Cultural Heritage Assessment

(RPS, 2012)

Appendix - J

Aboriginal Cultural Heritage Assessment

Springvale Mine Dewatering Bore 8

Lithgow Local Government Area

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Report No: 110382
Version/Date: Final, July 2012

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Document Status

Version	Purpose of Document	Orig	Review	Review Date
Draft A	Draft for client comments	DF	SW	2/4/2012
Rev 0	Draft for Aboriginal Community Stakeholders incorporating client comments	DF	DR	30/5/2012
Final	Final version incorporating Aboriginal community Stakeholders' comments.	DF	DR	11/07/2012

Approval for Issue

Name	Date
T.Boer-Mah	13/7/2012

Executive Summary

RPS has been engaged by Springvale Coal Pty Limited, to prepare an Aboriginal Cultural Heritage Assessment (ACHA) for the construction of Dewatering Bore 8 at Springvale Mine. Springvale Coal Pty Limited is the proponent of this project. The study area, located at Springvale within the Lithgow Local Government Area (LGA), falls within the existing Springvale mining lease and is located entirely within the Newnes State Forest.

Springvale seeks to modify development consent S91/06569/001 under section 75W of the *Environmental Planning and Assessment Act 1979* to allow for the construction and operation of an additional dewatering facility (Bore 8) within the Newnes State Forest on the Newnes Plateau. No further changes to the operations at Springvale are proposed. No changes are proposed to the mining method, mine layout, life of consent, operating hours, workforce, management of rejects and tailings, or coal production, handling and transport. These aspects will not be altered and will remain as approved by development consent S91/06569/001, as modified.

A search of the AHIMS register was conducted on 21 July 2011 for a 5 km radius centred over the study area. The results showed a total of 41 sites within that search radius. The most common site types within the local landscape are shelters with deposit (51.21%), followed by artefact scatters (17.07%) and shelters with art (12.20%). There are no sites recorded within the immediate vicinity of the study area, with the closest site located approximately 500 m to the west of the study area.

On 12 January 2012 a site inspection was conducted over the entirety of the study area by Deborah Farina, archaeologist of RPS in conjunction with Aboriginal community stakeholders. No Aboriginal sites were identified.

As a result of a desktop assessment comprising a review of local archaeological studies, a search of the AHIMS register and the site inspection, there are no constraints to the project in respect of Aboriginal heritage. Accordingly, the following general recommendations are made:

Recommendation 1
No Aboriginal objects or places have been identified within the study area and therefore an Aboriginal Impact Permit (AHIP) is not required for the proposed activity.

Recommendation 2
All relevant Springvale Coal Pty Limited staff, contractors, subcontractors and consultants should be made aware of their statutory obligations for heritage under NSW *National Parks & Wildlife Act 1974* and the NSW *Heritage Act 1977*, which may be implemented as a heritage induction.

Recommendation 3
If during the proposed works further Aboriginal sites are identified in the study area, then all works in the area should cease, the area cordoned off and contact made with the Office of Environment and Heritage (OEH) Enviroline 131 555. A suitably qualified archaeologist and the relevant Aboriginal stakeholders should be subsequently engaged, so that the Aboriginal sites can be adequately assessed and managed.

Recommendation 4

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

Recommendation 5

If, during the course of the project, suspected European cultural heritage material is uncovered, work should cease in that area immediately. The Heritage Branch of OEH should be notified, and works should only recommence when an appropriate and approved management strategy has been instigated, and the relevant consents/permits are in place.

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1 Introduction

RPS has been engaged by Springvale Coal Pty Limited to prepare a Cultural Heritage Impact Assessment (CHIA) for the construction of dewatering bore 8 at Springvale Mine and an associate access track.

This report has considered the environmental and archaeological context of the study area and developed a predictive model of archaeological sites. It also reports on the results of an archaeological survey of the study area, provided an assessment of archaeological significance for Aboriginal heritage, as well as providing management recommendations which address potential impacts of the proposed works. This report has been prepared in accordance with the relevant legislation and regulations, including the *Code of Practice for Archaeological Investigation of Aboriginal Objects* in New South Wales (Department of Environment Climate Change & Water, 2010b).

