	LEARD SF AS2	GDA	56	226658	6615384	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0405	LEARD SF IA1	GDA	56	225541	6615348	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0406	LEARD SF IA2	GDA	56	225023	6615846	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0407	LEARD SF ST2	GDA	56	226273	6614045	Open site	Valid	Artefact : 1		
	Contact	Recorders	AECOM Australia Pty Ltd (previously HLA-Envirosciences),Mr.Luke Kirkwood					Permits		
20-4-0441	T10/3	GDA	56	231776	6614765	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0442	T10/4	GDA	56	231779	6614731	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 74

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
20-4-0443	T10/1	GDA	56	231246	6615304	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0444	T10/2	GDA	56	231311	6615253	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0456	Teston AS1	GDA	56	224005	6615953	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders						Permits		
20-4-0457	Teston AS2	GDA	56	224058	6616636	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0463	Watsons ST1	GDA	56	223575	6617425	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders						Permits		
20-4-0464	Younger ST1	GDA	56	225772	6618035	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders						Permits		
20-4-0408	Teston AS3	GDA	56	224455	6616988	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0410	Teston AS5	GDA	56	223322	6616707	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0411	Teston AS61	GDA	56	224714	6615494	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0028	Teston;Manilla;	AGD	56	224500	6614300	Open site	Valid	Artefact : -	Open Camp Site	415
	Contact	Recorders						Permits		
20-4-0029	Willowtree Range;Manilla;	AGD	56	224500	6614200	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders						Permits		
20-4-0030	Back Creek/Stewarts Gully;Manilla;	AGD	56	230800	6615300	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders						Permits		
20-4-0031	Maules Creek;Warriahdool;Manilla;	AGD	56	225200	6621600	Open site	Valid	Artefact : -	Open Camp Site	3554
	Contact	Recorders						Permits		
20-4-0032	Back Creek;Warriahdool;Manilla;	AGD	56	225700	6618800	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders						Permits		
20-4-0033	Willowtree Range;Teston;	AGD	56	223300	6614400	Open site	Valid	Artefact : -	Open Camp Site	

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 74

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0034	Willow Tree Range;Teston;	AGD	56	223400	6614500	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0035	Back Creek;Leard State Forest;	AGD	56	230700	6614600	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0015	Willow Tree Range	AGD	56	224500	6615300	Open site	Valid	Artefact : -	Open Camp Site	415,1844
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0016	Willow Tree Range	AGD	56	224000	6616000	Open site	Valid	Artefact : -	Open Camp Site	415,1844
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0019	Willow Tree Range.	AGD	56	223400	6614600	Open site	Valid	Artefact : -	Open Camp Site	415,1844
	Contact	Recorders		Ms.Laila Haglund				Permits		
20-4-0094	BC-1	AGD	56	226063	6611506	Open site	Valid	Artefact : 1		
	Contact S Scanlon	Recorders		Mr.Giles Hamm				Permits	2369,2370	
20-4-0096	BC-2	GDA	56	226011	6611602	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Giles Hamm Archaeology				Permits		
20-4-0097	BC-3	GDA	56	226229	6612333	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0098	BC-4	GDA	56	227126	6611577	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0099	BC-5	GDA	56	226989	6610613	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0100	BC-6	GDA	56	226988	6610617	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0101	BC-7	GDA	56	227656	6611117	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0102	BC-8	GDA	56	227855	6611113	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0103	BC-9	GDA	56	227920	6611159	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0104	BC-10	GDA	56	227966	6611252	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0105	BC-11	GDA	56	228231	6611286	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders		Mr.Giles Hamm				Permits		
20-4-0106	BC-12	GDA	56	228078	6612217	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 74

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SiteID	SiteName		Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Searle									Permits
20-4-0107	BC-13		GDA	56	227968	6611850	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0108	BC-14		GDA	56	227512	6611198	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0109	BC-15		GDA	56	227431	6611081	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0110	BC-16		GDA	56	228387	6611077	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Searle									Permits
20-4-0118	BC-24		GDA	56	226039	6610496	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0119	BC-25		GDA	56	226014	6610716	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0120	BC-26		GDA	56	225879	6611038	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0128	BC34		GDA	56	225940	6611680	Open site	Valid	Artefact : 1		
	Contact	Searle									Permits
20-4-0469	T17/3		GDA	56	231097	6615763	Open site	Valid	Artefact : 1		
	Contact										Permits
20-4-0471	T17/1		GDA	56	231000	6615274	Open site	Valid	Artefact : 1		
	Contact										Permits
20-4-0472	T17/2		GDA	56	231078	6615163	Open site	Valid	Artefact : 1		
	Contact										Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232283, Northings : 6610160 - 6623587 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 74

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0147	BC 54	GDA	56	226105	6608889	Open site	Valid	Artefact : 60		
	Contact Searle	Recorders	Mr.Giles Hamm					Permits		
20-4-0222	LFNV25,26,27	GDA	56	225649	6610101	Open site	Valid	Modified Tree (Carved or Scarred) : 3		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0224	LF NV 24, 51-61 & 63	GDA	56	224946	6608068	Open site	Valid	Artefact : 145		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0228	LFNV 49, 50 & 62	GDA	56	224896	6609111	Open site	Valid	Artefact : 26		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0229	LFNV 77, 78	GDA	56	223825	6608155	Open site	Valid	Artefact : 10		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0198	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			101906
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0216	LFNV1,2,3,4 &13	GDA	56	223477	6609967	Open site	Valid	Artefact : 4		101940
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0388	BCS 5	GDA	56	226147	6608004	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0389	BCS 6	GDA	56	225719	6608229	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0392	BCS 3	GDA	56	225775	6607762	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0393	BCS 4	GDA	56	226222	6607532	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0196	Boggabri Coal Pad 1	AGD	56	225915	6607271	Open site	Not a Site	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0323	TCEP-OS-002	GDA	56	231503	6608363	Open site	Valid	Artefact : 3		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0324	TCEP-OS-003	GDA	56	231338	6608099	Open site	Valid	Artefact : 6		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0325	TCEP-OS-004	GDA	56	231340	6608288	Open site	Valid	Artefact : 2		
	Contact	Recorders	Kayandel Archaeological Services,Mr.Lance Syme					Permits		
20-4-0326	TCEP-OS-005	GDA	56	231211	6608107	Open site	Valid	Artefact : 2		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders								Permits
20-4-0327	TCEP-OS-006	GDA	56	231225	6607945	Open site	Valid	Artefact : 6		
	Contact	Recorders								Permits
20-4-0328	TCEP-OS-007	GDA	56	231309	6607856	Open site	Valid	Artefact : 8		
	Contact	Recorders								Permits
20-4-0329	TCEP-OS-008	GDA	56	231199	6607594	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0330	TECP-OS-009	GDA	56	231084	6607415	Open site	Valid	Artefact : 61		
	Contact	Recorders								Permits
20-4-0331	TCEP-OS-010	GDA	56	231239	6607304	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0332	TCEP-OS-011	GDA	56	230827	6607211	Open site	Valid	Artefact : 3		
	Contact	Recorders								Permits
20-4-0333	TCEP-OS-012	GDA	56	231039	6607183	Open site	Valid	Artefact : 4		
	Contact	Recorders								Permits
20-4-0334	TCEP-OS-13	GDA	56	231170	6607115	Open site	Valid	Artefact : 7		
	Contact	Recorders								Permits
20-4-0335	TCEP-OS-014	GDA	56	230317	6607387	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0336	TCEP-OS-15	GDA	56	230902	6606931	Open site	Valid	Artefact : 2		
	Contact	Recorders								Permits
20-4-0342	TCEP-ST-002	GDA	56	231307	6608235	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders								Permits
20-4-0347	TCEP-ST-010	GDA	56	227984	6608219	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders								Permits
20-4-0348	TCEP-ST-011	GDA	56	228319	6608164	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders								Permits
20-4-0434	T9/6	GDA	56	231751	6607129	Open site	Valid	Artefact : 1		
	Contact	Recorders								Permits
20-4-0438	T9/7	GDA	56	231747	6607214	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders						Permits		
20-4-0439	T9/8	GDA	56	231795	6607642	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0440	T9/9	GDA	56	231758	6607298	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0313	TCEP-IF-012	GDA	56	230148	6607603	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0322	TCEP-OS-001	GDA	56	231590	6608721	Open site	Valid	Artefact : 3		
	Contact	Recorders						Permits		
20-4-0306	TCEP-IF-005	GDA	56	231525	6608604	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0308	TCEP-IF-007	GDA	56	231260	6607745	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0309	TCEP-IF-008	GDA	56	231076	6607769	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0310	TCEP-IF-009	GDA	56	231339	6607583	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0311	TCEP-IF-010	GDA	56	231287	6607402	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0312	TCEP-IF-011	GDA	56	230894	6607193	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0424	T7/1	GDA	56	231967	6608717	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0293	BIC SLU	GDA	56	229150	6609849	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits	3477	
20-4-0294	TCEP-IF-013	GDA	56	229859	6607371	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0295	TCEP-IF-014	GDA	56	230202	6607362	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0296	TCEP-IF-015	GDA	56	230202	6607326	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0297	TCEP-IF-016	GDA	56	230909	6607326	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
20-4-0298	TCEP-IF-017	GDA	56	230308	6606958	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		
20-4-0299	TCEP-ST-001	GDA	56	228998	6608401	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0302	TCEP-IF-001	GDA	56	228841	6608319	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Mr.Lance Syme					Permits		
20-4-0303	TCEP-IF-002	GDA	56	229020	6608474	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Mr.Lance Syme					Permits		
20-4-0017	Nagero Creek;	AGD	56	225600	6608000	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Karen Flick					Permits		
20-4-0092	NAS 1	AGD	56	227254	6607483	Open site	Valid	Artefact : 4		
	Contact	S Scanlon	Recorders	Mr.John Appleton					Permits	2312
20-4-0093	NISO 1	AGD	56	227254	6607483	Open site	Valid	Artefact : 1		
	Contact	S Scanlon	Recorders	Mr.John Appleton					Permits	2312
20-4-0111	BC-17	GDA	56	227644	6608315	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0112	BC-18	GDA	56	227622	6608416	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0113	BC-19	GDA	56	227622	6608492	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0114	BC-20	GDA	56	227531	6608729	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0115	BC-21	GDA	56	226251	6609073	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0116	BC-22	GDA	56	227767	6608516	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0117	BC-23	GDA	56	226605	6608460	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0121	BC-27	GDA	56	226238	6609120	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0122	BC-28	GDA	56	226159	6609147	Open site	Valid	Artefact : 1		
	Contact	Searle	Recorders	Mr.Giles Hamm					Permits	
20-4-0123	BC-29	GDA	56	226090	6609164	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Searle								Permits
20-4-0124	BC30	GDA	56	226018	6609174	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0125	BC31	GDA	56	225354	6609238	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0126	BC32	GDA	56	225147	6609354	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0127	BC33	GDA	56	225058	6609442	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0129	BC36	GDA	56	230527	6609006	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0130	BC37	GDA	56	226785	6608396	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Searle								Permits
20-4-0131	BC38	GDA	56	226524	6608158	Open site	Valid	Artefact : 144		
	Contact	Searle								Permits
20-4-0132	BC39	GDA	56	226422	6608122	Open site	Valid	Artefact : 1		
	Contact	Searle								Permits
20-4-0133	BC 40	GDA	56	226468	6608332	Open site	Valid	Artefact : 10		
	Contact	Searle								Permits
20-4-0134	BC 42	GDA	56	226309	6608430	Open site	Valid	Artefact : 6		
	Contact	Searle								Permits
20-4-0135	BC 41	GDA	56	226333	6608273	Open site	Valid	Artefact : 3		
	Contact	Searle								Permits
20-4-0136	BC 43	GDA	56	226155	6608455	Open site	Valid	Artefact : 15		
	Contact	Searle								Permits
20-4-0137	BC 44	GDA	56	226186	6608185	Open site	Valid	Artefact : 4		
	Contact	Searle								Permits
20-4-0138	BC 45	GDA	56	226282	6608124	Open site	Valid	Artefact : 4		
	Contact	Searle								Permits
20-4-0139	BC 46	GDA	56	226098	6608743	Open site	Valid	Artefact : 28		
	Contact	Searle								Permits
20-4-0140	BC 47	GDA	56	226105	6608889	Open site	Valid	Artefact : 3		
	Contact	Searle								Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0141	BC 48	GDA	56	226105	6608889	Open site	Valid	Artefact : 3		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0142	BC 49	GDA	56	226105	6608889	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0143	BC 50	GDA	56	226105	6608889	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0144	BC 51	GDA	56	226105	6608889	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0145	BC 52	GDA	56	226105	6608889	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0146	BC 53	GDA	56	226105	6608889	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0148	BCHR1	GDA	56	225485	6608430	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0149	BCHR2	GDA	56	225368	6608222	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0150	BCHR3	GDA	56	224793	6608318	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0151	BCHR4	GDA	56	224630	6608316	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0152	BCHR5	GDA	56	224530	6608290	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Mr.Giles Hamm								Permits
20-4-0155	BCHR6	AGD	56	223161	6607947	Open site	Valid	Artefact : 1		
	Contact Searle	Recorders Archaeological Risk Assessment Services (ARAS)								Permits
20-4-0465	T15/1	GDA	56	231375	6607678	Open site	Valid	Artefact : 1		
	Contact	Recorders Mrs.Angela Besant,Insite Heritage Pty Ltd								Permits
20-4-0466	T15/4	GDA	56	230983	6607659	Open site	Valid	Artefact : 1		
	Contact	Recorders Mrs.Angela Besant,Insite Heritage Pty Ltd								Permits
20-4-0467	T16/1	GDA	56	231162	6607748	Open site	Valid	Artefact : 1		
	Contact	Recorders Mrs.Angela Besant								Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0468	T16/2	GDA	56	231114	6607569	Open site	Valid	Artefact : 1		
	Contact									Permits
20-4-0474	NV79	GDA	56	224486	6608228	Open site	Valid	Artefact : 1		
	Contact									Permits

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223071 - 232335, Northings : 6606881 - 6610160 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 97

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0199	BCD 2	GDA	56	225900	6606697	Open site	Valid	Artefact : 2		101906
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0200	BCD 3	GDA	56	226322	6606222	Open site	Valid	Artefact : 1		101906
	Contact	Recorders	Mrs.Angela Besant					Permits		
20-4-0337	TCEP-OS-016	GDA	56	230314	6605906	Open site	Valid	Artefact : 2		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		
20-4-0338	TCEP-OS-017	GDA	56	229714	6606080	Open site	Valid	Artefact : 2		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		
20-4-0339	TCEP-OS-018	GDA	56	229384	6605975	Open site	Valid	Artefact : 6		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0340	TCEP-OS-019	GDA	56	228763	6605355	Open site	Valid	Artefact : 2		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0341	TCEP-OS-020	GDA	56	228527	6605098	Open site	Valid	Artefact : 2		
	Contact	Recorders	Kayandel Archaeological Services,Mr.Warwick Wright					Permits		
20-4-0343	TCEP-ST-003	GDA	56	231090	6606729	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Ms.Catherine Vermeltfoort					Permits		
20-4-0344	TCEP-ST-004	GDA	56	229111	6605908	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0345	TCEP-ST-005	GDA	56	230940	6606189	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		
20-4-0346	TCEP-ST-006	GDA	56	230930	6606183	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0349	TCEP-ST-009	GDA	56	231529	6605495	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0350	TCEP-ST-007	GDA	56	227834	6605044	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223175 - 232335, Northings : 6601053 - 6606881 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 36

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
20-4-0351	TCEP-ST-008	GDA	56	231309	6605396	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0433	T9/5	GDA	56	231537	6606001	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0435	T9/2	GDA	56	231331	6606532	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0436	T9/3	GDA	56	231648	6606698	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0437	T9/4	GDA	56	231594	6606326	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0314	TCEP-IF-020	GDA	56	230950	6606068	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0315	TCEP-IF-021	GDA	56	229678	6606068	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0316	TCEP-IF-022	GDA	56	226939	6606170	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0317	TCEP-IF-023	GDA	56	229205	6605789	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0318	TCEP-IF-024	GDA	56	231021	6606355	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0319	TCEP-IF-025	GDA	56	228896	6604964	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0320	TCEP-IF-026	GDA	56	228277	6604964	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Catherine Vermeltfoort					Permits		
20-4-0321	TCEP-IF-027	GDA	56	227652	6605232	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0305	TCEP-IF-004	GDA	56	227590	6605116	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Melissa Dunk					Permits		
20-4-0307	TCEP-IF-006	GDA	56	227063	6605159	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services,Ms.Caroline Hubschmann					Permits		
20-4-0425	T9/1	GDA	56	231291	6606581	Open site	Valid	Artefact : 1		
	Contact	Recorders	Mrs.Angela Besant,Insite Heritage Pty Ltd					Permits		
20-4-0301	TCEP-IF-018	GDA	56	230364	6606845	Open site	Valid	Artefact : 1		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223175 - 232335, Northings : 6601053 - 6606881 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 36

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
20-4-0156	NAS 2	AGD	56	228783	6605841	Open site	Valid	Artefact : 2		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	3361	
20-4-0157	GGOS 1	AGD	56	228499	6605091	Open site	Valid	Artefact : 20		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2440	
20-4-0158	GGOS 2	AGD	56	228345	6604288	Open site	Valid	Artefact : 25		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2440	
20-4-0159	GGOS 3	AGD	56	228292	6604288	Open site	Valid	Artefact : 10		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2440	
20-4-0160	GGOS 4	AGD	56	228335	6604163	Open site	Valid	Artefact : 5		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>	2440	
20-4-0161	NST 1	AGD	56	227448	6606507	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		

Report generated by AHIMS Web Service on 21/03/2014 for Jeremy Hill for the following area at Datum :GDA, Zone : 56, Eastings : 223175 - 232335, Northings : 6601053 - 6606881 with a Buffer of 0 meters. Additional Info : DD. Number of Aboriginal sites and Aboriginal objects found is 36

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Appendix 3

Glossary of Site Types

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Aboriginal site types

The following is a brief description of most Aboriginal site types.

Artefact Scatters

Artefact scatters are defined by the presence of two or more stone artefacts in close association (i.e. within fifty metres of each other). An artefact scatter may consist solely of surface material exposed by erosion, or may contain sub-surface deposit of varying depth. Associated features may include hearths or stone-lined fireplaces and heat treatment pits.

Artefact scatters may represent:

- Camp sites: involving short or long-term habitation, manufacture and maintenance of stone or wooden tools, raw material management, tool storage and food preparation and consumption;
- Hunting or gathering activities;
- Activities spatially separated from camp sites (e.g. tool manufacture or maintenance); or
- Transient movement through the landscape.

The detection of artefact scatters depends upon conditions of surface visibility, including vegetation cover, ground disturbance and recent sediment deposition. Factors such as poor light, vegetation, leaf litter may obscure artefact scatters and prevent their detection during surface surveys.

Bora Grounds

Bora grounds are a ceremonial site associated with initiations. They usually comprise two circular depressions in the earth and may be edged with stone. Bora grounds generally occur on soft sediments in river valleys, although they may also be located on high, rocky ground in association with stone arrangements.

Burials

Human remains were often placed in hollow trees, caves or sand deposits and may have been marked by carved or scarred trees. Burials have been identified eroding out of sand deposits or creek banks, or when disturbed by development. The probability of detecting burials during archaeological fieldwork is extremely low.

Culturally Modified Trees

Culturally modified trees include scarred and carved trees. Scarred trees are caused by the removal of bark for use in manufacturing canoes, containers, shields or shelters. Notches were also carved in trees to permit easier climbing. Scarred trees are only likely to be present on mature trees remaining from original vegetation. Carved trees, the easiest to identify, are caused by the removal of bark to create a working surface on which engravings are incised. Carved trees were used as markers for ceremonial and symbolic purposes, including burials. Although, carved trees were relatively common in NSW in the early 20th century, vegetation removal has rendered this site type extremely rare. Modified trees, where bark was removed for often domestic use are less easily identified. Criteria for identifying modified trees include: the age of the tree; type of tree (the bark of many trees is not suitable, also introduced species would be unlikely subjects); axe marks (with the need to determine the type of axe - stone or steel – though Aborigines after settlement did use steel); shape of the scar (natural or culturally scarred); height of the scar above the ground (reasonable working height with consideration given to subsequent growth).

Fish Traps

Fish traps comprised arrangements of stone, branches and/or wickerwork placed in watercourses, estuaries and along coasts to trap or permit the easier capture of aquatic fauna.

Grinding Grooves

Grinding grooves are elongated narrow depressions in rocks (generally sedimentary), usually associated with watercourses, that are created by the shaping and sharpening of ground-edge implements. To produce a sharp edge, the axe blank (or re-worked axe) was honed on a natural stone surface near a source of water. The water was required for lubricating the grinding process. Axe grinding grooves can be identified by features such as a narrow short groove, with greatest depth near the groove centre. The grooves also display a patina developed through friction between stone surfaces. Generally a series of grooves are found as a result of the repetitive process.