1.1 Background

Springvale seeks to modify development consent S91/06569/001 under section 75W of the *Environmental Planning and Assessment Act 1979* to allow for the construction and operation of an additional dewatering facility (Bore 8) within the Newnes State Forest on the Newnes Plateau. No further changes to the operations at Springvale are proposed. No changes are proposed to the mining method, mine layout, life of consent, operating hours, workforce, management of rejects and tailings, or coal production, handling and transport. These aspects will not be altered and will remain as approved by development consent S91/06569/001, as modified.

The final footprint of Bore 8 will be approximately 0.32 hectares (ha). However, a construction footprint of 0.77 ha will initially need to be cleared of vegetation to allow sufficient room for the movement of heavy vehicles and the installation of sumps to contain drilling fluids, as well as the storage of all required equipment and spares within the dewatering facility compound. Surface water controls will also need to be installed on the outside of this footprint, with disturbance therefore occurring within an area totalling 1.44 ha (120 m x 120 m). In addition, a trench will be excavated along the existing access track leading to the proposed bore location to accommodate the required powerlines and water pipelines. The access track will also need to be augmented to accommodate safe access for large construction and maintenance equipment.

1.2 The Study Area

The study area is located at Springvale within the Lithgow Local Government Area (LGA). The borehole locations are on the eastern side of Sunnyside Ridge Road on the Newnes Plateau, within the Newnes State Forest and entirely within the Springvale mining lease (see Figure 1-1). The study area for the project encompasses the construction footprint for Bore 8 (1.44 ha), along with an additional approximate 30 m on each side of the existing track to be upgraded to provide a suitable access track and services corridor to the

dewatering facility. This larger area was surveyed to ensure all land that has the potential to be impacted by the project both directly and indirectly was surveyed.

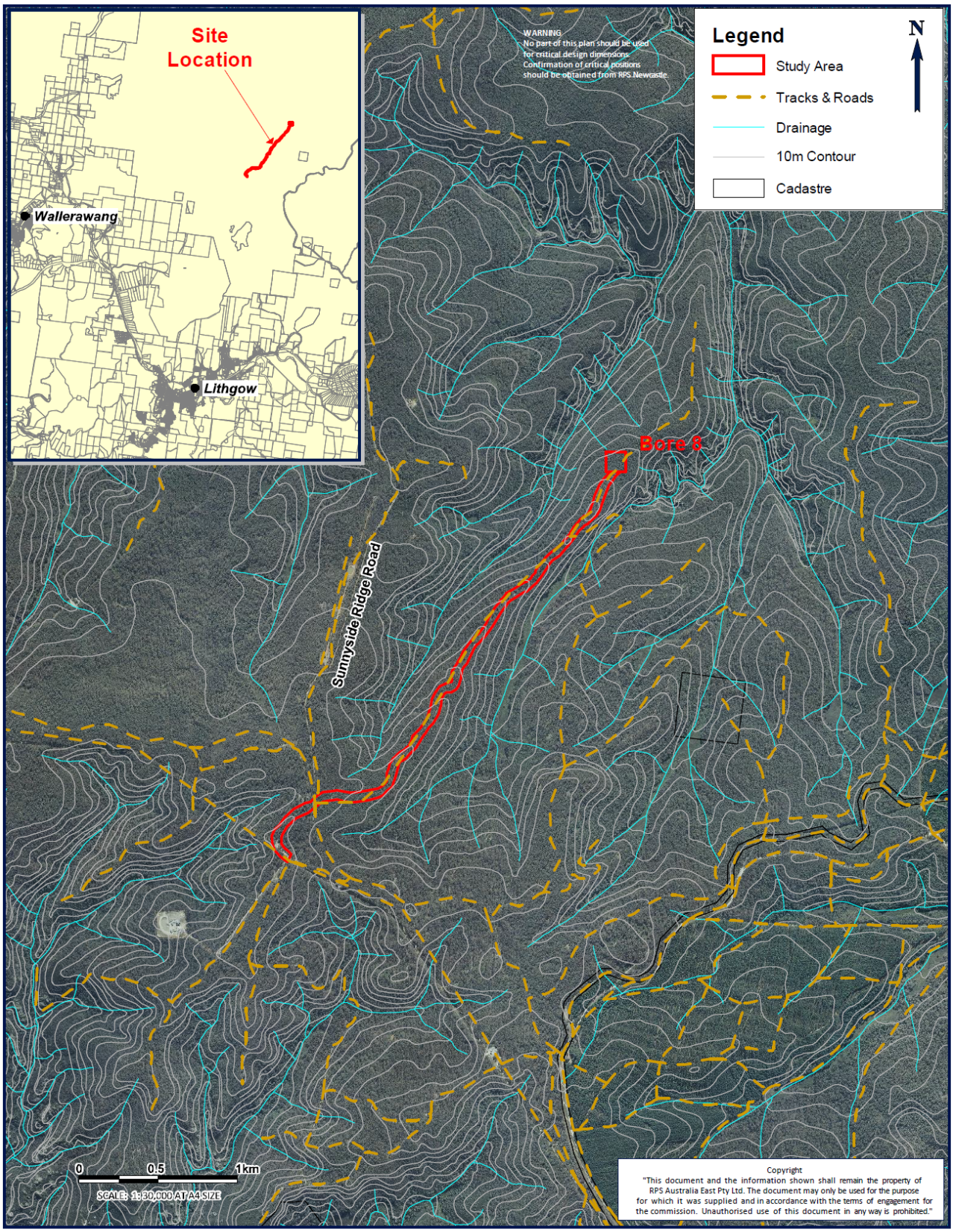


Figure 1-1: Study Area

1.3 Legislative Context

The following overview of the legal framework is provided solely for information purposes for the client, it should not be interpreted as legal advice. RPS will not be liable for any actions taken by any person, body or group as a result of this general overview, and recommend that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the summary below.

Aboriginal heritage (places, sites and objects) in NSW are protected by the *National Parks and Wildlife Act 1974*, which is overseen by the Office of Environment and Heritage (formerly Department of Environment, Climate Change and Water (DECCW)), now a part of the Department of Premier and Cabinet. In some cases, Aboriginal heritage may also be protected under the *Heritage Act 1977*, which is also overseen by the Office of Environment and Heritage (formerly the Heritage Branch of the Department of Planning). The *Environmental Planning and Assessment Act 1979*, overseen by the Department of Planning and Infrastructure, along with other environmental planning instruments, trigger the requirement for the investigation and assessment of Aboriginal heritage as part of the development approval process. For crown land, provisions under the *Aboriginal Land Rights Act 1983* and the *Native Title Act 1993* (overseen by the Office of the Registrar of the Aboriginal Land Rights Act 1983) may also apply.

1.3.1 National Parks and Wildlife Act 1974 (NPW Act)

The NSW Government is working towards stand alone legislation to protect Aboriginal cultural heritage which will be a significant reform for NSW. The first stage of this work has been completed and includes significant changes in relation to the regulation of Aboriginal cultural heritage management. The primary state legislation relating to Aboriginal cultural heritage in NSW is the *National Parks and Wildlife Act 1974* (NPW Act). The legislation is now overseen by the Office of Environment and Heritage (OEH) (formerly DECCW) as part of the NSW Department of Premier and Cabinet.

Changes to the NPW Act were made effective on 1 October 2010 and include:

- increased penalties for Aboriginal heritage offences, in some cases from $22,000 up to $1.1 million in the case of companies who do not comply with the legislation;
- prevention of companies or individuals claiming ‘no knowledge’ in cases of serious harm to Aboriginal heritage places and objects by creating new strict liability offences under the Act;
- introduction of remediation provisions to ensure people who illegally harm significant Aboriginal sites are forced to repair the damage, without need for a court order; and
- unification of Aboriginal heritage permits into a single, more flexible permit; and
- strengthened offences around breaches of Aboriginal heritage permit conditions.

1.3.2 Heritage Act 1977

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

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

This Act regulates a system of environmental planning and assessment for NSW. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage and specifically Aboriginal heritage. Assessment documents prepared to meet the requirements of the EP&A Act 1979 include Reviews of Environmental Factors (REF) and Environmental Impact Statements (EIS). These documents are required to assess impacts of activities on Aboriginal heritage. Local Environment Plans (LEP) and some State Environmental Planning Policies (SEPPs) contain provisions for Aboriginal heritage where relevant.

1.3.4 Aboriginal Land Rights Act 1983

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

(a) Is able to be lawfully sold, leased, reserved or dedicated;

(b) Is not lawfully used or occupied;

(c) Will not, or not likely, in the opinion of the Crown Lands Minister, be needed for residential purposes;

(d) Will not, or not likely, be needed for public purposes;

(e) Does not comprise land under determination by a claim for native title;

(f) 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*.