Isolated Finds

An isolated find describes a site where only one artefact is visible. These finds are not found in apparent association with other evidence for prehistoric activity or occupation. Isolated finds occur anywhere and may represent loss, deliberate discard or abandonment of an artefact, or may be the remains of a dispersed artefact scatter. An isolated find may flag the occurrence of other less visible artefacts in the vicinity or may indicate disturbance or relocation after the original discard.

Middens

Shell middens comprise deposits of shell remaining from consumption and are common in coastal regions and along watercourses. Middens vary in size, preservation and content, although they often contain artefacts made from stone, bone or shell, charcoal and the remains of terrestrial or aquatic fauna that formed an additional component of Aboriginal diet. Middens can provide significant information on land-use patterns, diet, chronology of occupation and environmental conditions.

Mounds

Aboriginal mounds are places where people lived and reflect a record of that living space. Mounds may be places where Aboriginal people lived over long periods of time. Mounds often contain charcoal, burnt clay or stone heat retainers from cooking ovens, animal bones, shells, stone tools and occasionally Aboriginal burials.

Mythological / Traditional Sites

Mythological and traditional sites of significance to Aboriginal people may occur in any location, although they are often associated with natural landscape features. They include sites associated with dreaming stories, massacre sites, traditional camp sites and contact sites. Consultation with the local Aboriginal community is essential for identifying these sites.

Ochre quarries

Ochre, iron oxide may in colours through brown, yellow to red. Ochre may have been used dry for colouring hair or skin or ground to a fine powder and mixed with mediums such as water, blood, fat, etc as a fixative. Ochre was used for decorating the body, artefacts and rockshelters. Quality deposits provided a valuable resource with evidence of wide spread trade of the substance.

Rockshelters may contain Art and / or Occupation Deposit

Rockshelters occur where geological formations suitable for habitation or use are present, such as rock overhangs, shelters or caves. Rockshelter sites generally contain artefacts, food remains and/or rock art and may include sites with areas of potential archaeological deposit, where evidence of rock art or human occupation is expected but not visible. The geological composition of a Study Area will indicate the likelihood for rockshelters to occur.

Stone Arrangements

Stone arrangements include lines, circles, mounds, or other patterns of stone arranged by Aboriginal people. These may be associated with bora grounds, ceremonial sites, mythological or sacred sites. Stone arrangements are more likely to occur on hill tops and ridge crests that contain stone outcrops or surface stone. Preservation of those sites is dependent on minimal impact from recent land use practices.

Stone Quarries

A stone quarry is a place at which stone resource exploitation has occurred. Quarry sites are only located where the exposed stone material is suitable for use either for ceremonial purposes (e.g. ochre) or for artefact manufacture.

Appendix 4

RAP Consultation Documentation

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Consultation Log

Date	Consultation Description	Received By	Method of Contact	Details
3/04/2014	RPS rang Grant Trindall	Grant Trindall	Phone	RPS left a message requesting Grant to call back regarding RAPs listed under his address.
7/04/2014	RAP Tender Document sent to all RAPs	All RAPs	Mail	The RAP Tender Document outlined the Project, the proposed methodology and offered an opportunity for comment. In addition, the letter also informed the RAPs regarding Workshop 1 proposed for the 16 th of April which also provided and opportunity to provide feedback.
7/04/2014	RPS emailed Tender Docs to RAPs with email only contacts	Amanda Heard, Dorothy Tighe and Marjorie Talbott	Email	The RAP Tender Document outlined the Project and requested that expression of interest were due by 22 April 2014. Workshop 1 is being held on the 16th of April. Opportunities to provide and EoI will be accepted at the first workshop.
7/04/2014	RPS received a return phone call from Grant Trindall	Jeremy Hill	Phone	Grant rang to confirm that Leo Walker, Peter Swann, Paul McGrady, Cohen Trindall and Ian Jerrad were care of Grant's Address.
9/04/2014	Michael Long Rang RPS	-	Phone	Jeremy Hill was unable to take Michael's call, however he did leave a message.
9/04/2014	Ronald Long rang RPS	Jeremy Hill	Phone	Ronald raised concerns with the restricted number of RAPs have attended the Tarrawonga works and he finds this disrespectful. RPS informed Ronald that the Tarrawonga works were outside of the AHCS scope.
9/04/2014	RPS received a call from Michael Long	Jeremy Hill	Phone	Michael was upset that works were not remunerated and that he would not give any information about cultural values for free. In addition, he doesn't want his cultural knowledge made public. Michael enquired about Native Title. RPS could not comment.
9/04/2014	Veronica Roberts rang RPS	Jeremy Hill	Phone	Veronica Roberts called RPS to ask if her partner could attend Workshop 1 on her behalf. RPS agreed and let Veronica know the venue location was Smithurst Theatre in Gunnedah.
9/04/2014	Gordon Griffith rang RPS	Jeremy Hill	Phone	Gordon Griffiths could not confirm his attendance at Workshop 1.
9/04/2014	RPS received a call from Mick Trindall	Jeremy Hill	Phone	Mick rang Jeremy Hill to confirm his attendance at Workshop 1.
9/04/2014	RPS received a call	Jeremy Hill	Phone	Michael Long stated that he

Date	Consultation Description	Received By	Method of Contact	Details
	from Michael Long			would not give out cultural information for free. He could not confirm his attendance for Workshop 1.
10/04/2014	Angus Alex Binge called RPS	Jeremy Hill	Phone	Angus Alex raised concerns that the work was not remunerated and would not attend.
11/04/2014	Bigundi Biame emailed RPS	Jeremy Hill	Email	Bigundi Biame confirmed their attendance at Workshops 1, 2 and 3.
14/04/2014	RPS received a call from Troy Silver	RPS	Phone	Troy Silver rang RPS to confirm attendance at Workshop 1 for Troy, Tyann, Skylee and Pam Silver. He also confirmed Leeann and Gloria Foley's attendance.
14/04/2014	RPS called Lloyd and Josh Matthews	Karyn Matthews	Phone	Jeremy Hill left a message with Karyn asking Lloyd and Josh to ring him back with regards to their attendance at workshop 1.
14/04/2014	RPS called Ian & Loretta Long	Ian & Loretta Long	Phone	JH left message on both contact numbers.
14/04/2014	RPS called Norm Archibold	Norm Archibold	Phone	JH rang to confirm Norm's attendance at Workshop 1. Norm could not attend Workshop 1.
14/04/2014	RPS received a call from Ronald Long	Jeremy Hill	Phone	Ronald rang RPS. He raised certain issues about some additional RAPs being consulted and no payments.
14/04/2014	RPS called Rhonda, Reg and Shane Talbott	Rhonda, Reg and Shane Talbott	Phone	RPS rang to confirm their attendance at Workshop 1, however they could not be reached.
14/04/2014	RPS called David Horton	David Horton	Phone	RPS rang to confirm attendance at Workshop 1. David was in a meeting and would call back.
14/04/2014	RPS called Scott Talbott	Scott Talbott	Phone	RPS rang to confirm attendance at Workshop 1. While Scott hadn't had the time to look at the project details, he would be in attendance at the 9am session for Workshop 1.
14/04/2014	RPS called Aaron and Chris Talbott	Aaron and Chris Talbott	Phone	RPS rang to confirm attendance at Workshop 1. This number had been disconnected.
14/04/2014	RPS called Derek Talbott	Derek Talbott	Phone	RPS rang to confirm attendance at Workshop 1. This number had been disconnected.
14/04/2014	RPS called June Field	June Field	Phone	RPS rang to confirm attendance at Workshop 1. Jeremy Hill left a message asking June to call back.
14/04/2014	RPS called Gwen Griffen	Gwen Griffen	Phone	RPS rang to confirm attendance at Workshop 1. Gwen would not be attending the first workshop.
14/04/2014	RPS called Neville Sampson	Neville Sampson	Phone	RPS rang to confirm attendance at Workshop 1. Neville would not be attending the first workshop.

Date	Consultation Description	Received By	Method of Contact	Details
14/04/2014	RPS called Marjorie Talbott	Marjorie Talbott	Phone	RPS rang to confirm attendance at Workshop 1. The number was busy and no facilities for leaving a message were available.
14/04/2014	RPS called Leonard Talbott	Leonard Talbott	Phone	RPS rang to confirm attendance at workshop 1. Jeremy Hill left a message asking Leonard to call back. Leonard did call back and would be in attendance at the first workshop.
14/04/2014	RPS received a call from Veronica Long	Veronica Long	Phone	Veronica Long enquired about the workshop venue. Jeremy Hill informed her it was taking place at the Smithurst Theatre in Gunnedah.
14/04/2014	RPS called Aaron Talbott	Aaron Talbott	Phone	RPS rang to confirm attendance at Workshop 1. Aaron would attend Workshop 1.
14/04/2014	RPS received a returned Phone call from Leonard Talbott	Jeremy Hill	Phone	RPS wanted to confirm Leonard's attendance. He would not be able to attend.
14/04/2014	RPS received a phone call from Allan Kelly	-	Phone	Jeremy Hill was unable to take his call.
14/04/2014	RPS received an email from Antwinette Squires	Tessa Boer-Mah	Email	Antwinette confirmed her attendance at the first workshop.
15/04/2014	RPS received a call from Wayne Griffiths	Wayne Griffiths	Phone	Wayne rang RPS to confirm Workshop 2 venue. He would be in attendance at the 11:30am Workshop 2.
16/04/2014	Workshop 1 - 9am Session	RAPs in attendance: Aaron Talbott, David Dorrington and Michael Long RPS attendance: Jeremy Hill & Tessa Boer-Mah WHC Attendance: Lachlan Johnson, Jill Johnson, Tim Muldoon and Danny Young	In Person	Documented in report.
16/04/2014	Workshop 1 - 11:30am Session	RAPs in attendance: Troy Silver, Gloria Foley, Leeann Foley, Pam Silver, Shirley Talbott, Tyan Silver, Cindy Foley RPS	In Person	Documented in report.

Date	Consultation Description	Received By	Method of Contact	Details
		attendance: Jeremy Hill & Tessa Boer- Mah WHC Attendance: Lachlan Johnson		
16/04/2014	Workshop 1 - 2pm Session	RAPs in attendance: Veronica Long and Evonne Long RPS attendance: Jeremy Hill & Tessa Boer- Mah WHC attendance: Jill Johnson	In Person	Documented in report.
17/04/2014	Gomeri Traditional Custodians (comprising the Gomeri Elders, Red Chief LALC, Min Min Aboriginal Corporation including 32 elders and 65 RAPs) wrote to RPS with a letter of Complaint	RPS (Addressed to Tessa Boer-Mah)	Email	RPS took note of the complaint letter. A response was given on 16 May 2014 (see 16/05/2014).
23/04/2014	RPS called Allan Kelly	Allan Kelly	Phone	RPS returned Allan's phone call, however RPS was only able to leave a message.
29/04/2014	RPS called Veronica Long	Veronica Long	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Troy Silver	Troy Silver	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Cindy Foley	Cindy Foley	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Shirley Talbott	Shirley Talbott	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Pam Silver	Pam Silver	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Gloria Foley	Gloria Foley	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.

Date	Consultation Description	Received By	Method of Contact	Details
30/04/2014	RPS called Wayne Griffiths	Wayne Griffiths	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received.
29/04/2014	RPS called Aaron Talbott	Aaron Talbott	Phone	RPS rang to inform that Workshop 2 had been cancelled, as a result of the complaint letter received. Aaron enquired as the circumstances behind the postponed session. RPS responded by stating that more time was needed between each workshop.
12/05/2014	RPS received email from Gomerioi Nations	Jeremy Hill	Email	Thomas Dahlstrom confirmed his attendance for the third workshop. JH responded stating that the third workshop had been postponed and will email updated details of the third workshop when they were available.
16/05/2014	RPS responded to the letter of complaint sent in by the Gomerioi Traditional Custodians (comprising the Gomerioi Elders, Red Chief LALC, Min Min Aboriginal Corporation including 32 elders and 65 RAPs)	Gomerioi Traditional Custodians (Addressed to Dolly Talbott)	Email	RPS responded to the letter of complaint. The proposed solution put forward to the Gomerioi Traditional Custodians was to extend the deadline for submission of the AHCS, giving the RAPs extended prior notice.
19/05/2014	RPS received a call from T&G Cultural Consultants	Tessa Boer-Mah	Phone	Tony Griffiths objected to the RAPs not being paid for the second workshop. He raised concerns of equality regarding heritage in the Aboriginal community. Tony was unable to attend the second workshop.
22/05/2014	RPS called Wunga-Li Traditional Owners	Dolly Talbott	Phone	Asked to be rung back later.
23/05/2014	RPS received a call from Anthony Munroe	Jeremy Hill	Phone	Will be attending the second workshop.
24/05/2014	RPS received a Return To Sender Letter - Invitation to Workshop 2	Jeremy Hill	Mail	This RTS was for Clifford Matthews. No alternate address was given and calls were made to obtain a new address, however Clifford could not be reached.
26/05/2014	RPS received a Return To Sender Letter - Invitation to Workshop 2	Jeremy Hill	Mail	This RTS was for Vicky Slater, Anthony James Conlon and Derrek Talbott. An email was sent to Vicky Slater with the details. No other supplied addresses were available for Anthony James Conlan or Derrek Talbott.
27/05/2014	RPS called Wunga-Li Traditional Owners	Dolly Talbott	Phone	Asked to be rung back later.
27/05/2014	RPS called Wunga-Li Traditional Owners	Dolly Talbott	Phone	Left message on the supplied contact details.
27/05/2014	RPS called Rhonda	Rhonda	Phone	Rhonda asked to be called back.

Date	Consultation Description	Received By	Method of Contact	Details
	Talbott	Talbott		RPS also explained the project and the process of the workshops.
27/05/2014	RPS called Scott Talbott	Scott Talbott	Phone	RPS explained the project and process for the workshop and emailed the data to Scott.
27/05/2014	RPS called Gomery Cultural Consultants	David Horton	Phone	David Horton would call back with a time he could attend the workshop.
27/05/2014	RPS called June Field	June Field	Phone	Left message on the supplied contact details.
27/05/2014	RPS called Mooki Country Custodian	Gloria Maltby	Phone	Phone engaged, not able to leave a message.
27/05/2014	RPS called Joyce Dorrington	Joyce Dorrington	Phone	RPS explained the project and process for the workshop, however, Joyce Dorrington would not be able to make it.
27/05/2014	RPS called Paul Moodie	Paul Moodie	Phone	Invalid Number
27/05/2014	RPS called Leonard Talbott	Leonard Talbott	Phone	A message was left on the supplied contact number.
27/05/2014	RPS called Shirley Talbott	Shirley Talbott	Phone	Shirley asked about the workshop/ projects process. RPS explained the project and process for each workshop. Shirley Talbott could not confirm her attendance, but would attempt to make one session for Workshop 2.
27/05/2014	RPS called Steve Talbott	Steve Talbott	Phone	Steve could not confirm his attendance, but would attempt to attend a session for Workshop 2.
28/05/2014	RPS received a Return To Sender Letter - Invitation to Workshop 2	Jeremy Hill	Mail	This RTS was for Corey Lamb, Kasey Henderson and Cyril Sampson. No alternate address was given and calls were made to obtain a new address, however Corey, Kasey and Cyril could not be reached.
4/06/2014	RPS cled Alan & Wendy Talbott	Alan & Wendy Talbott	Phone	Allan Talbott was unable to confirm his attendance due to work commitments.
4/06/2014	RPS called Mitchen Neaves	Mitchen Neaves	Phone	Mitchen Neaves was unable to confirm his attendance due to work commitment.
4/06/2014	RPS called Dick Talbott	Dick Talbott	Phone	The contact number rang out, as such no message was left.
4/06/2014	RPS Called Lloyd and Josh Matthews	Lloyd & Josh Matthews	Phone	The contact number was not accepting incoming calls, as such no message was left.
4/06/2014	RPS called Ian & Loretta Long	Ian & Loretta Long	Phone	Ian and Loretta Long will be attending on Thursday 12/06/2014.
4/06/2014	RPS called Norm Archibold	Norman Archibald	Phone	Left message regarding Workshop 2.
4/06/2014	RPS called June Field	June Field	Phone	Left message regarding Workshop 2.
4/06/2014	RPS called Gwen	Gwen Griffen	Phone	Left message regarding

Date	Consultation Description	Received By	Method of Contact	Details
	Griffen			Workshop 2.
4/06/2014	RPS called Neville Sampson	Neville Sampson	Phone	The contact number had no service and as such a phone message could not be left.
5/06/2014	RPS received an email from Gomeri Traditional Custodians (comprising the Gomeri Elders, Red Chief LALC, Min Min Aboriginal Corporation including 32 elders and 65 RAPs)	RPS (Addressed to Tessa Boer-Mah)	Email	The Gomeri Traditional Custodians requested that Lot and DP numbers be placed on the maps that will be used for the cultural mapping as this would assist in identifying certain cultural landscapes within the BOAs. RPS created a series of maps with the Lot and DP numbers. The Gomeri Traditional Custodians (comprising the Gomeri Elders, Red Chief LALC, Min Min Aboriginal Corporation including 32 elders and 65 RAPs) also asked for the second workshop to be postponed as there was a meeting on those days. Concerns were raised about the inadequacy of consultation.
10/06/2014	RPS received a Return To Sender Letter - Invitation to Workshop 2	Jeremy Hill	Mail	This RTS was for Gordon Copeland, Sarah Jones and Terrance Jones. No alternate addresses were given and calls to these RAPs were unsuccessful.
11/06/2014	Workshop 2 - All Sessions	There were no RAPs in attendance at any of the Workshop sessions. Tessa Boer-Mah and Jeremy Hill (both of RPS) were in attendance	In Person/Phone	Jeremy Hill and Tessa Boer-Mah, made phone calls to all RAPs identified in the RAP list (Appendix 1, approximately 190 phone calls). Approximately 12 RAPs could attend the Sessions on the 12th of June. Phone calls were also made to RAPs who said they could attend, but were not present. Tessa Boer-Mah tried to call Dolly Talbot of the Gomeri Traditional Custodians (comprising the Gomeri Elders, Red Chief LALC, Min Min Aboriginal Corporation including 32 elders and 65 RAPs) several times, but she could not be reached.
12/06/2014	Leanne Foley rang RPS	Jeremy Hill	Phone	Leanne confirmed that Gloria Foley, Cindy Foley and Tyan silver would be present at the 11:30am Workshop 2 session.
12/06/2014	Brian Draper Rang RPS	Tessa Boer-Mah	Phone	Brian Draper apologised for both himself and Loretta Long not being able to attend the second workshop.
12/06/2014	Workshop 2 - 9am	There were	In	Jeremy Hill and Tessa Boer-Mah,

Date	Consultation Description	Received By	Method of Contact	Details
	Session	no RAPs in attendance. Tessa Boer-Mah and Jeremy Hill (both of RPS) were in attendance	Person/Phone	made phone calls to all RAPs who could attend the sessions on 12 June 2014. The 12 RAPs would be present at the 11:30am and 2pm sessions.
12/06/2014	Workshop 2 - 11:30am Session	RAPs in attendance were: Tyan Silver, Cindy Foley, Rita Long, Gloria Foley, Shirley Foley, Michael Long, Natasha Long	In Person	Conservation Strategies were put forward by the RAPs.
12/06/2014	Workshop 2 - 2pm Session	RAPs in attendance were: Tyan Silver, Rita Long, Shirley Foley, Michael Long, Natasha Long. RPS Attendees: Jeremy Hill and Tessa Boer-Mah BTM Complex Attendance: Tim Muldoon, Lachlan Johnson, Dan Martin, Rob Sullivan (WHC) and Chase Dingle (Idemitsu)	In Person	Conservation Strategies were put forward by the RAPs and were discussed with the BTM Complex representatives.
26/06/2014	RPS sent the results of the Workshop 2 meeting minutes to the RAPs that had requested it	Leslie John Woodbridge, Edith Fordham, Norman McGrady, Angus Alex Binge, Gary Suey, Brian Draper and Aaron Talbott	Mail/Email	RPS asked for feedback on the workshop and the project by the 11th of July. No comments were received.