1.3.5 Native Title Act 1993

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 there is a presumption of native title in any area where an Aboriginal community or group can establish a traditional or customary connection with that area, there are a number of ways that native title is taken to have been extinguished. For example, land

that was designated as having freehold title prior to 1 January 1994 extinguishes native title, as does any commercial, agricultural, pastoral or residential lease. Land that has been utilised for the construction or establishment of public works also extinguishes any native title rights and interests 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.

Further details on the relevant legislative Acts are provided in Appendix 1.

1.4 Authorship and Acknowledgements

This report was prepared by Deborah Farina, Archaeologist, with assistance from Ali Byrne, Graduate Archaeologist and Natalie Wood, GIS/draftsperson and reviewed by Sarah Ward, Senior Archaeologist all from RPS. The project was managed by RPS Technical Director and Archaeology Manager, Darrell Rigby. Fieldwork was undertaken by Deborah Farina.

The project team acknowledges the assistance in preparing this report of various organisations and individuals, including but not limited to:

Table 1-1: Acknowledgements

Name	Organisation
Edwina White	Centennial Coal
Tom Hollis	Centennial Coal
Richard Peters	Bathurst Local Aboriginal Land Council
Kevin Williams	Warrabinga/North East Wiradjuri
Jack Pennell	Warrabinga/North East Wiradjuri
Trevor Brown	Gundungurra Tribal Council Aboriginal Corporation
Elwin Wolfenden	Mingaan Aboriginal Corporation

2 Aboriginal Consultation

The purpose of Aboriginal community consultation is to provide an opportunity for the relevant Aboriginal stakeholders to have input into the heritage management process. OEH encourages consultation with Aboriginal people for matters relating to Aboriginal heritage. If an Aboriginal Heritage Impact Permit (AHIP) is required, then specific Aboriginal Cultural Heritage Consultation Requirements (ACHCRs) for Proponents (DECCW, 2010a) are triggered in respect to Aboriginal consultation.

In the case of this project, the ACHCRs have been followed. These comprise a four stage Aboriginal consultation process and stipulate specific timeframes for each stage. Stage 1 requires that Aboriginal people who hold cultural information are identified, notified and invited to register an expression of interest in the assessment. This identification process should draw on reasonable sources of information including: the relevant OEH regional office, the relevant Local Aboriginal Land Council(s), the Register of Aboriginal Owners, the Native Title Tribunal, Native Title Services Corporation Limited, the relevant local council(s) and the relevant Catchment Management Authority, as well as placing an advertisement in a local newspaper circulating in the general location of the study area. Aboriginal organisations and/or individuals identified should be notified of the project and invited to register an expression of interest for Aboriginal consultation. Once a list of Aboriginal stakeholders has been compiled from the expression of interest process they need to be consulted in accordance with stage 2, 3 and 4 of the ACHCRs.

As there are a number of concurrent projects occurring across the Centennial Coal Western Region mine leases, the consultation process has been streamlined to include all active projects, rather than running multiple individual consultation processes. To this end, letters were sent to the relevant OEH regional office, the Bathurst Local Aboriginal Land Council, the registrar of Aboriginal owners, the Native Title Tribunal, Native Title Services Corporation Limited, Lithgow City Council and the Blue Mountains Catchment Management Authority requesting the identification of interested Aboriginal groups for projects involving Springvale, Angus Place, Neubecks, Clarence, Lidsdale and Coal Services. As a result of contacting these organisations Aboriginal community groups were identified as potentially having an interest in the project (see Table 2-1).

An advertisement was also placed in the Lithgow Mercury on 6 October 2011 (see Appendix 2) calling for registration of interest for Aboriginal Cultural Knowledge Holders in the Capertee, Blackmans Flat, Lidsdale and Newnes Plateau localities.

Table 2-1 Letters inviting expressions of interest were sent to the following Aboriginal community groups on the advice of relevant organisations

Organisation	Name of Representative	Date contacted
Dhuuluu Yala Aboriginal Corporation	-	8/11/2011
Wiradjuri Council of Elders	Helen Riley; Robert Clegg	8/11/2011
Wiradjuri Traditional Owners Central West Aboriginal Corporation		8/11/2011
Wiray-dyuraa Ngambaay-dyil	Bill Allen	8/11/2011
Gundungurra Tribal Council Aboriginal Corporation	-	8/11/2011
Gundungurra Aboriginal Heritage Association Inc.	-	8/11/2011
Mingaan Aboriginal Corporation	Sharon Riley	8/11/2011
Hawkesbury-Nepean Catchment Management Authority (Aboriginal Reference Group)	-	8/11/2011
Bathurst Local Aboriginal Land Council	Tonilee Scott	8/11/2011
Warrabinga Native Title Claimants Aboriginal Corporation	Wendy Lewis	8/11/2011
North-East Wiradjuri	Lyn Syme	8/11/2011
Mooka Traditional Owners	Neville Williams	8/11/2011
Blackshield Lawyers (on behalf of Warrabinga/Wiradjuri people represented by Wendy Lewis, Marvia Agnew, Martin de Launey)	-	8/11/2011
Eddy Neuman Lawyers (on behalf of the Gundungurra Tribal Council Aboriginal Corporation represented by Mervyn Trindall, Elsie Stockwell and Pamela Stockwell)	-	8/11/2011
Teitzel & Partners (on behalf of the Wiray-dyuraa Ngambaay-dyil and the Wiray-dyuraa Maying-gu represented by Mr William (Bill) Allen, Mr Joe Bugg, Mr Stephen Riley and Mr John Brasher)	-	8/11/2011

As a result of the invitation for expression of interest letters and the advertisement ten (10) Aboriginal Community Stakeholders registered their interest in the project (see Table 2-2).

Table 2-2: Aboriginal stakeholders who registered their interest in the project.

Organisation	Name of Representative	Date of Registration
Warrabinga Native Title Claimants Aboriginal Corporation	Wendy Lewis	16/11/2011
North-East Wiradjuri	Lyn Syme	16/11/2011
Bathurst Local Aboriginal Land Council	Tonilee Scott	16/11/2011
Gundungurra Tribal Council Aboriginal Corporation	Sharon Brown	18/11/2011
Mingaan Aboriginal Corporation	Helen Riley	18/11/2011
Eddy Neuman Lawyers (representing Gundungurra Tribal Council Aboriginal Corporation)	-	21/11/2011
Teitzel & Partners (representing Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu)	-	21/11/2011
Mooka Traditional Owners	Sharon Williams	21/11/2011
Wiradjuri Council of Elders	Sharon/Helen Riley	21/11/2011
Blackshield Lawyers (representing Warrabinga/Wiradjuri people)	-	22/11/2011

Information regarding the proposed heritage assessment methodology and strategy for collecting information on cultural heritage significance was provided in writing to the Aboriginal stakeholders on 23 November 2011. Six groups returned their comments on the methodology by the closing date for comments (Table 2-3).

Table 2-3: Aboriginal stakeholders who responded to the methodology by the due date

Organisation	Name of Representative	Date of Reply for Methodology (due 23/12/2011)
Mingaan Aboriginal Corporation	Helen Riley	07/12/2011
Warrabinga Native Title Claimants Aboriginal Corporation	Wendy Lewis	07/12/2011
Gundungurra Tribal Council Aboriginal Corporation	Jason Brown	21/12/2011
North East Wiradjuri	Lyn Syme	21/12/2011
Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu	Sharon Riley	20/12/2011
Bathurst Local Aboriginal Land Council	Tonilee Scott	21/12/2011

In addition, the letter of 23 November 2011 invited registered Aboriginal stakeholders to attend an information session at Black Gold Cabins on 7 December 2011. This information session included a formal presentation of the relevant upcoming Centennial projects as well as a Questions and Answers session in order to allow Aboriginal stakeholders to clarify any heritage, methodological or timing issues regarding the projects. The following representatives attended the information session on 7 December 2011.

Table 2-4: Stakeholders who participated in information session on 7 December 2011

Organisation	Name of Representative
Gundungurra Tribal Council Aboriginal Corporation	Jason Brown
Mingaan Aboriginal Corporation	Elwin Wolfenden
North East Wiradjuri	Robyn Williams
Warrabinga Native Title Claimants Aboriginal Corporation	Wendy Lewis
Wiradjuri Council of Elders	Helen Riley

According to the ACHCR process a site survey should be undertaken with reference to the nature, scale and complexity of the project. With these factors considered, five stakeholders were invited to participate in the survey which was undertaken on 12 January 2012.