RAP List

Organisation	Name
Cacatua Cultural Consultants	George Sampson
Min Min Aboriginal Corporation	Gwen Griffen
Red Chief Local Aboriginal Land Council	Toni Comber
Gunida Gunyah Aboriginal Corporation	Jane Bender
Bigundi Biame Traditional People	Wayne Griffiths
Ellilewis	Patricia Jean Hands
Aboriginal Native Title Consultants	John Matthews
Giwiirr Consultants	Rodney Matthews
Hunter Valley Culture Consultants	Christine Archbold
Mingga Consultants	Clifford Matthews (Mick)
Upper Hunter Heritage and Culture Consultants	Darrell Matthews
Bullen Bullen Consultants	Lloyd Matthews
Narrabri Local Aboriginal Land Council	Edward Trindall
Gomeri Narrabri Aboriginal Corporation	Craig Trindall
Wee Waa LALC	Kasey Hilderson
Aboriginal Natural Resource Officer	Jason Wilson
Carrawonga Consultants	Justin Matthews
Mooki River Consultants	Wayne Matthews
Wiawa Aboriginal Corporation	Brian Warren
Gomeri Cultural Consultants	David Horton
Traditional Local Site Trackers	Troy Silver
Individual	Cindy Foley
Wunga-Li Traditional Owners	Veronica Talbot
AT Gomilaroi Cultural Consultancy	Aaron Talbot
ACA ROOFING	Sonny Fitzroy
Gomeri - Namoi	Stephen Talbot
White Cockatoo	Michael Long
Individual	Brian Draper
Individual	Wendy Talbott
Individual	Leonard Talbott
NTSCorp	Ross Mackay
Individual	Ronald Long
Individual	Loretta (Long) Uren
Individual	Ian Long
Individual	Yvonne Rodgers
Individual	Natasha Rodgers
Individual	Robert Miller
Individual	Natasha Talbott
Individual	Tyan Silver
Individual	Sky-Lee Silver
Kawul Cultural Services	Vicky Slater

Organisation	Name
Aboriginal T/O Surveys	Gloria Foley
Individual	Dean Foley
Individual	James Foley
Individual	Leonard Draper
Individual	Leanne Foley
Individual	Reg Talbott
Individual	Gloria Maltby
Individual	Lesbra Shumack
Individual	Rita Long
Individual	Kerry Fernando
Gomeri Murri Ganuurr Yuuray Wadi Palinka	Greg Griffiths
Individual	Marjorie Talbott
Individual	Gary Griffiths
Individual	Samuel Cameron
HECMO Consultants	Mitchum Neave
Individual	Hazel Collins
Individual	Kathy King
Individual	Linda Whitten
Individual	Jason Whitten
Individual	Anthony Bennett
Individual	Allan Talbott
Individual	Scott Talbott
Deslee Talbott Consulting	Deslee Matthews
Individual	Toni Comber
Wunda Cultural Consultants	Travis Matthews
Bawurra	Kevin Sampson
Individual	Clifford Johnson
Muswellbrook Cultural Consultants	Brian Horton
Individual	Veronica Long
Curindi Consultants	Rona Slater
Huckda Dreaming Heritage Group	Richard Slater
T&G Culture Consultants	Tony Griffiths
Individual	Shannon Draper
AGA Services	Adam Sampson
L.J. Culture Management	Les Field
Individual	Amanda Heard
Individual	Cyril Sampson
ENT Cultural and Heritage	Esther Tyre
Woonaruah Cultural Heritage	Gordon Griffiths
Waabi Gabinya Cultural Consultancy	Elizabeth Howard
Cheryl Moodie Consultants	Cheryl Moodie
Individual	Rodger Noel Matthews

Organisation	Name
Individual	Joan Suey
Individual	Shirley Talbott
Individual	Derrek Talbott
Breeza Plains Culture Heritage Consultant	Terry Matthews
Individual	Neville Sampson
Individual	Melissa Hooper
Individual	Aleena Eather
Individual	Paul Moodie
Individual	Norm Long
Myland Cultural and Heritage Group	Wayne Schillings
Galamaay	Karen Matthews
DRM	Helen Faulkner
Individual	Robyn Wizgier
Individual	David Maltby
Individual	Antwinette Squires
Individual	Allan Talbott
Individual	Melissa Corkery
Smith Dhagaans Cultural Group	Tim Smith
Individual	Adam Budden
I&E Aboriginal Culture and Heritage	Ivy Jaeger
Marie- Ellen Griffiths Cultural Management	Marie Ellen Griffiths
Wurrumay Consultant	Kerrie Slater
Gomeroi Indigenous mining company	Ray Welsh and Marvonnia Welsh
Individual	Patricia Hampton
Individual	Edith Fordham
Jumbumma Traffic Management Group Pty Ltd	Norman Archibald
Yinarr Cultural Services	Kathie Kinchela
Individual	Norman McGrady
Individual	Dorothy Tighe
Tribes United Aboriginal Corporation	Richard Green
Individual	Pam Silver
Individual	Clinton Lamb
Individual	Edith Fordham
Individual	Douglas McGrady
Individual	Wesley Binge
Individual	Kye McKenzie
Individual	Josie Conlan
Individual	Lillian Gillon
Individual	Joshua Silver
Individual	Kevin Leo Sharpley
Individual	Josh Silver
Individual	Corey Lamb

Organisation	Name
Individual	Nathan Sellers
Individual	Gavin Close
Individual	Ruby Copeland
Individual	Norman Porter
Individual	Emily Roberts
Individual	Gordon Copeland
Individual	Ruth Sampson
Individual	Robert King
Individual	Alison Sampson
Individual	Angus Alex Binge
Individual	Hollie Dorrington
Individual	Leslie John Woodbridge
Individual	Leslie Bracken
Individual	Daniel Smith
Individual	Aaron Walton
Individual	Fiona Draper
Individual	Chantae Griffiths
Individual	Grant Trindall
Individual	Callum Trindall
Individual	Peter Swan
Individual	Paul McGrady
Individual	Leo Walker
Individual	Ian Jerrard
Individual	Jimmy Thomas
Individual	Joan Suey
Individual	Gary Suey
Individual	Delma Jones
Individual	Melissa Conlan
Individual	David MaGuire
Individual	Terrance Jones
Individual	Carla Suey
Individual	Joshua Suey
Individual	Jason Suey
Individual	Joe Conlan
Individual	Louise Conlan
Individual	Thorn Conlan
Individual	Rebecca Beyzade
Individual	James-Conlan
Individual	Heath Conlan
Individual	Anthony James Conlan
Individual	Sarah Jones
Individual	Wayne McDonald

Organisation	Name
Individual	Ronald Suey
Individual	Linda Suey
Individual	John Suey
Individual	Wayne Conlan
Individual	Elizabeth Humble
Individual	Sam Connolly
Individual	Sandy Aldridge
Individual	Vickie Wortley
Individual	Lorna Lamb
Individual	June Field
Individual	David Dorrington
Individual	Dalton Dorrington
Individual	Benny Murray
Individual	Betty Condran
Individual	Elaine Binge
Individual	Madeline McGrady
Individual	Daniel Cooper
Individual	Jinbai McGrady
Individual	Lionel McGrady
Individual	Anthony McGrady
Individual	Blake McGrady
Individual	Ronald McGrady
Individual	Shannon Swan
Individual	Clifford Copeland
Individual	Veronica Roberts
Individual	Rhonda Talbott
Individual	Shane Kennedy
Individual	James Thomas
Individual	Joyce Dorrington

Summary of Workshop Process

AHCS Methodology Mail Out

The initial phase of the Project included mailing a Tender Document to the RAPs. The Tender Document, which was sent to the RAPs identified in Appendix 4 (as supplied by the BTM Complex) on 7 April 2014, outlined the process for the Project and detailed what the intended outcomes were. In accordance with the ACHCR process (DECCW 2010a) a 14 day period was given for the RAPs to respond with an Expression of Interest (Eoi) and to supply feedback for the proposed project. Feedback was due on 22 April 2014. During this 14 day period, Workshop 1 was conducted in order to provide an overview and feedback opportunity in relation to the proposed project before the Eoi closing date.

Workshop 1

Workshop 1 was conducted on 16 April 2014. **Table 10** shows the RAPs in attendance for Workshop 1 and the purpose of the first workshop is described in Section 6.1.1.

Table 10 RAPs and other Representatives in Attendance at Workshop 1, 16 April 2014

Session Time		
9:00am	11:30am	2:30pm
Lachlan Johnson (WHC)	Lachlan Johnson (WHC)	Jill Johnson (WHC)
Jill Johnson (WHC)	Tessa Boer-Mah (RPS)	Tessa Boer-Mah (RPS)
Danny Young (WHC)	Jeremy Hill (RPS)	Jeremy Hill (RPS)
Tim Muldoon (WHC)	Troy Silver	Veronica Long
Tessa Boer-Mah (RPS)	Gloria Foley	Evonne Long
Jeremy Hill (RPS)	Leeann Foley	
Aaron Talbott	Pam Silver	
David Dorrington	Cindy Foley	
Michael Long	Shirley Talbott	
	Tyann Silver	

On 15 April 2014, RPS received a letter from the Gomeroi Traditional Custodians (including 32 elders and 65 RAPs) regarding the inadequacy of the consultation timeframes, the lack of field work and the inadequacy of archaeological recording in the offset areas. On 16 May 2014 RPS responded to the letter and appropriate actions were taken, including an extension to the original 30 June 2014 deadline issued by the DoPI for the submission of this conservation strategy. The second workshop was also postponed until 11 and 12 June 2014 in order to give the RAPs ample time to express interest and attend the second workshop. This was an extension on the 14 day period stipulated in the ACHCR process (DECCW 2010a).

This session provided an overview of the Project, the MCoA and an opportunity to provide feedback on the proposed project. During the workshop, several key issues were raised and are summarised below.

Table 11 Summary of Issues Raised by RAPs in Workshop 1

Issue	Summary of Issue
Ministers Conditions of Approval	The RAPs were concerned that a cultural values assessment was not completed at the time of the exploration lease being granted. Concerns were raised over the MCoA not indicating that a walk on country was needed as this was vital to assessing cultural values.
Cultural Values	Concerns were raised over the ranking system of the cultural values (high, medium and low). The RAPs considered that all cultural values are high and are more important than scientific (archaeological) assessments. It was suggested that this

Issue	Summary of Issue
	process be undertaken over a longer period of time.
Offset Areas	The RAPs suggested that the BOAs should be managed by the Aboriginal community. The management would enable the community to hunt and collect resources. Concerns were raised that the BOAs were chosen by the mines and not by the RAPs. It was argued that the RAPs would have chosen areas closer to rivers and creeks. RAPs suggested that access to the BOAs would allow them to the opportunity to educate their communities in the native vegetation and fauna.
Engagement of the Aboriginal Community	It was suggested that the RAPs with the cultural knowledge should be engaged to provide cultural values for the project. There were varying opinions on who should be included for this.
Employment, education and training opportunities	It was suggested that the BTM Complex employ Aboriginal youths in the active mining areas increasing respect for the wider community. The RAPs suggested that the BTM Complex fund scholarships.
Remuneration	The RAPs suggested that the knowledge holders should be paid to provide cultural knowledge.

Workshop 2

A letter inviting all RAPs to participate in Workshop 2 was sent on 16 May 2014. On 11 and 12 June, Workshop 2 took place at the Smithurst Theatre in Gunnedah. The RAPs in attendance for Workshop 2 are listed in **Table 12** and **Table 13** below and the purpose of Workshop 2 is described in Section 6.1.2. The results are documented in Section 8.0.

Table 12 RAPs and other Representatives in Attendance at Workshop 2, 11 June 2014

Session Time		
9:00am	11:30am	2:30pm
Tessa Boer-Mah (RPS)	Tessa Boer-Mah (RPS)	Tessa Boer-Mah (RPS)
Jeremy Hill (RPS)	Jeremy Hill (RPS)	Jeremy Hill (RPS)
No RAPs attended any session on this day. An attempt was made to call all RAPs in order to ascertain their attendance on 12 June 2014		

Table 13 RAPs and other Representatives in Attendance at Workshop 2, 12 June 2014

Session Time		
9:00am	11:30am	2:30pm
Tessa Boer-Mah (RPS)	Tessa Boer-Mah (RPS)	Lachlan Johnson (WHC)
Jeremy Hill (RPS)	Jeremy Hill (RPS)	Dan Martin (WHC)
No Raps in Attendance	Natasha Long	Tim Muldoon (WHC)
	Michael Long	Robert Sullivan (WHC)
	Shirley Long	Chase Dingle (Idemitsu)
	Rita Long	Tessa Boer-Mah (RPS)
	Tyan Silver	Jeremy Hill (RPS)
	Gloria Foley	Natasha Long
	Shirley Foley	Michael Long
	Leeann Foley	Shirley Long
		Rita Long
		Tyan Silver
	Gloria Foley	
	Shirley Foley	
	Leeann Foley	

Draft Report

A summary of the draft report responses will be added into the final report.

Workshop 3

A summary of Workshop 3 will be added into the final report.

Table 14 RAPs and other Representatives in Attendance at Workshop 3, 22 August 2014

Session Time/ RAPs in Attendance	9:00am	11:30am	2:30pm

As part of the ongoing consultation with the RAPs, the table below summarises the approximate number of hours undertaken for effective consultation (**Table 15**). This includes responding to RAP queries regarding the AHCS and courtesy phone calls to the RAPs confirming attendances to the workshops. Other attempts include one day dedicated to calling all RAPs during Workshop 2.

Table 15 Summary of Aboriginal Consultation Hours to Date

Summary of Notifications to RAPs	Date	Method	Approximate Number of Hours
RAP Tender Document sent out	7 th April 2014	Mail and email	7.5 Hours
Processing and responding to RAP queries on the AHCS	Ongoing	Phone, mail, email and meeting	>50 Hours
Phone calls made to RAPs to confirm attendance for Workshop 1	14 th April 2014	Phone	7.5 Hours
Workshop 1	16 th April 2014	Meeting	8 Hours
Phone calls made to RAPs to advise of cancellation of Workshop 2	29 th April 2014	Phone	4 Hours
Responding to complaint letter	16 th May 2014	Mail	8 Hours
Invitation to second workshop and phone calls to RAPs confirming attendance at Workshop 2	24 th May – 10 th June 2014	Mail and phone	20 Hours
Workshop 2 (including one day dedicated to phoning all RAPs confirming their attendance)	11 th and 12 th June 2014	Meeting	20 Hours
Mailing of Workshop 2 results to RAPs that requested data	26 th June 2014	Mail	2 Hours
Approximate number of hours to date	As of 18th July 2014	-	127 Hours

RAP Tender Document and Invitation for First Workshop

DRAFT



Newcastle Office

Ground Floor, 241 Denison Street, Broadmeadow, NSW Australia 2292
PO Box 428, Hamilton, NSW Australia 2303

Our Ref: PR115434
Date: 7 April 2014

Via: Email

RE: BTM COMPLEX AND OFFSET AREAS ABORIGINAL HERITAGE CONSERVATION STRATEGY

RPS has been engaged by the Boggabri-Tarrawonga-Maules Creek Complex (BTM Complex) to produce an Aboriginal Heritage Conservation Strategy (AHCS) for the three mines in the Gunnedah basin.

This AHCS requires consultation with the local Aboriginal groups and as a registered Aboriginal Party; we are inviting your organisation to participate. A series of workshops will be held, but you can also participate via written or verbal correspondence.

The role of the Aboriginal stakeholders is to provide input into the assessment of cultural values for the biodiversity offset areas, to assist in the mapping of these values and to assist in the identification of a range of options for enhancing and conserving Aboriginal heritage in the offset areas. This is the opportunity for the Aboriginal community to guide management of cultural values within these offset areas.

Please note there will be no fieldwork associated with this project and participation is on a nonremunerated basis.

The first workshop is proposed for the 16th of April, 2014, please let us know if your organisation would like to participate using the attached form.

We trust this information is sufficient for your purposes, however should you require any further details or clarification, please do not hesitate to contact us.

Yours sincerely
RPS

Tessa Boer-Mah
Newcastle Cultural Heritage Manager



Tender Document

Aboriginal Heritage Conservation Strategy (AHCS) for the BTM Complex and Biodiversity Offsets

Prepared by:

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Report Number: PR115434-1
Version / Date: April 2014

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Feedback Form

1.0 Introduction

RPS has been engaged by the Boggabri-Tarrowonga-Maules Creek Complex (BTM Complex) to produce an Aboriginal Heritage Conservation Strategy (AHCS) for the three mines in the Gunnedah basin.

1.1 What is the Project?

The aim of this project is to document archaeological and Aboriginal cultural values for the biodiversity offset areas associated with Boggabri and Maules Creek and Tarrowonga mines. The cultural values will guide an Aboriginal Heritage Conservation Strategy as per the Minister's Conditions of Approval (MCoA) for each of the three projects. The Aboriginal consultation process will provide the opportunity for input on how Aboriginal values may be enhanced and conserved in the BTM Complex biodiversity offset areas.

It should be noted that cultural values for the Project Application Areas of the BTM Complex mines have already been assessed as part of their respective Environmental Impact Statement (EIS) processes and this information will be incorporated into the AHCS.

Input into the AHCS can be by phone, in writing or through a proposed series of workshops. Information will also be mailed to the RAPs who elect to participate in the process. The project will *not* involve fieldwork.

1.2 Ministers Conditions of Approval

The following condition has been attached to the Boggabri, Maules Creek and Tarrowonga MCoAs: *"The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset areas to the satisfaction of the Director-General. This strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management."*

1.3 Where is the Project?

The offset areas encompass parcels of land within 50km of Boggabri (Figure 1). The northernmost offset area is located in the Nandewar Range and incorporates the Maules Creek catchment in the vicinity of Lindsay. The offset areas also incorporate portions of land to the north, east and west of the Leard State Forest and incorporate land in the vicinity of Maules Creek and the Namoi River. The easternmost portion of the offset area includes Rioters Hill. The southern offset areas include parcels of land to the north and west of the Kelvin State Forest.

1.4 What is the Role of the Aboriginal Stakeholders?

The role of the Aboriginal stakeholders is to provide input into the assessment of cultural values for the biodiversity offset areas, to assist in the mapping of these values and to assist in the identification of a range of options for enhancing and conserving Aboriginal heritage in the offset areas. This is the opportunity for the Aboriginal community to guide management of cultural values within these offset areas.

Input into the AHCS can be made by phone, in writing or as part of the workshop process.

1.5 What is the Role of RPS

The role of RPS is co-ordinate workshops for the assessment of Aboriginal cultural values, to document the outcomes of the workshop, map the Aboriginal cultural values and incorporate them into the AHCS, as well as document options for enhancing and conserving Aboriginal cultural values.

1.6 Workshops: When and Where?

The documentation of Aboriginal cultural values will be undertaken over a series of workshops. The proposed dates and locations are outlined below. Depending on proposed attendance numbers, workshops may be split into a number of sessions on the same day to ensure RAPs have an opportunity to speak:

Workshop	Date	Location	Time
<u>Workshop 1</u> : Project Inception	16 th April	Gunnedah -TBA	TBA
<u>Workshop 2</u> : Aboriginal Cultural values workshop	30 th April & 1 st May	Gunnedah -TBA	TBA
<u>Workshop 3</u> : Review of draft AHCS with RAPs	3 rd June	Gunnedah -TBA	TBA

Please note: No remuneration will be provided for attendance of workshops and for Aboriginal consultation input. However, light refreshments, tea and coffee will be provided at workshops.

Legend

- Localities
- Biodiversity Offset Areas**
 - Boggabri Offset Areas
 - Maules Creek East & West Offset Areas
 - Maules Creek Northern Offset Areas
 - Maules Creek Southern Offset Areas
 - Tarrawonga Willeroi Offset Area
 - Shared Offset Area (Maules Creek and Boggabri)
- Project Application Areas**
 - Boggabri Project Application Area
 - Maules Creek Project Application Area
 - Tarrawonga Project Application Area

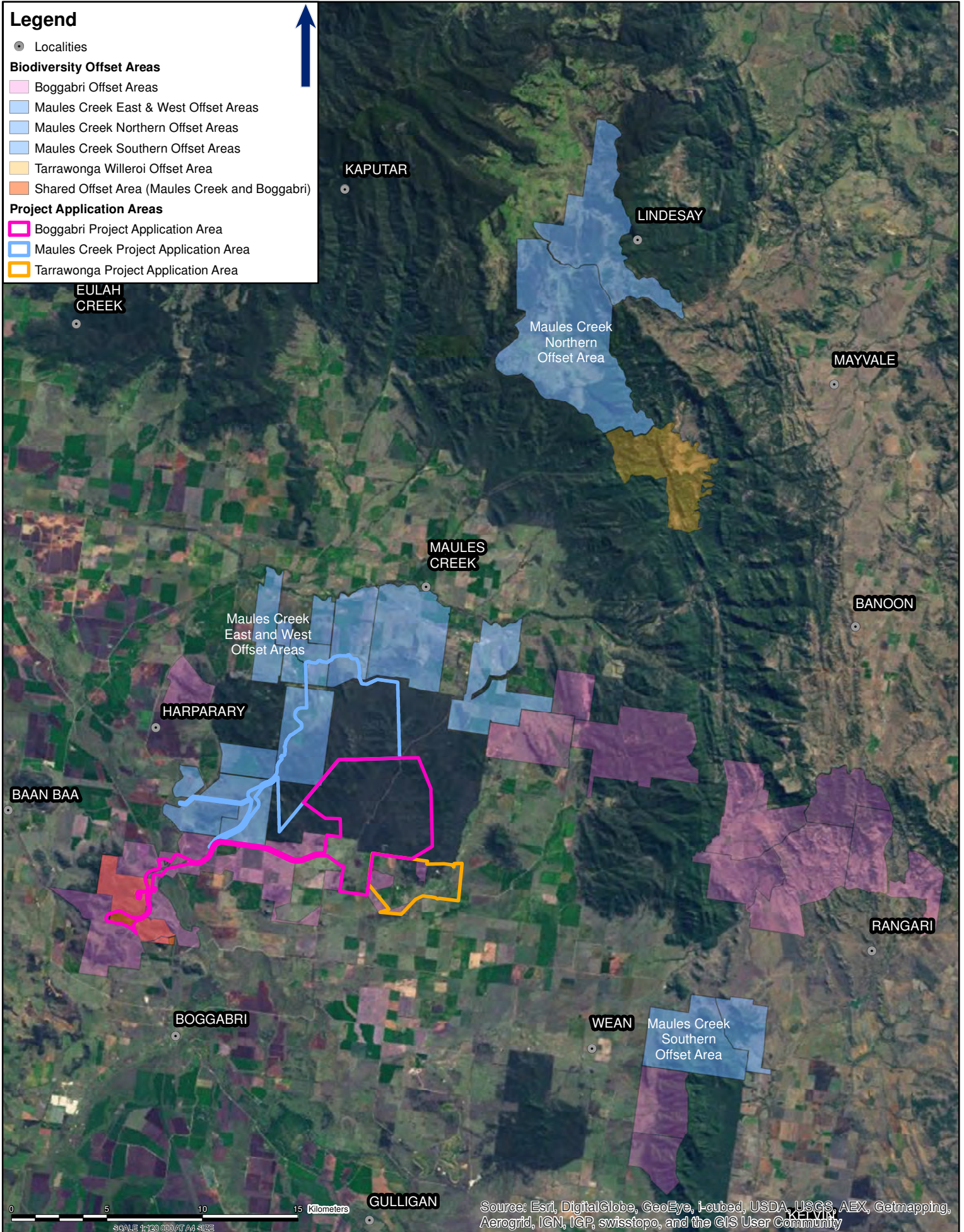


Figure 1: Three Mines Combined Offset Areas

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: 115434-1	Data Sources: Bing Maps 2011
PURPOSE: Heritage Technician: jeremy.hill	Date: 3/04/2014

CLIENT: Parsons Brinckerhoff

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2.0 Principles and Processes of Aboriginal Consultation

RPS will abide by the guiding principles of *Ask First* in conducting consultation. The relevant elements of the Aboriginal Cultural Heritage Consultation Requirements (ACHCRs) will also be used, particularly with regards to review periods for documents. In addition, the proposed RPS process for Aboriginal consultation has also been outlined.

2.1 Ask First Principles

RPS will abide by the guiding principles of *Ask First* which is the national voluntary guideline for consulting with Aboriginal communities. The Australian Heritage Commission released the document *Ask First* (Australian Heritage Commission 2002) and it has become an important practical guide in assisting land managers, land users and land developers in consulting and negotiating with Indigenous stakeholders.

The key task of the document is engendering a respect for Indigenous heritage places and values in those who may have an impact on Indigenous heritage. The title - *Ask First* - is the message of this book; that consultation and negotiation with Indigenous stakeholders is the best means of addressing Indigenous heritage issues.

Ask First Indigenous Heritage Management Process flow chart was used to establish a protocol for progressing consultation with the Aboriginal community. One alteration to the flow chart was that background research was carried out prior to consultation beginning and progressively through the consultation process. It was considered important the RPS mapping team have an overview and knowledge of the landscape, cultural heritage and Aboriginal peoples of the study area.

2.2 Aboriginal Cultural Heritage Consultation Requirements (ACHCRs) and Process

Consultation for the BTM Complex will follow the relevant processes set out in the ACHCRs, which includes 28 days to review draft documents.

The three mines of the BTM Complex already have lists of Registered Aboriginal Parties (RAPs) as part of previous works and therefore Stage 1 of the ACHCRs has already been completed. Stage 1 has included the identification, notification of interested Aboriginal parties.

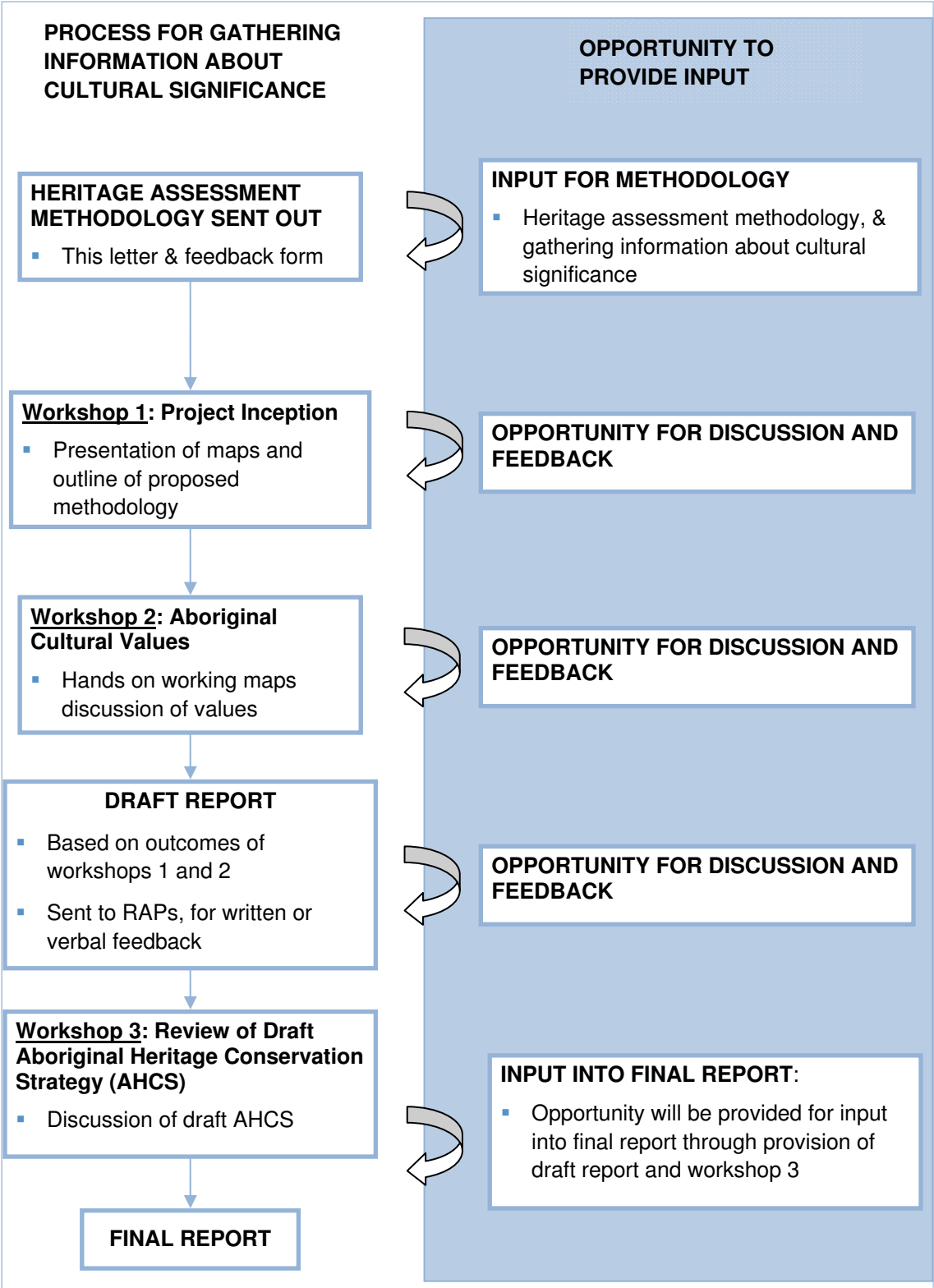
This identification process has drawn on reasonable sources of information including: the Registrar (*Aboriginal Land Rights Act, 1983*), the relevant OEH Environment Protection Regulation Group (EPRG) Regional Office, the Local Aboriginal Land Council(s), the National Native Title Tribunal, the Native Title Services Corporation Limited, the relevant Catchment Management Authority and the relevant local council(s). The identification process has also included an advertisement placed in a local newspaper circulating in the general location of the Project Areas. As a result RAPs have been identified for the BTM Complex.

We are thus inviting the RAPs to be further consulted for this AHCS and will be undertaking workshops as part of the consultation. Documents for comment including the draft report will allow 28 days for review in accordance with the processes set out in the ACHCRs.

2.3 RPS Consultation Process for this Project

The above principles and process will guide the consultation process; this section will outline the opportunities for your RAP to provide input, as per chart below.

Five opportunities will be provided to the RAPs for input into this AHCS process. The first opportunity is to respond to the contents of this document. Two workshops will then be held to outline the process (Workshop 1) and to provide hands-on opportunity for mapping (Workshop 2). An outline of workshop framework and protocols is provided in Section 4.0. The draft AHCS will be based on the outcomes of Workshops 1 and 2, it will then be sent to RAPs for consideration, feedback can be provided verbally over the phone or in writing. Feedback can also be given as part of Workshop 3.



3.0 Desktop Archaeological Study Summary

The AHCS under the MCoA is to include Aboriginal cultural values; however, it is also to include archaeological patterning and interpretation, to then be able to make an assessment of archaeological values. In order to gain an understanding of the archaeological patterning a search of the AHIMS register has been undertaken over the offset areas and the surrounding region in order to provide base data. Previous archaeological studies have also been obtained and reviewed where relevant. An examination of the regional archaeological data has identified a number of site distribution patterns which are associated with landform (Table 1).

Artefact Sites

Artefacts sites (artefact scatters, isolated finds and unspecified numbers) are the most common type of Aboriginal site in the region. These sites occur close to major rivers, ephemeral creek lines, valley flats and lower slopes. There is a weaker site patterning for artefact sites to be located along ridgelines and plateaus, as well as steep gullies. Artefact sites located at steep gullies are usually associated with grinding grooves. The majority of artefact sites are located within 100 metres of a water source. Artefact sites can represent base camps, where Aboriginal people camped for longer periods of time and used as a base from which to make expeditions further afield. Hunter-gatherers occupy base camps for several nights (or longer) and are bases from which hunting and other activities are undertaken (Attenbrow 2006:220-221). At locations which have been inhabited for longer periods a range of activities would be undertaken including food preparation, skin working, tool manufacture and/or maintenance, as well as other campsite activities. Archaeological evidence for such activities are sometime preserved in the usewear, or residues on stone tools; or can be inferred from the types of stone tools present and/or feature on flakes.

Activity locations/transit camps by contrast are occupied short term (day/s), as part a mobile hunter-gatherer strategy and may be used when moving between base camps or resource areas, activities undertaken are less varied and may be specific to the exploitation of a particular resource. The archaeological evidence which distinguishes base camps from transit camps may include size (area in square metres) as well as the diversity, richness and nature of artefact types and faunal remains. Meehan (1988:179-80) identified that base camps had wider range of food species, but may not have the remains of whole animals since these may have partially been consumed at dinner-time (transit) camps. Nelson (1991:79-81,85) has asserted that base camps are likely to have evidence for particular activities and potentially a greater diversity and richness of artefacts.

The spatial distribution of artefact sites, appears to indicate that locations close to water courses were commonly used as base camps. Artefact sites along ridges, plateaus and steep gullies potentially are evidence for activity locations and transit camps.

Scarred Trees

The AHIMS data shows that scarred trees are generally located close to major rivers. Although there is some evidence for scarred trees along low and mid slopes associated with the upper catchment (1st and 2nd order tributaries). In either instance, scarred trees are usually located within 200-250 metres of a water source. On the basis of the AHIMS data, there scarred trees are three times more likely to occur near rivers than in the upper catchment. One pattern to be investigated is whether large scars (associated with canoe making) occur closer to rivers and smaller scars (associated with shields and coolamon making) are located in the upper catchment.

Grinding Grooves

Grinding grooves in the region are located in steep gullies, where suitable sandstone platforms occur, but are also associated with a watercourse, as water is essential to the mechanics of the grinding and sharpening process. These sites generally occur on valley bottoms at a lower altitude (240 – 460 metres AHD). Although, there are some instances of this site type further up the catchment on the mid to upper slopes. There is weaker patterning for these site types to be located mid to upper slope in steep gullies with a water source.

Rockshelters

This site type in the region is located along steep gullies at higher altitudes (430 – 1100 metres AHD) where suitable sandstone pagodas or boulders outcrop. Some of these site contain potential archaeological deposit (PAD), artefacts or art.

Ceremonial Sites

Few ceremonial sites have been recorded; however, where they have been recorded has tended to be on ridgetops or upper slopes.

Table 1 Summary of Site Types and Landforms

Site Type	Landform							
	Major Waterways	Creeks	Steep Gullies	Flats	Lower Slopes	Mid Slopes	Upper Slopes	Ridges/ Plateaus
Artefact Scatters								
Isolated Finds								
Scarred Trees								
Grinding Grooves								
Rockshelters								
PADs								
Art								
Ceremonial								

Key

Likely present in Landform

Occasionally present in landform

4.0 Workshop Framework and Protocols

4.1 Workshop Aims

The overall aim of the workshops will be to provide a forum for RAPs to discuss Aboriginal cultural values associated with the offset areas and provide input into the AHCS.

The aim of Workshop 1 will be to provide an overview of the project: this will include an outline of the Ministers Conditions of Approval (MCoA), presentation of maps on the offset areas, present the results of the desktop study. Opportunities will be provided for RAPs to seek clarification on any of the material presented, to ask questions and make suggestions for the format of Workshops 2 and 3.

The aim of Workshop 2 will be to provide an opportunity for hands-on mapping of cultural values, discussion of cultural values and documentation of cultural values associated with the offset areas.

After the conclusion of Workshop 2, the draft AHCS will be prepared and sent to the RAPs for review. A final workshop will be held to provide a final review of the AHCS before it is finalised.

4.2 Workshop Format

The proposed workshop format is that RPS will provide a detailed overview and aims of the workshop; this will be followed by an opportunity for discussion and comment, then a presentation of tasks and points for discussion will be outlined and be followed by either group discussion or completion of tasks in small working groups.

4.3 Workshop Materials

RAPs will be provided with printed copies of information booklets and resources. For workshop 2, AO maps will be provide for mapping cultural values. Light refreshments, tea and coffee will be provided.

4.4 Workshop Attendance Numbers

In order to ensure RAPs have an opportunity for constructive input into workshops, numbers will be limited to approximately 12 people per session; particularly for workshop 2. Duplicate sessions may be added as required.

4.5 Acceptable Behaviour

The purpose of the workshops and consultation is to benefit the Aboriginal community by providing the opportunity to document and protect Aboriginal values in the offset areas. This will be done in good faith and to provide an equal voice to all RAPs involved in a comfortable environment. As such, any anti-social behaviour including raised voices, abusive language and gestures will not be tolerated and any participants exhibiting such behaviour will be asked to leave. If there are acknowledgeable and specific grievances with regards to the process then the below dispute resolution protocols will be followed.

4.6 Dispute Resolution

If there is a dispute in a workshop, all parties are to commit to resolve the issue/s and to reach an agreement. If this cannot be achieved in a period of 5 minutes, then it may be deemed appropriate to have a break of 10 minutes, after which the issue is discussed one-on-one or as a small group in order to reach a resolution; this process will be documented. In the instance that non-acceptable behaviour is exhibited, or a

resolution cannot be reached, it may be appropriate that participation in the consultation process is undertaken in writing, rather than in the workshop format.

4.7 Confidentiality

All individuals and organisations will respect that some information shared will be confidential. This may include:

- Commercial information,
- Sensitive Aboriginal cultural information, and
- Any material or information identified as sacred.

If there is sensitive Aboriginal cultural information that needs to be recorded, RPS is able to provide a confidential dossier of that information which will be kept in confidence, with specific named access registers, which shows who can access the information. In the case of sensitive areas, RPS is able to provide polygon buffering to ensure information is protected.

Aboriginal Feedback Form

BTM Complex and Biodiversity Offset Areas Aboriginal Heritage Conservation Strategy (AHCS).

A representative of my organisation will likely be able to attend the following workshops:

Workshop	Date	Location	Able to attend? Y/N
<u>Workshop 1</u> : Project Inception	16 th April	Gunnedah -TBA	
<u>Workshop 2</u> : Aboriginal Cultural values workshop	30 th April & 1 st May	Gunnedah -TBA	
<u>Workshop 3</u> : Review of draft AHCS with RAPs	3 rd June	Gunnedah -TBA	

I have been sent information regarding the proposed AHCS methodology. I seek to endorse the proposed methodology, unless otherwise stated below, or with the following amendments:

Name.....

Registered Organisation.....

Current Phone Number.....

Signature.....

Date.....

Please send this feedback form by the 16th of April if you are attending the project inception workshop, or otherwise by the 22nd of April, 2014 to **Jeremy Hill** via:

Phone: 02 4940 4200

Fax: 02 4961 6794

Email: Jeremy.Hill@rpsgroup.com.au

Address: PO Box 428, Hamilton NSW 2303

Correspondence Received

DRAFT

RPS AUSTRALIA EAST PTY LTD
241 Denison St
Broadmeadow NSW 2292
PO Box 428, Hamilton 2303

Tessa.Boer-Mah@rpsgroup.com.au
15 April 2014

cc. Minister Hazzard, Minister Shoebridge, Minister Foley, Minister Hunt, Senator Larrisa Waters, Mark Holden Environmental Defenders office Solicitor, Redchief LALC, NSWALC, NTSCorp, Mike Young DPI, Monica Collins and Peter Christie OEH, Chase Dingle and Ken McLaren Boggabri Coal, Paul Flynn CEO Whitehaven Coal Maules Creek, Danny Young Tarrawonga Coal, Dr Alan S Hearne CEO RPS Group., Min Min Aboriginal Corporation

Re Aboriginal Heritage Conservation Strategy (AHCS) for the Boggabri- Tarrawonga- Maules Creek (BTM) Complex and Biodiversity offsets.

Dear Tessa

The Gomeroi Traditional Custodians comprising Gomeroi Elders (the most senior knowledge holders of our community) and traditional owner community members including the Redchief Local Aboriginal Land Council and the members of the Min Min Aboriginal Corporation of the Gunnedah and Maules Creek Boggabri Breeza Quirindi Wallhollow, Tamworth and Caroon region¹ would like to thank you for your letter stating that you will be commencing the long awaited Regional cultural heritage conservation strategy for the cumulative mining interests of Whitehaven Maules Creek, Boggabri Coal and Tarrawonga Coal which make up the BTM Complex and Biodiversity Offsets. We note that the GTC comprise a significant number of RAPs – including 32 Elders and 65 RAPs.

We however, raise several concerns relating to adequacy of consultation, methodology approach and timeframes which appear to be inconsistent with the Ask First Principles and ACHARs 2010 cited as being applied to inform the process.

While we thank you for your tender document dated 7 April 2014 (which has only just been received from 9 April 2014 to 15 April 2014) for some Registered Aboriginal Parties (RAPs) -leaving very little time for notification nor opportunity for participation in the process .

Timing of notification

The timing of wanting to have a workshop two days prior to Easter and during the short school holiday break in which a lot of families are either away or having friends and family stay with them is considered inappropriate and places at disadvantage full participation.

¹ This letter represents 138 parties to this complaint

It is also noted that there does not appear to be consideration of the ACHARs in terms of at least providing **14 days'** notice of an intended meeting and it is also of concern that the correspondence on **page 2** of the RPS package **does not include** details of Venue and time for the attendance to a Project Inception workshop. This may be an oversight but one which is significantly disadvantaging to our people. Therefore this meeting needs to be rescheduled appropriately.

Review periods allowed for draft documents – consistently less than 14 notification of initial briefing and methodology review period of 28 days:

In accordance with OEH guidelines, **Aboriginal registrants are to be provided copies of all key documents for review and comment, spanning the draft assessment methodology, and draft report.** The methodology does not provide for this review period and therefore needs to be urgently addressed. See below:

It is noted that in the correspondence provided by RPS that RPS refer to compliance with the Aboriginal Cultural Heritage Consultation Requirements 2010 NSW- particularly in relation to documentation review time periods. We simply do not understand how the methodology review period can also be an administrative oversight.

Correspondence incorrectly addressed to RAPs resulting in large numbers of community not informed

It is noted that the RPS material appears to have been sent to RAPs as a 'job lot' ie having several RAPs listed on correspondence as a group rather than sending materials out to individual RAPs- even though the listed RAPS do not live at a singular address. Again this is a significant administrative oversight. We strongly suggest that as a matter of urgency that your contacts list be consolidated and reviewed prior to commencing consultation.

The RPS mailout has resulted in incorrect mailing details and many RAPs are yet to receive documentation advising of a briefing session to be conducted on the 16 April 2014 (ie tomorrow).

This is having an accumulative impact of disadvantaging our community and RAPs who have a strong interest and rights and obligations relating to the BTM complex heritage outcomes.

We strongly recommend that this is a *false start* in the consultation process and a meeting with adequate timing , correspondence sent to all RAPs should be provided in order that procedural fairness in participation is provided.

We note the BTM complex and cultural heritage strategy process is one of the most important and largest initiatives to protect Gomerai Culture and Heritage in the history of post settlement/invasion for Gomerai people in the region.

It is also noted that the package refers to the ACHARs and includes a methodology for both consultation and heritage values assessment. In accordance with section 4 of the ACHAR 2010 requirements.

Caveat to comment

While the GTC has not been afforded the time to provide a more detailed and considered approach to informing the draft consultation methodology some key points are raised in this letter and we reserve the right to provide a more detailed consideration and methodology approach within the 28 day review period which we believe will need to be afforded to our community.