Table 2-5: Stakeholders who participated in the survey

Organisation	Name of Representative
Gundungurra Tribal Council Aboriginal Corporation	Trevor Brown
North East Wiradjuri	Jack Pennell
Warrabinga Native Title Claimants Aboriginal Corporation	Kevin Williams
Bathurst Local Aboriginal Land Council	Richard Peters
Mingaan Aboriginal Corporation	Elwin Wolfenden

A copy of the draft report was provided to the following Aboriginal stakeholders on 1 June 2012 (Table 2-6). Gundungurra Tribal Council Aboriginal Corporation returned their comments on the draft report by the closing date for comments. All other stakeholders were contacted by telephone on 29 June 2012 requesting their comments verbally. No issues were raised by any stakeholders with the draft report. Please see Aboriginal consultation log for further details (Appendix 4)

Table 2-6: Aboriginal stakeholders who responded to the methodology by the due date

Organisation	Name of Representative	Date of Reply for draft report (due 29/06/2012)
Mingaan Aboriginal Corporation	Helen Riley	29/06/2012
Warrabinga Native Title Claimants Aboriginal Corporation	Wendy Lewis	02/07/2012
Gundungurra Tribal Council Aboriginal Corporation	Jason Brown	05/06/2012
North East Wiradjuri	Lyn Syme	29/06/2012
Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu	Sharon Riley	29/06/2012
Bathurst Local Aboriginal Land Council	Tonilee Scott	29/06/2012
Eddy Neuman Lawyers (representing Gundungurra Tribal Council Aboriginal Corporation)	-	29/06/2012
Teitzel & Partners (representing Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu)	-	29/06/2012
Wiradjuri Council of Elders	Sharon/Helen Riley	29/06/2012
Blackshield Lawyers (representing Warrabinga/Wiradjuri people)	-	29/06/2012

3 Environmental Context

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

3.1 Geology and Soils

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

The Blue Mountains area comprises typically of deep incised gorges with sandstone bed-rock, steep sided cliffs and pagodas, narrow incised valleys with spring fed creek lines and inter-bedded sandstone conglomerate rocks. The geology for the study area is primarily an undifferentiated mix of sandstone, shale and tuff, formed on the Narrabeen Group, laid down in the Triassic period. This is bounded by nearby deposits of the Illawarra Coal Measures laid down in the Permian period, comprising shale, sandstone, conglomerate and chert, with coal and torbanite seams and a quaternary alluvium of gravel, sand, silt and clay, found mainly along watercourses (Bryan, 1966).

The relevant soil landscapes of the study area are the Lithgow and Cullen Bullen soil landscapes. The study area is situated on the Lithgow soil landscape, described as having moderately deep (<20 cm) soils, comprising red podzolic soils, yellow podzolic soils and yellow leached earths on upper slopes and well drained areas. Moderately deep to deep (<170 cm) solods/yellow solodic soils are found on lower slopes and in areas of poor drainage. Immediately adjacent is the Cullen Bullen soil landscape comprising shallow to moderately deep (<100 cm) yellow podzolic soils and yellow earths on crests, moderately deep (<100 cm) yellow podzolic soils, soloths and yellow leached earths on upper and mid slopes, and moderately deep to deep (50-100 cm) yellow solodic soils and yellow podzolic soils on lower slopes near and along narrow drainage lines. Shallow yellow earths and lithosols are associated with low scarps (King, 1992:29).

3.2 Topography and Hydrology

The topography of the Newnes Plateau landscape generally incorporates broad, level and gently inclined plateau surfaces. Slope gradients range up to 10%, with <20 m of local relief and elevation typically >1000 m. Swampy drainage depressions are common and on ridgelines localised sandstone outcrops are rare (King 1992:29).

The topography of the Lithgow soil landscape is generally flat to undulating rises and broad valley floors on Illawarra Coal Measures and the Berry formation. Local relief is up to 20m, with slope gradients of <10% and elevation approximately 800-1000 m AHD. The landscape is generally cleared open forest and open woodland.

The topography expected of the Cullen Bullen soil landscape is rolling low hills and rises on Illawarra Coal Measures and the Berry formation. Slopes are 10-25%, local relief <50 m, elevation 550-1,050 m. Localised rock outcrop occurs as small isolated low scarps (<5 m), with extensively cleared open woodland and open forest.