General comment on consultation approach

OEH guidelines identify the central role that Aboriginal people have in assessing and managing Aboriginal cultural heritage places, stating that all parties involved in managing Aboriginal culture heritage should acknowledge, accept and act on the principles that: (DECCW 2010)

- Aboriginal people are the primary source of information about the value of their heritage and how this is best protected and conserved;
- Aboriginal people must have an active role in any Aboriginal cultural heritage planning process;
- Aboriginal people must have early input into the assessment of the cultural significance of their heritage and its management so they can continue to fulfil their obligations towards their heritage; and
- Aboriginal people must control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value.

OEH (in DECCW 2010) also state that effective consultation requires a commitment by **all parties** (our emphasis) to work in the spirit of cooperation, mutual understanding and respect; and that consultation with Aboriginal people is important and needs to be sustained throughout the heritage assessment process (in this instance the heritage strategy) to ensure cultural perspectives, views and concerns are taken into account.

OEH guidelines also clearly state that Aboriginal participation in archaeological and cultural values assessment processes does not constitute adequate consultation on the cultural significance of places within a proposed development and in this instance **biodiversity offset areas**, (our emphasis) with OEH (in NPWS 1997, a guideline specifically referred to in the *Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation* [DoP and DEC 2005]):

Biodiversity Offset areas have never visited by RAPS and Elders

It is incongruous and incredulous that RPS and the three mines Whitehaven Coal Maules Creek mine, Idemitsu Boggabri Coal, partnership Idemitsu and Whitehaven Tarrawonga mine corporations expect RAPS including Elders to make cultural values comments and enhancements to Biodiversity offset areas based on a *virtual reality* workshop ie using our imagination of the areas not based on sound professional and cultural practices and details of the Biodiversity Offset areas..

This is completely inconsistent with Aboriginal world view and archaeological and anthropological practices.

It is also relevant to inform you of the upcoming Senate enquiry into the Biodiversity Offset adequacy review and the GTC participation in the framework being applied in this instance.

We note that we will be profiling the RPS – BTM complex model as part of our Senate Enquiry response- as we believe it is in the Public and Environmental and Cultural Interest to model both

positive and adverse approaches which impact on the integrated aspects of Biodiversity offset adequacy and Cultural Heritage threats and advancements.

We note with some concern that the RPS documentation states that the values assessment has already been conducted over the Biodiversity offsets for all three mines as part of the individual EIS processes when these areas were never discussed, visited nor assessed by RAPs and knowledge holders including traditional owners. We note RPS also state that we are not able to visit the Biodiversity Offset areas which we strongly object to as this is an inadequate approach.

As state the Biodiversity offset areas have **never been seen or walked by RAPs** - to provide meaningful interpretation and any workshop being undertaken in this context is conducted in highly questionable ethical, professional standards nor is informed consent underpinning the processes. **Therefore this must be rejected.**

It is also noted that the documentation fails to provide details including block/lot numbers of the offset areas nor provision of gps coordinates in order to inform the community of the specific locations of the Biodiversity offsets. We note that this is simply impossible to provide values assessment and enhancement details with such little information.

In meetings with the relevant mines over the past two years, we have repeatedly requested mapping and documentation which is meaningful to RAPs -we note that again -there is a failure to respond or even attempt to provide this information.

Further, DPI and OEH guidelines **specifically identify the assessment of social and Aboriginal cultural values as a discrete and dedicated process of engagement** with Aboriginal people that can involve a range of methodologies such as oral history recording, cultural mapping, detailed ethnohistorical research etc. This has not been conducted over the Biodiversity Offset areas despite being advised in consultation processes by the relevant mining companies that this will occur.

As stated in the *Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation* [DoP and DEC 2005]:

“The social and cultural information leading to the establishment of social and cultural values includes the spiritual, traditional, historical or contemporary associations and attachments which the place or area has for the present-day Aboriginal community. This information will be obtained primarily from the Aboriginal community based on a process of community consultation and will involve a range of methodologies, such as cultural mapping, oral histories, archival documentation, and specific information provided by the Aboriginal community for the purposes of the study”.

We note that cultural mapping needs to undertaken in the field out on Country- to do so at a workshop without this cultural compass is incongruous. We also note that no ethno historic records have been provided by RPS to inform the process.

OEH guidelines also identify that those consulting with Aboriginal people should respect and observe Aboriginal protocols, which should be reflected in the consultation approach selected, stating (in Sheet 3 of the ACHCRs, DECCW 2010):

“Those consulting with Aboriginal people about cultural significance must respect and observe Aboriginal peoples’ protocols and values. The design and implementation of ethical standards and processes is critical to good practice in consultation with Aboriginal people and should be incorporated into the design of the consultation process”.

We note that we are asserting *Fact sheet 3 of the ACHRS 2010* and require consultation which will guarantee our protection and rights of sacred knowledge.

Although it is acknowledged that Aboriginal registrants could make comment throughout the preparation of the Maules Creek/ Tarrawonga and Boggabri Coal EA Aboriginal cultural heritage assessments **this was only** over the project impact areas.

It is also clear and with significant alarm and distress, that the assessment approach chosen did not include an appropriate level of engagement with Aboriginal registrants on the cultural significance of the Biodiversity Offset areas.

Inadequacy of archaeological recording

It is also noted that there is inadequacy in the record of Archaeological recording over the Biodiversity Offset areas as these areas have not been assessed for either cultural values nor archaeological assessment. The records of the AHIMS registered sites are also questioned in terms of the code of practice for archaeologists as the time of these records may be very old. A record of the sites located within the Biodiversity Offset areas are not complete. We note that we have not received the AHIMS registered site cards which may be again an administrative oversight but an administrative error of some significance.

We note that engagement should instead be focused on Aboriginal views of the archaeological assessment process, instead of strategies to engage in broader discussion on identification and management of cultural significance values. We need to undertake both the specific and the broader cultural heritage dialogue in order to meet the Project approval conditions which are requirements of the approvals process especially as the Biodiversity Offset areas are currently subject to Senate Enquiry..

Given the BTM Complex Project relate to State Significant Developments with a large and complex biodiversity offset areas, never seen nor walked by the GTC or RAPs the above is considered **completely inadequate** to meaningfully seek Aboriginal registrant input on the Heritage Values strategy process and outcomes in accordance with the three mines conditions of project/s approval and the Ask First principles and OEH guidelines and professional standards cited as being conducted and provided.

This requires urgent address. Please provide in writing details of how these issues will be addressed. It is due to these serious concerns and reservations that we will not be able to attend the meeting suggested for tomorrow (including no details of venue and time provided by you in your documentation) and that we request that the process be applied consistent with the Ask First Principles and ACHARs 2010. We will also be providing a more in-depth statement and feedback relating to the methodology. We have included a copy of your RPS correspondence package as an addendum for your reference.

In consideration that the false start and administrative challenges being confronted by RPS and the BTM Complex mines which may impede completion of conditions of approval obligations within the described timeframes dictated by government, we will be formally writing to Minister DPI in order to request that the Heritage Strategy timeframe be increased in order that the BTM are able to fulfil their obligations and timeframes to complete the Biodiversity Heritage strategy however collectively this will also still enable our community to provide the appropriate level of heritage detail for the AHCS plan. This will ensure that both BTM and the community are not disadvantaged in the Heritage Assessment process.

We look forward to working together to attain a positive cultural heritage outcome for our people and for the intent of the Ministers Heritage Strategy requirements including adequate Biodiversity offset arrangements.

Our delegated contact person on behalf of our Elders and community is Dolly Talbott and Dolly can be contacted on 0413131983 or email gomerotraditionalcustodians@hotmail.com

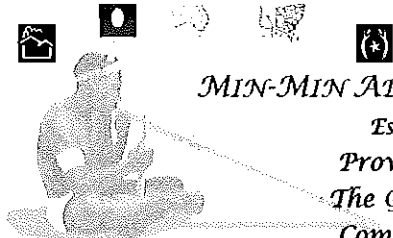
Yours sincerely

Gomerot Traditional Custodians Elders and Community

Name	Address	Phone	Signature
JUDE FIELD	9 BOROWIA AVE GUNNEDAH	0401841065	J Field
LES FIELD	4 HINTON DR GUNNEDAH	0827725563	Les Field
ROGER MATTHEWS	76 NELSON RD MORREBROOK	0919676586	R.M.
Hazel Collins	3 Carroll St GD	0423902746	H Collins
SANDRA Aldridge	99 View St GD	0434245311	S Aldridge
Vicki WORTLEY	1/61 View St GD	0434008423	V. Wortley
LOARA LAMB	5 CARROLL St Gunnedah	0428196329	L Lamb
Tracy Wortley (nee) Matthews	75 High St	0423391628	T. Wortley
Lloyd Matthews Elder	21 Bando	67420658	L. Matthews
Cory Matthews	35 Marion St Gunnedah	0422286467	C. Matthews
TERRY MATTHEWS	396 ARMIDALE RD + ANNORTH	0467490722	T Matthews
Jacob Matthews	396 Armidale RD Tamworth	0467490722	J. Matthews
Breanna Matthews	396 Armidale Rd Tamworth	0467490722	B. Matthews
MICHAEL ROY STAIR	15 PARKINSON AVE, MUSWELLBROOK	0419473965	MICHAEL ROY STAIR
Leanne Kirkman	56 Little Conolly St Gunnedah	0400400592	L Kirkman
Betty Barton	16 Bando St GD	0420620363	Betty Barton
Kirra Sawyer	16 Bando St	0420620363	Kirra Sawyer
Judith Hartley	23 Bando St GD	0499758864	Judith A. Hartley
Sharon Pearce	Home - WA.	0890391353	S Pearce
Ally Kennedy	31 Little Conolly St Gunnedah	67423778	Ally Kennedy
Kenneth Kennedy	31 Little Conolly Street Gunnedah	67423778	K. Kennedy
Betty Bondron			
Liz Ryan	58 High St GDH	0437777081	L Ryan

Name	Address	Phone	Signature
Pauline Sampson	2 Anzac Parade Werris Creek	040 3580901	P Sampson
Michael Furner	2 Anzac Parade Werris Creek	040 3580901	M. Furner
Kevin Furner	92 Henry St Werris Creek	040 3243618	K Furner
Jean Street			
GARY SHERY	GURLEWIS 69 HENRY ST	6743666	G Shery
Huby Smith	Barber St		
Joyce Donington	Barber St		
Reg Robinson	31 Little Conadilly Street.		
Delcie Robinson	"		
Lou Conlan	Eura Street	APPROVED BY PHONE	
Joe Conlan	Eura Street	APPROVED BY PHONE	
Gloria Mathey	45 Jaeger Ave Gundah	0412125009	G Mathey

APPROVED BY PHONE



MIN-MIN ABORIGINAL CORPORATION

Established 1985.

Providing Affordable Housing to

The Gunnedah Aboriginal

Community

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Fax: (02) 6742-5152

Email: minminaboriginalcorporation@yahoo.com.au

Min Min Aboriginal Corporation.

PO BOX 877

Gunnedah NSW 2380.

15 th April 2014.

Dear Jane,

Please include Min Min Aboriginal Corporation in correspondence with **RPS**.

Gwen Griffen (Chairerson)

I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled, also the concerns over the process being reviewed,

Regards

Stephen Talbott

From: Amanda Heard [mailto:amandaj.heard@hotmail.com]
Sent: Tuesday, 15 April 2014 11:20 PM
To: Brooke Heard; Dolly Talbott
Subject: Amanda's letters.doc

I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled,also the concerns over the process being reviewed,

Regards

Amanda Heard

RPS Letter

Vicky Slater

33 Gardner Cct

Singleton. NSW 2330

I hereby give permission for my name to be attached & be included to the letter requesting that RPS ADVISING that the meeting should be Cancelled and Rescheduled and also Our concerns over the process of being Reviewed.

Regards

Vicky Slater – Traditional Owner Gomeroi People.

Toni Comber

From: Jane Delaney-John <jane@connectforeffect.com.au>
Sent: Thursday, 17 April 2014 3:49 PM
To: Toni Comber
Subject: FW: Letter RPS

-----Original Message-----

From: Dolly Talbott [<mailto:nanagoanna@yahoo.com.au>]

Sent: Thursday, 17 April 2014 3:11 PM

To: jane@connectforeffect.com.au

Subject: Fwd: Letter RPS

12 Creek Reserve Road,
Boolaroo 2284 NSW

As a traditional owner I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled, also the concerns over the process being reviewed,
Regards, Kayla Whitten.

Toni Comber

From: Jane Delaney-John <jane@connectforeffect.com.au>
Sent: Thursday, 17 April 2014 3:50 PM
To: Toni Comber
Subject: FW: Letter RPS

-----Original Message-----

From: Dolly Talbott [<mailto:nanagoanna@yahoo.com.au>]

Sent: Thursday, 17 April 2014 3:09 PM

To: jane@connectforeffect.com.au

Subject: Fwd: Letter RPS

12 Park Parade,
Booragul, 2284 NSW

As a traditional owner I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled,also the concerns over the process being reviewed,
Regards, JasonWhitten.

Toni Comber

From: Jane Delaney-John <jane@connectforeffect.com.au>
Sent: Thursday, 17 April 2014 3:50 PM
To: Toni Comber
Subject: FW: Letter RPS

-----Original Message-----

From: Dolly Talbott [<mailto:nanagoanna@yahoo.com.au>]
Sent: Thursday, 17 April 2014 3:07 PM
To: jane@connectforeffect.com.au
Subject: Letter RPS

26 Endeavour Close
Woodrising 2284 NSW

As a traditional owner I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled, also the concerns over the process being reviewed, Regards, Linda Whitten.

Toni Comber

From: Jane Delaney-John <jane@connectforeffect.com.au>
Sent: Thursday, 17 April 2014 3:49 PM
To: Toni Comber
Subject: FW: Letter RPS

-----Original Message-----

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Subject: Fwd: Letter RPS

12 Creek Reserve Road,
Boolaroo 2284 NSW

As a traditional owner I hereby give permission for my name to be attached and included to the letter to RPS advising that the meeting should be cancelled and rescheduled, also the concerns over the process being reviewed, Regards, Kayla Whitten.

Toni Comber

From: Jane Delaney-John <jane@connectforeffect.com.au>
Sent: Thursday, 17 April 2014 3:50 PM
To: Toni Comber
Subject: FW: Letter RPS

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Newcastle Office

Ground Floor, 241 Denison Street, Broadmeadow, NSW Australia 2292
PO Box 428, Hamilton, NSW Australia 2303

Our Ref: 115434-1
Date: 16 May 2014

Attn: Ms Dolly Talbott
Gomeri Traditional Custodians, Elders,
Red Chief Local Aboriginal Land Council,
Min Min Aboriginal Corporation and Community

Via: Email and Mail

Dear Ms Talbott,

RE: CORRESPONDENCE REGARDING ABORIGINAL HERITAGE CONSERVATION STRATEGY (AHCS) FOR THE BTM COMPLEX AND BIODIVERSITY OFFSET AREAS

Thank you for your letter of 15 April 2014 on behalf of Gomeri Traditional Custodians, Red Chief Local Aboriginal Land Council, Min Min Aboriginal Corporation, and other members of the Aboriginal community.

Your concern regarding the Project inception Workshop

Thank you, in particular, for raising with us your concern that circumstances prevented many members of the community from attending the Project Inception Workshop for the Aboriginal Cultural Heritage Strategy (**ACHS**). We are determined to maximise community consultation for the AHCS and share your concern that time constraints and the Easter holidays prevented interested knowledge-holders from attending the workshop.

Our proposed solution

In order to address your concern, we intend to apply to the Department of Planning and Infrastructure to for an extension to the existing 30 June 2014 deadline for submission of the AHCS. If the extension is granted, we would use the additional time to hold a further workshop, with plenty of prior notice for all interested community members, as you suggest in your letter.

The further workshop would also be an opportunity for you and your colleagues to discuss with us the other concerns which you detail in your letter.

We appreciate you taking the timing to write to us on this matter.

Yours sincerely
RPS

Tessa Boer-Mah
Newcastle Cultural Heritage Manager

cc: Steven O'Donoghue (Planning and Infrastructure)
Phil Purcell (Office of Environment and Heritage)

Invitation and Advertisement for Second Workshop

DRAFT



Newcastle Office

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Our Ref: PR115434-1
Date: 16/05/2014

RE: INVITATION FOR CULTURAL MAPPING WORKSHOP AS PART OF THE BTM COMPLEX AND BIODIVERSITY OFFSET AREA ABORIGINAL HERITAGE CONSERVATION STRATEGY (AHCS)

RPS has been engaged by the BTM Complex to produce an Aboriginal Heritage Conservation Strategy (AHCS) for the BTM Complex and Biodiversity Offset Areas.

As part of the ongoing AHCS for the BTM Complex, three workshops have been planned. This AHCS requires consultation with the local Aboriginal Groups and as a Registered Aboriginal Party (RAP); we are inviting your organisation to participate in the **second** workshop. Your organisation can also participate via written or verbal correspondence. Workshop one, a project inception meeting, was held on the 16th of April, 2014.

The second workshop is proposed for the **11th and 12th of June, 2014**. The aim of this workshop is to provide your organisation the opportunity to comment on the Aboriginal cultural values of the BTM Complex and Biodiversity Offset Areas, as well as provide input into strategies appropriate for enhancing and conserving Aboriginal values in these areas. Any confidential information provided will be separated into a confidential dossier with appropriate restrictions on who can access the information.. The second workshop will be divided into three sessions: 9am, 11:30am and 2:30pm.

For catering and attendance purposes, please let Jeremy Hill know if your organisation will be attending this workshop and what session they would prefer. You can do this by filling out the attached feedback form. Please note there will be no fieldwork associated with this workshop and participation is on a non remunerated basis.

We trust this information is sufficient for your purposes, however should you require any further details or clarification, please do not hesitate to contact us.

Yours sincerely
RPS

Jeremy Hill
Cultural Heritage Consultant

cc: Tessa Boer-Mah (Newcastle Cultural Heritage Manager)

AHCS *Second Workshop Attendance Form*

BTM Complex and Biodiversity Offset Areas Aboriginal Heritage Conservation Strategy (AHCS).

A representative of my organisation will be able to attend the following workshop (please select one session):

Workshop	Date	Session Time	Location	Able to attend? Y/N
<u>Workshop 2</u> : Aboriginal cultural values workshop	Wednesday 11 th June	9:00 am	Gunnedah – Smithurst Theatre	
<u>Workshop 2</u> : Aboriginal cultural values workshop	Wednesday 11 th June	11:30 am	Gunnedah - Smithurst Theatre	
<u>Workshop 2</u> : Aboriginal cultural values workshop	Wednesday 11 th June	2:30 pm	Gunnedah - Smithurst Theatre	
<u>Workshop 2</u> : Aboriginal cultural values workshop	Thursday 12 th June	9:00 am	Gunnedah – Smithurst Theatre	
<u>Workshop 2</u> : Aboriginal cultural values workshop	Thursday 12 th June	11:30 am	Gunnedah - Smithurst Theatre	
<u>Workshop 2</u> : Aboriginal cultural values workshop	Thursday 12 th June	2:30 pm	Gunnedah - Smithurst Theatre	

Name.....

Registered Organisation.....

Current Phone Number.....

Signature.....

Date.....

Please send this feedback form by the 4th of June, 2014 if you are attending the second workshop to **Jeremy Hill** via:

Phone: 02 4940 4200

Fax: 02 4961 6794

Email: Jeremy.Hill@rpsgroup.com.au

Address: PO Box 428, Hamilton NSW 2303

MEETING & WORKSHOP

ABORIGINAL HERITAGE CONSERVATION STRATEGY
FOR BTM COMPLEX AND BIODIVERSITY OFFSET
AREAS

WEDNESDAY 11TH JUNE

INDIVIDUAL SESSSIONS:

9AM

11:30 AM

2:30 PM

THURSDAY 12TH JUNE

INDIVIDUAL SESSIONS: 9AM & 11:30 AM

COMBINED SESSION: 2:30PM

WHERE:

SMITHURST THEATRE

FURTHER INFORMATION:

If you would like to attend please phone RPS
4940 4200 and ask for Jeremy or Tessa

Fax: 02 4961 6794

Address: PO Box 428, Hamilton NSW 2303

Email: Jeremy.Hill@rpsgroup.com.au

Invitation and Advertisement for Third Workshop

To be added on completion of the third workshop

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Map of Culturally Sensitive Area as Shown on AHIMS Site Card 20-4-0010

DRAFT

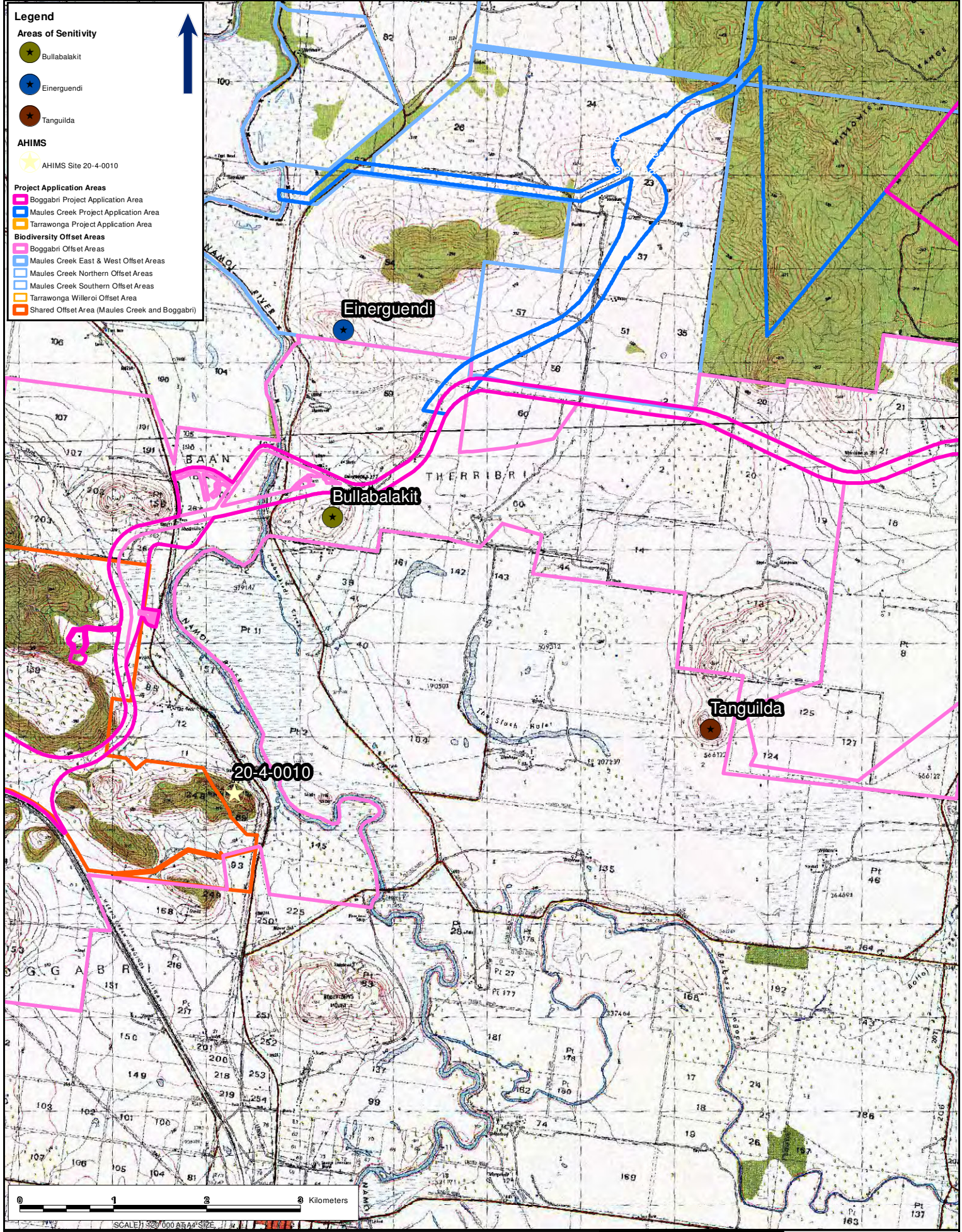


Figure: Additional Map Presented During Workshop 1 Showing Sensitivity Areas Identified by Site Card 20-4-0010

LOCATION: Boggabri - Tarrawonga - Maules Creek Complex	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: 115434-1	Data Sources: Bing Maps 2011
PURPOSE: Heritage Technician: jeremy.hill	Date: 18/07/2014

CLIENT: Parsons Brinckerhoff
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**ATTACHMENT 3 - LIKELY DISTRIBUTION OF ABORIGINAL SITE TYPES WITHIN THE STUDY
AREA**

The background study on environmental, historical, and archaeological context indicates that Aboriginal cultural heritage sites do occur within the Study Area. By comparing the results of the background research and the archaeological investigations previously undertaken within the region, the following conclusions can be drawn regarding the potential for additional, previously unidentified Aboriginal cultural heritage within the Study Area:

Open Artefact Sites (including artefact scatters and isolated finds):

- Artefact scatters are the site type most likely to occur in the Study Area.
- Artefact sites are more likely to be found on permanent rivers and, to a lesser degree, alongside intermittent creeks.
- There is a strong correlation between the size and density of artefact remains and water availability (i.e. the frequency of stone artefacts decreases with distance from permanent water). Sites associated with permanent water are generally more extensive and frequently used than sites located in other landforms. When artefacts are encountered on higher landforms, they are generally representative of a sporadic and diffuse Aboriginal presence.
- Artefacts are most likely to be found within 50 m of other artefacts and/or 200 m of a named watercourse and/or 100 m either side of a mapped drainage line.
- Near rivers and lagoons, artefact sites tend to occur on the higher parts of the banks, above normal flood level.
- The presence of low-density artefact scatters on intermittent creeks is generally limited to locations downstream from steeper sections that drain higher terrain, but upstream of where the creek channels become poorly defined. These locations are likely associated with temporary water holes following rain.
- The presence of stone artefact scatters on intermittent creeks is often associated with the presence of exposed outcrops of suitable stone resources. The nature of artefacts from these sites reflect preliminary stone-working activities associated with stone resource acquisition.
- A review of the relevant geology within the Study Area indicates an abundance of eroded conglomerate gravels, suitable for artefact manufacture (knapping or grinding), and occasional sandstone outcrops, suitable for artefact grinding.
- Higher elevations hold low potential for artefactual material, likely due to the scarcity of surface water and the prevalence of steep surfaces.

Scarred Trees

- Carved trees have been found in the Gunnedah area (e.g. Burburgate Tree; Dallas 1986), but such trees are generally known and listed, and the potential for unlisted examples is low and likely confined to very remote areas.
- Scarred trees, which represent the sources of material for shields, containers, canoes, shelters, etc., can occur near water or away from it, depending on the type of wood or bark wanted and its purpose.

- Considering the late 19th or early 20th Century cessation of tree scarring, only mature native trees have the potential to contain cultural scars.
- Haglund (1986) notes that few trees were seen in the wider area that would be old enough to have been affected by Aboriginal activities.
- Most trees bearing scars are not the result of cultural activities; several registered trees have been reassessed as being of natural origin (e.g. 'torch bark scars' in Thompson 1981; Burns' reassessment of trees at Maules Creek Coal Mine).

Rock Shelters

- Sites dependent upon the presence of rock formations such as rock shelters and rock art sites would be unlikely in the MC Western and MC Eastern Offsets, the Shared Offset, and BC Western and BC Central Offsets, because these areas are generally devoid of suitable rock outcrops. The volcanic and conglomerate bedrock in the low hills and ridges within the immediate region does not weather to form caves or overhangs. Rock shelter sites are rare in the region.
- Rock-shelter sites are known to exist in National Parks adjacent to the MC Northern and MC Southern Offsets. The geological nature of these offsets indicate that some potential remains for rock-shelters and/or overhangs to exist within these properties, particularly in areas associated with suitable durable bedrock (sandstone) deposits, such as the northern sections of Braefield in the BC Eastern Offset.

Spiritual or Ceremonial Sites

- Mythological or religious sites include stone arrangements usually on hill crests or ridges, bora grounds usually associated with ridges and permanent water, but distant from occupation sites, or burials usually in soft, sandy and dry deposits. All these sites have been reported but not necessarily substantiated by archaeological investigation for the wider Boggabri area. Nevertheless, such sites are rare.
- Gin's Leap has been registered on AHIMS as a mythological site, and is the only site of this type recorded in the immediate region.
- Ceremonial grounds, such as bora grounds, tend to be some distance from occupation sites (McCarthy 1940).
- In the early 1980s archaeologists consulted with numerous Aboriginal elders about the general area and did not identify any spiritual or ceremonial sites (Haglund 1983; 1985; 1986; Thompson 1981; Kamminga 1977).

Burials

- Burial sites are rare, and are either known through tradition or found by accident when disturbed. Aboriginal burials tend to occur in locations where the soil is light, sandy and well drained, or within rock shelters. Prehistoric burials are unlikely to occur or remain in the heavy alluvial soils of the Namoi floodplain, or acidic volcanic soils of the uplands, or shallow stony soils of the ridges.
- Human remains tended to be placed in hollow trees, caves or sand deposits along river banks. Usually burials are only identified when eroding out of sand dunes or creek banks, or when disturbed by development.
- Burials are not expected in the Study Area due to an expected paucity of alkaline sand bodies.

Other Site Types

- Earthen features including mounds, ovens, hearths, and ceremonial rings are normally restricted to level ground adjacent to water sources. They would be unlikely to be identified in the Study Area because previous land disturbance, such as mining activities, grading roads and fence lines, animal grazing, and ploughed cultivation would likely have destroyed any that may have occurred in the area.
- Freshwater shell middens rarely occur more than 100 m from permanent water sources (Dunk and Vermeltfoort 2011: 36).
- Grinding grooves tend to be close to water, where suitable outcrops of coarse sandstone are available. Grinding grooves are present in the sandstone outcropping along the Namoi River, but sandstone is also known to exist within several discrete geological landforms in the MC Southern, MC Northern, and BC Eastern Offsets, and, to a lesser degree, the MC Western, BC Western, BC Central and MC Eastern Offsets.

**ATTACHMENT 4 - LIST OF REGISTERED ABORIGINAL PARTIES PER MINE FOR THE
ABORIGINAL HERITAGE CONSERVATION STRATEGY**

Table A4-1
List of Registered Aboriginal Parties – Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
AB/TT Services		Maules Creek Coal Mine
Aboriginal Native Title Consultants	Margaret and John Matthews	Maules Creek Coal Mine Tarrawonga Coal Project
Aboriginal Natural Resource Officer	Jason Wilson	Maules Creek Coal Mine
Aboriginal T/O Surveys	Gloria Foley	Maules Creek Coal Mine
ACA Roofing	Sonny Fitzroy	Maules Creek Coal Mine
AGA Services	Adam Sampson	Maules Creek Coal Mine
AT Gomilaroi Cultural Consultancy	Aaron Talbot	Maules Creek Coal Mine
Bawurra	Kevin Sampson	Maules Creek Coal Mine
Bigundi Biame Traditional People	Wayne Griffiths	Maules Creek Coal Mine Tarrawonga Coal Project
Breeza Plains Culture Heritage Consultant	Terry Matthews	Maules Creek Coal Mine
Bullen Bullen Consultants	Lloyd Matthews	Maules Creek Coal Mine Tarrawonga Coal Project
Cacatua Cultural Consultants	George and Donna Sampson	Maules Creek Coal Mine Tarrawonga Coal Project
Carrawonga Consultants	Justin Matthews	Maules Creek Coal Mine
Cheryl Moodie Consultants	Cheryl Moodie	Maules Creek Coal Mine
Curindi Consultants	Rona Slater	Maules Creek Coal Mine
Deslee Talbott Consulting	Deslee Matthews	Maules Creek Coal Mine
Divine Diggers	Gary Perkins	Maules Creek Coal Mine
DRM Cultural Management	Helen Faulkner	Maules Creek Coal Mine
Elli Lewis Cultural Heritage Consultants	Patricia Jean Hands	Maules Creek Coal Mine
EMT Cultural and Heritage	Esther Tighe	Maules Creek Coal Mine
Galamaay	Karen Matthews	Maules Creek Coal Mine
Giwirr Consultants	Rodney Matthews	Maules Creek Coal Mine Tarrawonga Coal Project
Gomeri Cultural Consultants	David Horton	Maules Creek Coal Mine
Gomeri Indigenous Mining Company	Marvonia Welsh	Maules Creek Coal Mine
Gomeri Indigenous Mining Company	Ray Welsh Senior	Maules Creek Coal Mine
Gomeri Murri Ganuurr Yuuray Wadi Palinka	Greg Griffiths	Maules Creek Coal Mine
Gomeri Namoi Traditional Owners	Stephen Talbott	Maules Creek Coal Mine
Gomeri Narrabri Aboriginal Corporation	Craig Trindall - Narrabri National Park Cultural Officer	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
Gomeri Native Title Applicants C/- Sam Hegney Solicitors	Sam Hegney	Maules Creek Coal Mine
Gunida Gunyah Aboriginal Corporation	Jane Bender and Wade Natty	Maules Creek Coal Mine Tarrawonga Coal Project
Gunnedah Aboriginal Elders Justice Group	Gloria Foley	Maules Creek Coal Mine
HECMO Consultants	Mitchum Neave	Maules Creek Coal Mine
Heilamon Cultural Consultants	Clifford Johnson	Maules Creek Coal Mine
HSB Heritage Consultants	Patricia Hampton	Maules Creek Coal Mine
Huckda Dreamin Heritage Group	Richard Slater	Maules Creek Coal Mine
Hunter Valley Culture Consultants	Christine Archbold	Maules Creek Coal Mine
Hunters and Collectors	Tania Matthews	Maules Creek Coal Mine
I&E Aboriginal Culture and Heritage	Ivy Jaeger	Maules Creek Coal Mine
Jumbumma Traffic Management Group Pty Ltd	Norman Archibald	Maules Creek Coal Mine
Kawul Cultural Services	Vicky Slater	Maules Creek Coal Mine
L.J. Culture Management	Les Field	Maules Creek Coal Mine
Luke Cameron Cultural Management	Luke Cameron	Maules Creek Coal Mine
ME Griffiths Cultural Management	Marie-Ellen Griffiths	Maules Creek Coal Mine
Min Min Aboriginal Corporation	Christine Smith	Maules Creek Coal Mine Tarrawonga Coal Project
Mingga Consultants	Clifford Matthews (Mick)	Maules Creek Coal Mine Tarrawonga Coal Project
Mooki River Consultants	Wayne Matthews	Maules Creek Coal Mine
Muswellbrook Cultural Consultants	Brian Horton	Maules Creek Coal Mine
Myland Cultural and Heritage Group	Wayne Schillings	Maules Creek Coal Mine
Narrabri Local Aboriginal Land Council	Edward Trindall	Maules Creek Coal Mine
Ngurrimbaa Gunidjaa Traditional Owners		Maules Creek Coal Mine
Red Chief Local Aboriginal Land Council		Maules Creek Coal Mine Tarrawonga Coal Project
Smith Dhagaans Cultural Group	Tim Smith	Maules Creek Coal Mine
T&G Culture Consultants	Tony Griffiths	Maules Creek Coal Mine
Traditional Local Site Trackers	Troy Silver	Maules Creek Coal Mine
Tribes United Aboriginal Corporation	Richard Green	Maules Creek Coal Mine
Upper Hunter Heritage and Culture Consultants	Darrell Matthews	Maules Creek Coal Mine
Waabi Gabinya Cultural Consultancy	Elizabeth Howard	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
Wee Waa Local Aboriginal Land Council	Kasey Hilderson	Maules Creek Coal Mine
White Cockatoo	Michael Long	Maules Creek Coal Mine
Wiawa Aboriginal Corporation	Brian Warren	Maules Creek Coal Mine
Woonaruah Cultural Heritage	Gordon Griffiths	Maules Creek Coal Mine
Wunda Cultural Consultants	Travis Matthews	Maules Creek Coal Mine
Wunga-Li Traditional Owners	Veronica Talbott	Maules Creek Coal Mine
Wurrumay Consultant	Kerrie Slater	Maules Creek Coal Mine
WY Consulting	Yvonne Rodgers	Maules Creek Coal Mine
Yinarr Cultural Services	Kathie Kinchela	Maules Creek Coal Mine
	Aaron Walton	Maules Creek Coal Mine
	Adam Budden	Maules Creek Coal Mine
	Aleena Eather	Maules Creek Coal Mine
	Alfred Priestly	Maules Creek Coal Mine
	Alison Sampson	Maules Creek Coal Mine
	Allan Talbott	Maules Creek Coal Mine
	Amanda Heard	Maules Creek Coal Mine
	Angus Alex Binge	Maules Creek Coal Mine
	Anthony Bennett	Maules Creek Coal Mine
	Anthony James Conlan	Maules Creek Coal Mine
	Anthony McGrady	Maules Creek Coal Mine
	Antwinette Squires	Maules Creek Coal Mine
	Benny Murray	Maules Creek Coal Mine
	Betty Condran	Maules Creek Coal Mine
	Blake McGrady	Maules Creek Coal Mine
	Brian Draper	Maules Creek Coal Mine
	Brian McGrady	Maules Creek Coal Mine
	Callum Trindall	Maules Creek Coal Mine
	Carla Suey	Maules Creek Coal Mine
	Carol Walsh	Maules Creek Coal Mine
	Chantae Griffiths	Maules Creek Coal Mine
	Charles Quinlan	Maules Creek Coal Mine
	Cindy Foley	Maules Creek Coal Mine
	Clifford Copeland	Maules Creek Coal Mine
	Clinton Lamb	Maules Creek Coal Mine
	Corey Lamb	Maules Creek Coal Mine
	Cyril Sampson	Maules Creek Coal Mine
	Dalton Dorrington	Maules Creek Coal Mine
	Daniel Cooper	Maules Creek Coal Mine
	Daniel Smith	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
	Daphne Cubby	Maules Creek Coal Mine
	David Dorrington	Maules Creek Coal Mine
	David MaGuire	Maules Creek Coal Mine
	David Maltby	Maules Creek Coal Mine
	David Toomey	Maules Creek Coal Mine
	Dean Foley	Maules Creek Coal Mine
	Delma Jones	Maules Creek Coal Mine
	Derrek Talbott	Maules Creek Coal Mine
	Dorothy Tighe	Maules Creek Coal Mine
	Douglas McGrady	Maules Creek Coal Mine
	Elaine Binge	Maules Creek Coal Mine
	Elizabeth Humble	Maules Creek Coal Mine
	Emily Roberts	Maules Creek Coal Mine
	Fiona Draper	Maules Creek Coal Mine
	Gary Griffiths	Maules Creek Coal Mine
	Gary Suey	Maules Creek Coal Mine
	Gavin Close	Maules Creek Coal Mine
	Gloria Maltby	Maules Creek Coal Mine
	Gordon Copeland	Maules Creek Coal Mine
	Grant Trindall	Maules Creek Coal Mine
	Hazel Collins	Maules Creek Coal Mine
	Heath Conlan	Maules Creek Coal Mine
	Holly Dorrington	Maules Creek Coal Mine
	Ian Jerrard	Maules Creek Coal Mine
	Ian Long	Maules Creek Coal Mine
	James Foley	Maules Creek Coal Mine
	James Thomas Jnr	Maules Creek Coal Mine
	Jane Conlan	Maules Creek Coal Mine
	Jason Suey	Maules Creek Coal Mine
	Jason Whitten	Maules Creek Coal Mine
	Jeanette Crozier	Maules Creek Coal Mine
	Jimmy Thomas	Maules Creek Coal Mine
	Jinbai McGrady	Maules Creek Coal Mine
	Joan Suey	Maules Creek Coal Mine
	Joe Conlan	Maules Creek Coal Mine
	John Sellers	Maules Creek Coal Mine
	John Suey	Maules Creek Coal Mine
	Josh Silver	Maules Creek Coal Mine
	Joshua Silver	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
	Joshua Suey	Maules Creek Coal Mine
	Josie Conlan	Maules Creek Coal Mine
	Joyce Livermore	Maules Creek Coal Mine
	June Field	Maules Creek Coal Mine
	Kathy King	Maules Creek Coal Mine
	Kerry Fernando	Maules Creek Coal Mine
	Kevin Leo Sharpley	Maules Creek Coal Mine
	Kye McKenzie	Maules Creek Coal Mine
	Leanne Foley	Maules Creek Coal Mine
	Lee Tighe	Maules Creek Coal Mine
	Leo Walker	Maules Creek Coal Mine
	Leonard Draper	Maules Creek Coal Mine
	Leonard Talbott	Maules Creek Coal Mine
	Lesbra Shumack	Maules Creek Coal Mine
	Leslie Bracken	Maules Creek Coal Mine
	Leslie John Woodbridge	Maules Creek Coal Mine
	Leslie Sussyer	Maules Creek Coal Mine
	Lillian Gillon	Maules Creek Coal Mine
	Linda Suey	Maules Creek Coal Mine
	Linda Whitten	Maules Creek Coal Mine
	Lindsey Copeland	Maules Creek Coal Mine
	Lionel McGrady	Maules Creek Coal Mine
	Loretta (Long) Uren	Maules Creek Coal Mine
	Lorna Lamb	Maules Creek Coal Mine
	Louise Conlan	Maules Creek Coal Mine
	Luana Quinlan	Maules Creek Coal Mine
	Luke Venasau	Maules Creek Coal Mine
	Madeline McGrady	Maules Creek Coal Mine
	Malveena Welsh	Maules Creek Coal Mine
	Mandy Hicks	Maules Creek Coal Mine
	Marjorie Talbott	Maules Creek Coal Mine
	Matt Priestly	Maules Creek Coal Mine
	Melissa Conlan	Maules Creek Coal Mine
	Melissa Corkery	Maules Creek Coal Mine
	Melissa Hooper	Maules Creek Coal Mine
	Michael Trindall	Maules Creek Coal Mine
	Nakita Silver	Maules Creek Coal Mine
	Natasha Rodgers	Maules Creek Coal Mine
	Natasha Talbott	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
	Nathan Sellers	Maules Creek Coal Mine
	Neville Sampson	Maules Creek Coal Mine
	Norm Long	Maules Creek Coal Mine
	Norman McGrady	Maules Creek Coal Mine
	Norman Porter	Maules Creek Coal Mine
	Pam Silver	Maules Creek Coal Mine
	Paul McGrady	Maules Creek Coal Mine
	Paul Moodie	Maules Creek Coal Mine
	Peter Swan	Maules Creek Coal Mine
	Peter Williams	Maules Creek Coal Mine
	Ray Welsh Jnr	Maules Creek Coal Mine
	Raymond Binge	Maules Creek Coal Mine
	Rebecca Beyzade	Maules Creek Coal Mine
	Reg Talbott	Maules Creek Coal Mine
	Rita Long	Maules Creek Coal Mine
	Robert King	Maules Creek Coal Mine
	Robert Miller	Maules Creek Coal Mine
	Robyn Wizgier	Maules Creek Coal Mine
	Rodger Noel Matthews	Maules Creek Coal Mine
	Ronald Long	Maules Creek Coal Mine
	Ronald McGrady	Maules Creek Coal Mine
	Ronald Suey	Maules Creek Coal Mine
	Ruby Copeland	Maules Creek Coal Mine
	Ruth Sampson	Maules Creek Coal Mine
	Sam Connolly	Maules Creek Coal Mine
	Samuel Cameron	Maules Creek Coal Mine
	Sandy Aldridge	Maules Creek Coal Mine
	Sarah Jones	Maules Creek Coal Mine
	Scott Talbott	Maules Creek Coal Mine
	Shannon Draper	Maules Creek Coal Mine
	Shannon Swan	Maules Creek Coal Mine
	Shaun Dixon	Maules Creek Coal Mine
	Shirley Long	Maules Creek Coal Mine
	Shirley Talbott	Maules Creek Coal Mine
	Shona Jordon	Maules Creek Coal Mine
	Sky-Lee Silver	Maules Creek Coal Mine
	Stephen Griffen	Maules Creek Coal Mine
	Stewart Porter	Maules Creek Coal Mine
	Terrance Jones	Maules Creek Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
	Thelma Yorkshire	Maules Creek Coal Mine
	Thomas Dahlstrom	Maules Creek Coal Mine
	Thorn Conlan	Maules Creek Coal Mine
	Toni Comber	Maules Creek Coal Mine
	Tracey Wortley	Maules Creek Coal Mine
	Tyan Silver	Maules Creek Coal Mine
	Veronica Long	Maules Creek Coal Mine
	Veronica Roberts	Maules Creek Coal Mine
	Vickie Wortley	Maules Creek Coal Mine
	Vivienne McGrady	Maules Creek Coal Mine
	W McGrady	Maules Creek Coal Mine
	Wayne Conlan	Maules Creek Coal Mine
	Wayne McDonald	Maules Creek Coal Mine
	Wendy Slade	Maules Creek Coal Mine
	Wendy Talbott	Maules Creek Coal Mine
	Wesley Binge	Maules Creek Coal Mine
	Edith Fordham	Maules Creek Coal Mine
	James Conlan	Maules Creek Coal Mine
	Rhonda Talbott	Maules Creek Coal Mine
	Shane Kennedy	Maules Creek Coal Mine
	Joyce Dorrington	Maules Creek Coal Mine