The hydrology of the study area is defined by several creek lines and rivers. The closest water source is the Wolgan River western branch, located approximately 7 km from the proposed location of bore 8. The Wolgan River eastern branch is located approximately 1 km to the east of both ESA8 and ESA9. Various tributaries of these two watercourses are also located in the vicinity. These resource zones are large enough to provide reliable water for most of the year.

The topography and hydrology suggest that the local environment would have been favourable to past Aboriginal occupation and in most cases utilised for transitory activity through the landscape. Parts of the landscape that incorporate narrow ridgelines and steep cliffs made access difficult. The availability of fresh water in the study area locality would have contributed to a diverse local habitat providing a variety of food and other exploitable resources.

3.3 Climate

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

The climate of the Newnes Plateau area is cool temperate climate, characterised by cold winters and warm summers. The warmest month is January, with an average maximum temperature of 23.9°C, whilst the coldest is July, with an average minimum temperature of 2.5°C. Snow and/or sleet are common in the winters. The wettest month is February, with an average of 113.9 mm, and the driest month is July, with an average monthly rainfall of 44.5 mm (BOM, ud).

3.4 Flora and Fauna

The Blue Mountains are generally populated by the Sydney Montane Dry Sclerophyll Forest which is characterised by a range of plant communities including the Blue Mountain ash and Sydney peppermint (Keith 2006:161). The ridges are dominated by hard leaved scribbly gum and silvertop ash (Keith 2006:161). The study area also contains shrubs such as Dorothy's wattle and sunshine wattle and herbs such as blue flax lily (Keith 2006:161). The Gooches Swamp topographical feature is characterised by closed wet heath.

Geebung is also known in the local area and this species was often utilised by Aboriginal people for food, medicine and strengthening fishing line (Percival and Stewart, 1997:42). The Newnes Plateau Woodland community is chiefly located on soils derived from Narrabeen sandstone.

Fauna species encountered within the study area include a number of macropods, such as Swamp Wallaby and Red-necked Wallaby, arboreal mammals and the Greater Glider (Keith 2006) and a moderate diversity of open forest birds including those characterising elevated habitats, being Grey Currawongs, Red-browed Treecreepers, Scarlet Robins and Flame Robins. The Gang-Gang cockatoo has also been identified in the vicinity of the study area.

The diversity of flora and fauna species may have provided seasonal food resources for small Aboriginal groups or communities moving throughout the region.

3.5 Synthesis

Overview of the environmental context indicates that there are rich food and raw material sources available on the plateau and in the nearby valleys and thus would have been a favourable area for Aboriginal occupation. In particular, the location of the plateau between two reliable water sources and the abundance of plant and animal life, in addition to rock shelters would have provided adequate food, water and shelter. In addition, the Illawarra Coal Measures in the area are known to produce chert, a favourable raw material for tool production.

4 Historic Heritage Context

4.1 Historical overview

The initial discovery of Botany Bay in 1770 was followed by the arrival of the First Fleet in January 1788. Later the fleet moved further north to Port Jackson where the colony of Sydney Cove was founded (NSW National Parks and Wildlife Service 1991). In the first few years of British contact the new colonists quickly began to explore their new surroundings extending to the north, south and west out of Sydney Town.

Under the advice of local Aborigines, in 1813 explorers Blaxland, Wentworth and Lawson made an efficient job of traversing the southern watershed landscape of the Grose catchment. They descended the western sandstone escarpment at Mount York, then travelled onto Mount Blaxland besides the upper Coxs River where they crossed the Blue Mountains barrier. Within two years William Cox constructed the first road along the explorers' route that extended over the Great Divide reaching the fertile plains of the Lithgow valley and Bathurst.

4.2 Local history

The Lithgow valley was first settled in 1824 and was named by Surveyor General John Oxley, after William Lithgow, Governor Brisbane's private secretary. It was not until 1869 that the town began to prosper following the construction of the western railway line (Lithgow Tourism 1996 - 1999).

The Zig Zag Railway was engineered and completed in 1869 this allowed for the movement of trains into the valley. The combination of great coal reserves and rail service provided Lithgow with the ideal location for industries dependent on these resources (Lithgow Tourism 1996 - 1999).