Table A4-2
List of Registered Aboriginal Parties – Tarrawonga Coal Project

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
Aboriginal Native Title Consultants	Margaret and John Matthews	Tarrawonga Coal Project
Bigundi Biame Traditional People	Wayne Griffiths	Tarrawonga Coal Project
Bullen Bullen Consultants	Lloyd Matthews	Tarrawonga Coal Project
Cacatua Cultural Consultants	George and Donna Sampson	Tarrawonga Coal Project
Giwiirr Consultants	Rodney Matthews	Tarrawonga Coal Project
Gunida Gonyah Aboriginal Corporation	Jane Bender and Wade Natty	Tarrawonga Coal Project
Min Min Aboriginal Corporation	Christine Smith	Tarrawonga Coal Project
Mingga Consultants	Clifford Matthews (Mick)	Tarrawonga Coal Project
Red Chief Local Aboriginal Land Council		Tarrawonga Coal Project

Table A4-3
List of Registered Aboriginal Parties – Boggabri Coal Mine

Registered Aboriginal Party	Contact Name	Relevant Mine/Project
Red Chief Local Aboriginal Land Council	CEO & Members	Boggabri Coal Mine
Gunida Gunya	Tammy Bush	Boggabri Coal Mine
Min Min Aboriginal Corporation	Gwen Griffen	Boggabri Coal Mine
Cacatua Cultural Consultants	Donna and George Sampson	Boggabri Coal Mine
Elli Lewis Cultural Heritage Consultants	Patricia Hands	Boggabri Coal Mine
Bigundi Biame Traditional People	Gary Griffiths	Boggabri Coal Mine
Gomeri Narrabri Aboriginal Corporation (GNAC)	Craig Tindall	Boggabri Coal Mine
	Gloria Foley	Boggabri Coal Mine
	Jason Wilson	Boggabri Coal Mine
Aboriginal Reference Group Namoi CMA	Cyril Sampson	Boggabri Coal Mine
Gomilaroi Cultural Consultants	Mr Aaron & Scott Talbott	Boggabri Coal Mine
	Mr Reg Talbott	Boggabri Coal Mine
	Mr Steve Talbott	Boggabri Coal Mine
	Mr Leonard Talbott	Boggabri Coal Mine
	Ms Veronica Talbott	Boggabri Coal Mine
	Mr Michael Trindall	Boggabri Coal Mine
Deslee Talbott Consultant	Ms Deslee Mathews	Boggabri Coal Mine
TNL Site Trackers	Mr Troy Silver	Boggabri Coal Mine
	Mr Lloyd Mathews	Boggabri Coal Mine
	Mr Ronald Long	Boggabri Coal Mine
White Cockatoo	Mr Michael Long	Boggabri Coal Mine
	Mr James Foley	Boggabri Coal Mine
	Mr Sonny Fitzroy	Boggabri Coal Mine
	Mr Nathan Slater	Boggabri Coal Mine
	Mr Shannon Draper	Boggabri Coal Mine
	Mr Cyril Sampson	Boggabri Coal Mine
	Mr Brian Draper	Boggabri Coal Mine
Mooki Plains Clan	Stephen Mathews (replaced by Les Field LJ Consulting)	Boggabri Coal Mine
T&G Cultural Consultants	Tony & Greg Griffiths	Boggabri Coal Mine
	Mr David Horton	Boggabri Coal Mine
	Ms Cindy Foley	Boggabri Coal Mine

ATTACHMENT 5 - SUMMARY OF PRELIMINARY DESKTOP ASSESSMENT

THE ARCHAEOLOGICAL PREDICTIVE MODEL

It is important to understand the environmental context of the Maules Creek Coal Mine, Tarrawonga Coal Project, Boggabri Coal Mine and associated biodiversity offset areas (herein referred to as the Study Area) in order to gain a better understanding of the resources potentially available to Aboriginal people (in both the pre- and post-contact periods) and European settlers. In addition, this information assists in determining whether natural environmental processes (i.e. weathering of land surfaces) will have impacted on archaeological sites deriving from activities associated with these resources.

The following discussion highlights aspects of the environmental context that are likely to have influenced prehistoric patterns of land use and Aboriginal site location for the Study Area. In particular, the nature of the local geology, landform and hydrology combined with an understanding of historical and Aboriginal land use will contribute to the development of a reliable predictive model for *in situ* Aboriginal cultural heritage sites in the Study Area. Predictive models are generally based on the results of previous archaeological investigations within a similar local environment, and take into account a wide variety of environmental influences (Rowland and Connolly, 2002).

The purpose of a predictive model is to focus future archaeological investigations on areas with archaeological potential. As a result, a large portion of the development of each model is undertaken as a desktop study. In order to further refine the predictive model, and to ensure its applicability and reliability to the Study Area landscapes, preliminary site visits were undertaken by University of Queensland Culture & Heritage Unit (UQCHU) archaeologists (Dr Matthew Whincop and Reiner Mantei) on 16-19 November 2015 and 12-13 July 2016 (Dr Matthew Whincop). Each biodiversity offset area (including the Boggabri-Maules Creek joint managed property "Rocklea"), was visited and general observations made regarding landform, geological outcrops, elevation, slope, and the extent of clearance and disturbance on each property.

Geology and Landform

Aboriginal people made use of the resources available to them, including a wide variety of stone resources which were used to produce stone tools. The nature of stone exploitation by Aboriginal people relies on the nature of the available resource, whether as a primary outcrop or as a secondary gravel source (Doelman et al. 2008). The following description of the local geological context provides perspective on stone resources available in the Study Area, which are located on several geological landscapes (this study relied upon geological data obtained from the Australian Stratigraphic Units Database online resource at Geosciences Australia – www.ga.gov.au).

MC Northern Offset (Mt Lindesay, Wongala and Wirradale)

The geology of the Mt Lindesay, Wongala and Wirradale properties of the Northern Offset is largely characterised by basaltic and rhyolite deposits of the Nandewar Volcanic Complex (i.e. mafic to intermediate volcanics, mafic to intermediate intrusives), and conglomerates of the Willuri Formation (e.g. Plagyan Ignimbrite Member) with occasional sandstone. The eastern margins of the Northern Offset consist of conglomerate and siltstone deposits associated with the Lark Hill Formation and Rocky Creek Conglomerate. The steep landforms of the conglomerate uplands are rugged and generally inaccessible with abundant conglomerate outcropping that erodes to shallow stony soils; seasonal drainage lines have created deeply incised gullies across much of these uplands. The uplands associated with the Nandewar basalt flows, however, are more accessible than the conglomerate counterparts; these landforms are characterized by wide ridges and undulating open grasslands with shallow brown loam soils (Mitchell, 2002:75); rocky outcrops are less prevalent in these areas.

Willeroi West

While the geology of the Willeroi West property contains abundant conglomerate deposits of the Willuri Formation (e.g. Plagyan Ignimbrite Member) with some sandstone intrusions, the eastern half of the property is characterized by a wide variety of stone resources associated with the Namoi Formation (thinly bedded mudstone and siltstone), Clifden Formation (coarse grained feldspar and sandstone, and mudstone) and Spion Kop Conglomerate, Ermelo Pyroclastics (coarse conglomerate). The steep landforms of the conglomerate uplands associated with Willuri Formation and Spion Kop Conglomerate, Ermelo Pyroclastics are rugged and deeply incised by seasonal drainage lines. The uplands of the Namoi Formation are more open, however, with wide ridges and undulating open grasslands, which characterise the north-eastern margins of the Willeroi West property; rocky outcrops are less prevalent in these areas.

MC Western, MC Eastern and BC Western Offsets

The MC Western, MC Eastern Offsets and BC Western Offsets are represented by four primary stratigraphic units: Boggabri Volcanics, the Maules Creek Formation, unnamed alluvial deposits, and a sand plain (ID 38499). The MC Western Offset is characterised by Early Permian acid volcanics of the Boggabri Volcanic group, which are widely distributed and characterised by a mix of rhyolitic flows and pyroclastics (including ashflow tuffs and ignimbrites), with rare deposits of andesite and trachyte (Hill, 1986). The Maules Creek Formation, which characterises the MC Eastern Offset, consists of Early Permian carbonaceous claystones interbedded with sandstone and minor coal seams, all of which are capped by upper conglomerates that contain acid volcanic clasts (Beckett et al., 1983). These two geological formations are locally overlaid by intermittent alluvial deposits associated with the Namoi River, Back Creek, and Maules Creek. The BC Western Offset extends across sections of the undulating Maules Creek Formation, the rugged volcanic ridges of the Boggabri Volcanics, and, in its eastern extent, a gently undulating sand plain associated with a relict Namoi River floodplain.

The landforms of the MC Western, MC Eastern, and BC Western Offsets are together characterised by several features:

- alluvial flood plains associated with permanent water course (e.g. Namoi River);
- undulating plains and lower slopes (areas not directly impacted by flood events);
- steep slopes, and incised gullies associated with seasonal drainage lines; and
- upper slopes and ridgelines.

The Shared Offset (Rocklea)

The geology of the Rocklea property is characterised by rhyolitic and dacitic deposits associated with the Boggabri Volcanics. This property is immediately adjacent to the local landmark known as Gin's Leap, which itself is a large outcrop of Permian Boggabri rhyolite. The remainder of the property consists of undulating landforms with occasional incised gullies and drainage lines, some steep slopes and rhyolite outcropping.

BC Central Offset

The western half of the BC Central Offset (Goonbri and much of the Wirrilah properties) is characterised by the undulating landforms of the Maules Creek Formation, which consists of Early Permian carbonaceous claystones interbedded with sandstone and minor coal seams, all of which are capped by upper conglomerates that contain acid volcanic clasts (Beckett et al., 1983). The eastern extent of the BC Central Offset (the Mallee and Myall Springs properties and a small portion of Wirrilah) is characterised by the steep landforms of the Willuri Formation (e.g. Plagyan Ignimbrite Member), which is dominated by conglomerate deposits and occasional outcrops of sandstone. The steep landforms of the conglomerate uplands are rugged and deeply incised by seasonal drainage lines. While rock outcrops are a common feature of the Mallee property, this area is unlikely to contain suitable rockshelters or overhangs for Aboriginal use.

BC Eastern Offset

The BC Eastern Offset is characterised by a wide variety of stone resources. Large areas of the Namoi Formation (thinly bedded mudstone and siltstone), and Mostyn Vale Formation (lithic wacke, naturally cemented conglomerate and basaltic tuffs) are associated with the undulating, open uplands of the Sunshine and Braefield South properties with wide ridges and undulating open grasslands; rock outcrops are less prevalent in these areas. More limited deposits of the Clifden Formation (coarse grained feldspar and sandstone, and mudstone) and Caroda Formation (arenite and conglomerate uplands with occasional siltstone and pebbly sandstone, and subordinate Barney Spring Andesite) are associated with uplands within the northern portions of the BC Eastern Offset properties, including inaccessible areas within the Braefield North property. The Sunshine property is traversed, roughly north to south, by a 500-metre-wide valley associated with a strip of Tulcumba Sandstone; this valley holds potential for grinding groove sites. The western extent of the Nioka North property is characterised by conglomerates of the Willuri Formation with occasional sandstone.

MC Southern Offset

The geology of the Southern Offset largely consists of rhyolite, andesite, volcanic conglomerates and occasional sandstone associated with the Willuri Formation (Penryn Rhyolite Member), and Caroda Formation (Barneys Spring Andesite Member). The upper slopes of the Southern Offset are generally steep and inaccessible, with conglomerate and sandstone outcrops abundant across the eastern margins. The 300-400-metre-high stony landforms of the Roseglass and Bimbooria properties are deeply incised by numerous seasonal drainage lines that are devoid of water for much of the year. The gently inclined lower slopes are traversed by numerous creeks, some of which contain small amounts of water.

Geological Context of Study Area

The geological context of the Study Area clearly demonstrates an abundance of suitable stone resources available for artefact production (e.g. fine-grain gravels derived from conglomerate rocks are ideal for knapping, while occasional sandstone outcrops are suitable for artefact grinding). The erosion pattern associated with the geology discussed above indicates that the presence of overhangs or shelters large enough for use by the local indigenous population is unlikely across much of the Study Area. Generally speaking, rock shelters are produced where a resistant, insoluble rock (e.g. sandstone, limestone) overlies a relatively weaker bedrock geology and when considerable erosive forces (e.g. water, wind) cut away the weaker rock, leaving behind the more resistant rock as an overhang or rock shelter. For this reason, there remains only limited potential for the presence of rock shelters where outcrops of durable rock outcrops occur, such as is evident within the MC Southern Offset and occasionally noted for the MC Northern Offset and BC Eastern Offset. The geology of the MC Western, BC Western, MC Eastern, BC Central, BC Eastern and MC Northern Offsets are dominated by crumbly conglomerate outcrops, which are unlikely to form overhangs of sufficient size for human occupation.

Hydrology

The majority of the biodiversity offset areas are located within the Namoi River catchment area, which is positioned as an intermediary between tablelands (to the east) and broad plains (to the west). In the western portions of the Study Area, the Namoi River meanders through alluvial plains and is fed by several seasonal creeks (e.g. Cox Creek, Maules Creek, Back Creek, Goonbri Creek, Stewarts Creek, Gin Gin Creek, Bollol Creek, and Whiskey Creek) that drain the volcanic uplands.

The northernmost 8 km of the biodiversity offset areas (northern portion of the MC Northern Offset) are located within the upper slopes of the Gwydir River catchment area, where the Horton River and several smaller creeks (e.g. Cutroad Creek, Porcupine Creek and Secondwater Creek) form the headwaters of the Gwydir.

Numerous lower order tributaries of creeks and rivers traverse the Study Area, providing suitable sources of fresh water for at least seasonal occupation by the local Aboriginal population. These tributaries tend to originate in higher ground, with the associated drainage of the upper slopes and steeper terrain forming seasonal creeks and streams that only flow

following prolonged rainfall and which do not retain water for long. Surface water is rare across much of the higher landforms except for short periods after storms or during long, wet periods (Haglund, 1986: 4). The higher order tributaries and major rivers are located on the valley flats and flood plains, and at the base of lower slopes, where temporary water holes and billabongs form following rainfall.

Land Use

The present distribution, physical condition and visibility of Aboriginal sites depends on the local patterns of land use over the last 150 years.

In 1831, the NSW Surveyor General, Sir Thomas Mitchell, examined the Namoi (Namoy, Nammoy) River valley and remarked on the open appearance of Mulluba (Maluba), the undulating area to the east of the Kelvin State Forest. The managed appearance of this landscape reminded him of English farm lands. Mitchell did note areas of thick scrub, but in 1831 much of the country close to the River was of open woodland appearance with some clear plains. Aboriginal food production techniques, such as burning off, had modified the landscape to make it more productive (attracting grass grazing mammals) (Thompson, 1981: H-3; Haglund, 1986: 5).

In the last 150 years, farming, forestry and other land management practices have changed many land surfaces in the Study Area and the vegetation they carried (Haglund 1986: 5). Clearing and logging have, for example, removed many trees old enough to carry scars from Aboriginal prehistoric activities. The BC Eastern Offset properties are also greatly affected by extensive erosion, which is the result of many factors (e.g. restrictive burning off regulations, the proliferation of Cypress pine).

Much of the alluvial flats associated with the major creek and rivers have been cleared and heavily cultivated, with archaeological materials often greatly disturbed by ploughing. Some woodland on hills and slopes has been logged during the last 150 years, while select areas in the wider landscape have also been subject to commercial mining and mineral exploration activities. During the site visits, Dr Whincop noted the level of clearing and disturbance for each of the biodiversity offset areas, which are summarised in Table A5-1.

Table A5-1
Biodiversity Offset Areas – Level of Observed Clearance and Disturbance

Property Name	Disturbed Areas	Undisturbed Areas	Comment
BC Western Offset			
Merriendi	Lower slopes west of uplands	Uplands with thick scrub	Shallow stony soils in accessible areas.
Namoi	Undulating plains and Namoi floodplain, as well as low hills east of Namoi River; localised disturbance west of Namoi River	Uplands at western extent of property	East of the Namoi River, this offset consists of low lying cleared land with occasional low rises. Extensive pastoral use in these areas.
Jerralong	Undulating plains and low hills	-	Adjacent to Namoi floodplain
MC Western Offset			
Kelso	Lower slopes and flats	Ridges and slopes	-
Olivedene	Rise in floodplain	Edge of river terrace	-
Louenville	Flats and plains	Ridges and slopes	Close to Namoi floodplains
Velyama	Undulating plains	Ridge lines	Previously surveyed and characterized
Tralee	Entirely cleared for pastoral activities	-	-
Teston South	Extensively cleared for pastoral activities	-	Previously surveyed and characterized
Teston North	Extensively cleared for pastoral activities	-	-
Warriahdool	Extensively cleared	-	Under crop
Back Creek	Surrounding fields	Creek margins	Previously surveyed and characterized
Maules Creek	Surrounding fields	Creek margins	-
MC Eastern Offset			
Wollandilly	Undulating plains	Back Creek margins and flood plain Several ridges	Deflated stony soils; crop and pasture; landscape modification (dams)
Oakleigh/ Onavale	Undulating plains	Localised slopes and ridges	Deflated stony soils; crop and pasture
BC Central Offset			
Goonbri	Undulating plains	Western rise less disturbed	Property largely cleared for pastoral activities, but some higher landforms still with vegetation

Wirrilah	Undulating plains between low rises	Highest ridges of main rise	Most of the property has been cleared, but conglomerate ridge less disturbed.
Myall Plains	Low lying areas at base of uplands	Uplands less disturbed	Young scrub with shallow stony soils
Mallee	Western extent of offset property has been cleared.	Rugged uplands with frequent rock outcrops.	Very rugged landforms with conglomerate and occasional sandstone outcrops.
BC Eastern Offset			
Nioka North	Low-lying landforms and central/eastern uplands cleared	South-western uplands	Eastern uplands and central lowlands have been cleared.
Sunshine	Extensive clearance and erosion	-	Localised sandstone outcrops between uplands
Braefield	All lower slopes and accessible country	Inaccessible northern uplands	Property impacted by localised erosion. Remnant vegetation evident in northern uplands with possible localised sandstone outcrops.
MC Southern Offset			
Roseglass	Undulating plains	Slopes and ridges	Plains cleared for pastoral activities; very rugged
Bimbooria	Undulating plains	Slopes and ridges	Plains cleared for pastoral activities; very rugged
MC Northern Offset			
Mt Lindesay	Lower plains	Slopes and ridges	Plains cleared for pastoral activities; very rugged
Wirradale	Lower plains	Slopes and wide ridges	Plains cleared for pastoral activities; natural grassy uplands
Wongala	Lower plains	Slopes and ridges	Plains cleared for pastoral activities; very rugged
Tarrawonga Offset			
Willeroi	Localised disturbance on grassy uplands	Slopes and ridges; localized grassy plains	Isolated disturbance on grasslands associated with access track, contour banks, and house.
Shared Offset			
Rocklea	Undulating plains	Slopes and ridges	Plains cleared for pastoral activities

Archaeological Context

Kammaing (1977) sample surveyed areas of the Amax lease at Boggabri. In particular, he searched for chalcedony quarries on Robertson's Mount and in the outcrops around Gin's Leap. Kamminga also investigated anecdotal evidence for the presence of burial grounds, carved trees, a bora ground and a fish trap, but was unable to conclusively locate any such sites, possibly due to destruction through modern land-use activities (e.g. ploughing).

Balme's (1984) broad regional study of the north central river systems identified open artefact scatters and scarred trees as the predominant site type. These sites tend to be located in association with permanent watercourses and, to a lesser degree, seasonal creeks at the base of higher landforms.

Thompson (1981) undertook an assessment of the Vickery Authorisation as part of that project's broader Environmental Impact Statement (Table A5-2). Thompson (1981: H-10) concluded that the locations of camp sites (artefact scatters) are closely associated with the presence of water, either a permanent river or intermittent creeks. Sites with the highest artefact densities (though none were particularly rich) are generally located on a permanent water source with access to a variety of environments and, therefore resources: i.e. the Namoi River where it intersects the open plains in proximity to nearby low hills. Campsites rarely occur away from permanent water, though smaller artefact scatters are evident along creeks immediately downstream from steeper sections (i.e. where water can pool). Scarred trees are generally not well represented in Thompson's (1981: H-21) study, except for the Cypress Pine tree scars that Thompson associated with 'torches' and nocturnal resource gathering. These same 'torch-bark' scars were inspected by a member of the NSW Forestry Commission, who interpreted these scars to be the result of a fire and should not be considered to be Aboriginal relics (Haglund, 1985: 19-20). Similar scars encountered during archaeological survey of the nearby Maules Creek Coal Mine were also dismissed by an arborist with more than 30 years' forestry experience as not having a cultural origin (Burns, 2013).

Haglund 1982 undertook archaeological investigation of two artefact scatters located on the Namoi River that had been identified by Thompson (1981): Top Rocks (AHIMS 20-4-0009) and Bottom Rocks (AHIMS 20-4-008), though both have been registered under the site name 'Wilga'. Haglund's detailed inspection of these two sites identified a wider class of artefact and raw material evident than that recorded by Thompson. Of the two sites, only Top Rocks was interpreted as maintaining some spatial integrity with in situ archaeological deposits: Bottom Rocks was considered to be much disturbed and damaged by erosion and human activity.

Table A5-2
Summary of Results from Thompson 1981

Type	Name	Context	Comment
Grinding Grooves	Wilga (20-4-0009) (Top Rocks)	River	20 grooves = 1 sqm; sandstone Vickery Formation in Namoi River
Artefact Scatters	Wilga (20-4-009) (Top Rocks)	River	Eroding scarp 60 m E; chert & quartzite artefacts
	Wilga (20-4-0008) (Bottom Rocks)	River	Eroded gullies 50 m E; chert, quartzite, silcrete artefacts
	Greenwood Creek	Creek	4km – Namoi; chert artefacts
	Driggle Draggie Creek	Creek	Knapped, ground edge, grinders
	Nagero Creek	Creek	Knapped, ground edge, grinders
	Driggle Draggie Creek II	Creek	Knapped, ground edge, grinders
Isolated Artefacts	Various	Slopes, ridges, drainage lines, creeks	-
Scarred Trees	Various	Rivers	Size of scars variable; Cypress pine 'torch-bark' scars; Coolamon occasional; Large scars rare

Data derived from Thompson 1981.

Haglund 1983 summarises the preliminary results of a broad archaeological reconnaissance survey of the Maules Creek Coal Project aimed at characterising the archaeological potential of the area based on general observations regarding landform, geology and site identification. Haglund (1983: 2) noted that the river flats in her Study Area (i.e. those associated with the Namoi River and Back Creek) were surrounded by more rugged terrain with steep-sided ridges and spurs separated by narrow erosion gullies. While rocky outcrops were noted by Haglund, nowhere was the rock seen to form overhangs or shelters large enough for use by the local indigenous population (*ibid*). North of Back Creek, the more gently-sloping terrain consisted of extensive colluvium and alluvium. Haglund concluded that areas “likely to have been preferred for Aboriginal camp sites occur on flat-topped spurs where finer sediment remains with the gravel, on stretches of Black Soil [...] and on the areas of colluvium and alluvium” (1983: 3). Archaeological material was considered more likely on high creek banks close to rocky outcrops exposed in creek beds and, to a lesser degree, on the lower slopes of low hills and broad saddles. No archaeological material was evident above the 340 metre contour, likely due to the scarcity of surface water and the prevalence of steep surfaces. Haglund’s (1983: 7; 1986: 5) study confirmed the relevance of Thompson’s (1981: H-10) predictive model: namely the presence of low-density artefact scatters on intermittent creeks at locations just downstream from steeper sections that drain hills, but upstream of where the creek channels become poorly defined and spread out on the flat alluvial areas downstream.

Haglund 1986 is a follow-up to her reconnaissance survey for the Maules Creek Project, outlining the results of a more detailed sampling survey of the project area. As a result of the two surveys, Haglund identified 21 artefact scatters and several isolated artefacts in the Maules Creek Project area (Table A5-3). Haglund (1986: 9) noted that the richest sites in terms of artefact frequency and diversity were those sites located on the banks of Maules Creek (n=3). Furthermore, the smaller assemblages primarily consist of unretouched flakes, flake cores, and flake fragments; artefact categories that characterise stone-working activities associated with stone resource acquisition. The Aboriginal sites identified by Haglund are characterised by scatters of flaked stone artefacts of variable raw material (e.g. mudstone, silcrete, chert, quartz, quartzite, and chalcedony).

Table A5-3
Summary of Results from Haglund 1986

Type	Name	Context	Comment
Artefact Scatters	MC1	Back Creek	Heavily disturbed – 10+ artefacts
	MC2	Intermittent creek	Heavily disturbed – 4 artefacts
	MC3	Intermittent creek	Heavily disturbed – 5 artefacts
	MC4	Intermittent creek	Some disturbance – 31 artefacts
	MC5	Intermittent creek	Heavily disturbed – 7+ artefacts
	MC6	Intermittent creek	Heavily disturbed – 5 artefacts
	MC7	Intermittent creek	Some disturbance – 40+ artefacts
	MC8	Intermittent creek	Some disturbance – 40+ artefacts
	MC9	Intermittent creek	Heavily disturbed – 9 artefacts
	MC10	Intermittent creek	Some disturbance – 30 artefacts
Artefact Scatters	MC11 (20-4-0024)	Low slope	Heavily disturbed – sparse artefacts
	MC12	Low slope	Some disturbance – few artefacts
	MC13	Billabong banks	Some disturbance – 40 artefacts
	MC14	Creek	Some disturbance – 80+ artefacts
	MC15	Slope overlooking water	Heavily disturbed – 20+ artefacts
	MC16	Maules Creek	Some disturbance – 20+ artefacts
	MC17	Maules Creek	Heavily disturbed – mostly broken artefacts
	MC18	Back Creek	Heavily disturbed - <10 artefacts
	MC19	Maules Creek	Heavily disturbed – 70+ artefacts
	MC20	Back Creek	Some disturbance – 40+ artefacts
	MC21	Intermittent creek	Some disturbance – 30+ artefacts

Data derived from Haglund 1986

Haglund 1985 undertook archaeological investigations of extensive areas north of Gunnedah proposed for coal mining, including areas now associated with the Vickery, Boggabri, Tarrawonga and Maules Creek Coal Mines. Haglund (1985) discusses nine artefact scatters and four isolated artefacts within the Vickery Authorisation area, including two sites located on the banks of the Namoi River that were first identified by Thompson (1981) and subject to more detailed investigation by Haglund (1982). The results of Haglund's archaeological investigations revealed low artefact densities, with the greatest artefact numbers concentrated along the Namoi River and then, to a lesser degree, seasonal drainage lines (Table A5-4).

Table A5-4
Summary of Results from Haglund 1985

Type	Name	Context	Comment
Artefact Scatters	Top Rocks	Namoi River	Scatter with in situ deposit & GG
	Mirrabinda 1	200m Namoi River	Sparse scatter of 30+ artefacts
	Bottom Rocks	Namoi River	Disturbed scatter
	Namoi River CWR	Namoi River	Sparse scatter
	Greenwood 1	Greenwood Creek	20 artefacts
	Greenwood 2	Greenwood Creek	Minor scatter
	Greenwood 3	Greenwood Creek	Minor scatter

Data derived from Haglund 1985

Dallas (1986) also undertook an archaeological survey of proposed infrastructure options for the Maules Creek Coal Mine. The survey located four archaeological sites; three low-density artefact scatters and one rock-shelter with an associated bifacial artefact. The rock shelter site (AHIMS MC22), which contained no evidence of Aboriginal occupation or use within the shelter, is located at the western end of the same rock outcrop associated with Gin's Leap.

The Aboriginal Archaeology and Cultural Heritage Management Plan (AACHMP) currently approved for the Maules Creek Coal Mine was originally approved in 2013 (AECOM 2013), while a revised version of the same plan was approved in 2015 (WHC 2015a). The original AACHMP identified a total of 101 Aboriginal cultural heritage sites within the Maules Creek assessment area. The majority of the assessed sites were artefact scatters (n=37) and isolated artefacts (n=20 predominantly occurring in association with creeks and slopes (AECOM 2013: 16). Two portable grinding groove objects were also identified in association with the sloped landform. The sixteen scarred trees identified during the assessment have all since been re-assessed as of non-cultural origin; this assessment was undertaken by a qualified arborist with more than 30 years forestry experience (Burns 2013; 2014a; 2014b; 2014c); the revised AACHMP did not include these trees (UQCHU 2015). As part of the management protocols

proposed in the original AACHMP, a predictive model for archaeological monitoring of cultural heritage sensitive areas.

The defining of cultural heritage sensitive areas was based on previous research, which demonstrated a close relationship between artefact presence and distance to water, and the results of the Aboriginal cultural heritage assessment. Cultural heritage sensitive areas were defined as those areas within 50 metres of a known Aboriginal cultural heritage site and/or land within 200 metres of a named watercourse and/or 100 metres either side of other mapped drainage lines (AECOM 2013: 49). During the course of archaeological salvage and ground disturbance monitoring for the construction activities for the Maules Creek project, several additional artefact scatters and isolated artefacts were identified within the cultural heritage sensitive areas; only a few isolated artefacts were identified beyond these zones (UQCHU 2015: 27).

The archaeological salvage program also established that the Maules Creek project area, including the Aboriginal cultural heritage sites contained therein, had been subjected to extensive disturbance: there was no evidence of intact sub-surface stratigraphy and the artefact assemblage was notable for the relatively high levels of artefact attrition (approximately 70% of artefacts were broken compared to the average of around 30-35% for sites across eastern Australia – Clarkson 2014: 17-21).

The Cultural Heritage Management Plan for Idemitsu's (2013) Boggabri Coal Mine incorporates the results of several different archaeological surveys, but is unclear about the actual number of sites located within the project area. An early ACHA (ARAS 2005) identified 61 sites (30 artefact scatters, 26 isolated artefacts and 5 scarred trees), while a later survey (Insite 2010) identified an additional 77 Aboriginal sites (artefact scatters, isolated artefacts and scarred trees). Many of these sites were located in close proximity to each other and which resulted in several sites sometimes being incorporated under a single AHIMS registration number. Furthermore, several sites identified during the Tarrawonga and Maules Creek ACHAs will be managed by the Boggabri CHMP. A total of 67 AHIMS sites, incorporating 103 site loci, are the subject of the approved CHMP. Additional sites are added to AHIMS and the Boggabri Coal Mine database as they are located in the course of salvage and due diligence activities.

The 2009 AHIMS search undertaken as part of the Aboriginal Cultural Heritage Impact Assessment Report (Insite 2010: 19) for Boggabri identified 103 sites within a 500 km² area (see Insite 2010: Figure 3), including 86 artefact sites, 14 scarred trees, 1 archaeological deposit (later de-registered), 1 artefact site with a scarred tree, and 1 mythological site (Gin's Leap). Two patches of grinding grooves on sandstone bedrock in the Leard Forest were also identified during subsequent survey, though they are both considered relatively poor examples of their type (Insite 2010: 73).

The results of the 2010 assessment concluded that the majority of artefact sites were located on the lower slopes and plateaux of the Baan Baa Range, while fewer sites were visible in the sediments of the Namoi River plains. Much of what was identified by the various surveys and assessments were notably disturbed, though Insite (2010: 50) states that the lower slopes of

the Leard State Forest hold potential for buried, undisturbed sites. Site NV48, located on a plateau within the Baan Baa Range, is one of the more significant sites discovered due to the variety of implements identified, including several grinding stones, cores, retouched flakes, and flakes. The outcropping cobbles have been used within the site also. A large portion of the area of the site (approximately 75%) has been conserved at the rear of the Rocklea property (The Shared Offset).

Several Aboriginal Cultural Heritage Assessments have been undertaken for different aspects of Whitehaven's Tarrawonga Coal Mine (Dunk and Vermeltfoort 2011; Cupper 2010). The approved Environmental Assessment (EA) reports the identification of 58 previously unregistered sites (22 artefact scatters, 25 isolated artefacts, and 11 scarred trees) during the assessment; this is in addition to the 90 sites (76 artefact scatters, 11 scarred trees, 1 potential archaeological deposit, 1 artefact scatter with a scarred tree and 1 restricted access site) at that time already registered on AHIMS. All but two of the artefact scatters identified during survey were located on the Lower Slopes or Plains landform units, and only one was found in a location not within 200 metres of Goonbri Creek. The majority of artefact scatters were considered to be low density; the highest density was 61 artefacts (including 10 cores). Isolated artefacts are generally distributed across a wider variety of landforms than artefact scatters (Ridge Top, Plain, and Lower Slope), but generally still within 200 metres of a known creek or water source. The results of the ACHA demonstrate that there is a strong correlation between the size and density of artefact remains, water availability and landform.

In addition, a targeted search of the AHIMS database was undertaken on 25 November 2015. Several searches were performed, with each focusing on areas likely to have little or no disturbance over the past two centuries. AHIMS searches were undertaken for the Mount Kaputar National Park (adjacent to the Northern Offset) (Table A5-5), the Boonalla Aboriginal Area (State Conservation Area adjacent to the Southern Offset) (Table A5-6), the Leard CCA Zone 3 Conservation Area (State Conservation Area adjacent to the Western Offset).

The results of these searches will inform future archaeological research on the biodiversity offset areas. The below tables do not present all sites identified in the searches, but excludes the ubiquitous isolated artefact and low-density artefact scatter sites. As such, the resulting tables present site types that are less frequently encountered in the region. Note that the search of the AHIMS database for the Leard CCA Zone 3 Conservation Area did not produce any results (i.e. there are no registered sites within this small State Conservation Area).

Table A5-5
Select AHIMS Search Results: Mount Kaputar National Park

AHIMS	Site Name	Site Type
20-1-0021	Bobbiwaa Creek, Sawn Rocks	Rock Shelter; PAD
20-1-0022	Bobbiwaa Creek, Sawn Rocks	Rock Shelter; PAD
20-1-0026	Mount Kaputar	Rock Shelter; PAD
20-1-0012	Ningadhun	Rock Shelter; PAD
20-1-0013	Ningadhun	Rock Shelter; PAD
20-1-0014	Dawson's Spring	Scarred Tree
20-1-0015	Dawson's Spring	Scarred Tree; Artefact Scatter
20-1-0029	Dawson's Spring Camp	Scarred Tree
20-1-0030	Scarred Tree – Sawn Rocks – Mount Kaputar National Park	Scarred Tree
20-1-0031	Hand Stencil (Ochre Art) – Bt – Mt Coryah	Art
20-1-0071	Restricted Information	Restricted

PAD = Potential Archaeological Deposit.

Table A5-6
Select AHIMS Search Results: Boonalla Aboriginal Area

AHIMS	Site Name	Site Type
20-4-0059	BBS; Red Chief LALC; Kelvin SF ST2	Scarred Tree
20-4-0063	BBS; Red Chief LALC; Kelvin SF ST1	Scarred Tree
20-4-0171	yarral16	PAD
20-4-0172	Grinding grooves 1 guda	Grinding Grooves
20-4-0197	Boonalla Cave	Rock Shelter; PAD
20-4-0230	Boonalla Scared* Tree x 2	Scarred Tree
20-4-0266	Boonalla Shelter	Rock Shelter
20-4-0272	Boonalla Scar Tree	Scarred Tree
20-4-0273	Boonalla Fire Pit	Stone Arrangement
20-4-0282	Boonalla Scar Treet*	Scarred Tree
20-4-0283	Boonalla Scart* Tree Whitebox #2	Scarred Tree
20-4-0284	Boonalla Double Scar Tree	Scarred Tree
20-4-0352	Boonalla Burial 1	Burial

PAD = Potential Archaeological Deposit.

*sic

Cultural Significance

Opportunity for RAPs to contribute their knowledge of the cultural significance of the region has been provided on several projects in the surrounding area including the Vickery Coal Project (Haglund, 1986; Vickery Joint Venture, 1986), Tarrawonga Coal Project (Dunk and Vermeltfoort, 2011: 14), Boggabri Coal Project (Insite, 2010) and the Maules Creek Coal Mine (AECOM 2013). Thompson (1981) and Haglund (1986:2) both made enquiries through the Red Chief Local Aboriginal Land Council with the same result:

“None of the people contacted revealed any knowledge of sacred sites or other places of particular importance to them on or close to the Mine Authorisation Areas” (Thompson, 1981).

“No information indicates the presence of sites of mythological/ceremonial significance within the [Maules Creek] Study Area” (Haglund, 1986: 6).

Until relatively recently, only one specific site of non-archaeological cultural significance had been identified in the area of the Study Area: Gin’s Leap is an unusual landscape feature (a prominent outcrop of weathered rhyolite) located on the western margin of the Kamilaroi Highway approximately 3-4 km north of the Boggabri township. In 2014, RAPs were asked by RPS if there were any specific areas of cultural value (non-archaeological) within the vicinity of the Boggabri Coal Mine, Tarrawonga Coal Project and Maules Creek Coal Mine and no other specific locations were identified (Boer-Mah 2014: 38-40). This is consistent with the consultation data gathered by UQCHU since 2013. Some RAPs consulted by UQCHU since 2013 have stated that the Leard State Forest is of high cultural significance to them, because in the past it would have been a hunting and gathering ground for their ancestors, and because it affords them with opportunities to re-connect with country. They also noted that certain species of flora and fauna growing in the region had cultural value for them.

In February 2015, several locations within the Leard State Forest and wider environs were registered on AHIMS as sites of high cultural significance by members of the local Aboriginal community. The relevant site cards contain little detail regarding the nature of these sites. Differing views as to the cultural significance of these sites exist within the local Aboriginal community. Those RAPs that RPS and UQCHU have consulted have not assessed these sites as being of high cultural significance. Also, investigations at some of these locations (e.g. Lawlers Well – 20-4-0551) by UQCHU have demonstrated that the AHIMS cards may be based on important misapprehensions about the nature of those sites. Nevertheless, ongoing management of Aboriginal cultural heritage in the Study Area will be sensitive to these matters.

A recent AHIMS search of the Boonalla Aboriginal Area and Mount Kaputar National Park (see above) has yielded results that indicate these particular National Parks properties hold sites of high cultural (including scientific) significance (e.g. burial, stone arrangement, rock-shelters, a restricted access site). It is not clear, however, whether the adjacent biodiversity offset areas (MC Southern Offset and MC Northern Offset, respectively) will also contain sites of similar significance. Both the MC Southern and MC Northern Offsets appear to consist of similar geology and landform as their adjacent National Parks, and therefore hold some potential for sites of high significance.

Implications for Building a Predictive Model

The background study on environmental, historical, and archaeological context indicates that Aboriginal cultural heritage sites do occur within the Study Area and surrounds. By comparing the results of the background research and the archaeological investigations previously undertaken within the region, the following conclusions can be drawn regarding the potential for Aboriginal cultural heritage material within the Study Area:

- Disturbance is widespread due to over a century of pastoral and forestry activities.
- The majority of clearance and subsequent ground disturbance associated with the Study Area is restricted to undulating plains and lower landforms. These areas of disturbance, which are unlikely to contain in situ sites of high significance, can be mapped using georeferenced satellite imagery.
- Flood events associated with the Namoi River flood plain will have dispersed, buried and scoured many sites that may have been located in this landform unit.

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