Coal mining in Lithgow began with the first cut in Bowenfels and was used to run the steam engine at the local flour mill from the 1850s. The Lithgow coal reserves were important for the development of the Great Western Railway. Coal for trading purposes was first mined at Lithgow in 1868.

Coal mining began in the Wallerawang district around 1873 with a number of mines being operated on the Lithgow seam and in the area of Lidsdale and Wallerawang. The major working mines at the time in the Wallerawang district were The Irondale Colliery, Cullen Bullen Colliery, The Ivanhoe Colliery, The Commonwealth Colliery, The Great Western Mine and The Invincible Colliery.

Between 1900 and 1910 several smaller mines were opened between Piper's Flat and Blackman's Flat, which incorporated The Angus Colliery (Lithgow Tourism 1996 - 1999).

4.3 Analysis of physical and documentary research

The Australian Heritage Database is an online database of items listed under the Commonwealth Heritage List, National Heritage List and the Register of the National Estate. The Commonwealth Heritage List relates to Commonwealth owned property and is not applicable for this assessment.

The National Heritage List is now the lead statutory document for the protection of places considered to have national importance. Previous to this the Register of the National Estate was the primary document. While the Register of the National Estate still exists it is now frozen, and as of February 2012 no longer has statutory status.

The State Heritage Inventory database is maintained by the NSW Heritage Office and lists all items that have been identified as of heritage value throughout NSW. Items listed on the Heritage Inventory include those which have been listed by local councils (local significance) and also those which are listed on the State Heritage Register (items of state significance).

4.3.1 National Heritage

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

Prior to this the Register of the National Estate was the primary document. While the Register of the National Estate still exists in archival form, items can no longer be registered and as of 19 February 2012 no longer has statutory status. The Minister is required to consider the Register when making some decisions under the EPBC Act. The Register of the National Estate includes 18 heritage sites within the Lithgow LGA, but none are located near the study area.

The Commonwealth Heritage List comprises natural, Indigenous and historic heritage places owned or controlled by the Commonwealth. These include places connected to defence, communications, customs and other government activities that also reflect Australia's development as a nation. Places on this list are also protected under the EPBC Act.

A search of the Australian Heritage Database which incorporates all the above lists shows no additional items registered that would be affected by the proposed works.

4.3.2 Local and State Significant Heritage in NSW

Heritage items in NSW may be registered as important at the State level and/or at the local level. The Heritage Council has developed criteria to help determine whether an item is State significant. Items of State significance are registered by the Heritage Council of New South Wales under the NSW *Heritage Act 1977*. Those items are listed on the State Heritage Register as being under an Interim Heritage Order or protected under section 136 of the NSW *Heritage Act 1977*.

Some heritage places and items that do not reach the threshold for listing on the State Heritage Register may be of heritage significance within a local government area. These places are listed by local council under their LEP and additionally may be included on the NSW Heritage Inventory database.

The NSW Heritage Inventory database is maintained by the NSW Heritage Office and lists items that have been identified as of State and local heritage value throughout NSW.

A search of the NSW Heritage Inventory shows no heritage items listed within the vicinity of the study area.

4.3.3 Lithgow City Council Local Environmental Plan

The study area is wholly located within the bushland of the Newnes Plateau, with the closest European settlement at Lidsdale, approximately 9.7 km to the west. As such, a review of the *Lithgow City Local Environmental Plan 1994* shows the closest heritage item to the study area as the State Mine Site at State Mine Gully, approximately 12 km to the south west.

4.4 Discussion

Research of listed Heritage Items has shown that there are no heritage items in the vicinity of the study area or at threat of impact.

4.5 Conclusion

As there are no registered heritage items within the vicinity of the study area, it is considered that there are no European heritage constraints associated with the project.

5 Aboriginal Heritage Context

Aboriginal heritage assessment process requires that the significance of Aboriginal sites within a study area is assessed. It is important that Aboriginal sites are contextualised within the local and regional landscape in order to inform the assessment of significance. The Aboriginal heritage context is also needed in order to develop a predictive model of Aboriginal sites in the study area. Historical information also provides additional information for the interpretation of archaeological sites. A glossary of Aboriginal site types is provided in Appendix 6.

5.1 Historic Records of Aboriginal Occupation

It is important to acknowledge that early historical documents were produced for a number of reasons and thus may contain inaccuracies and/or bias in their reporting of events or other aspects of Aboriginal culture (L'Oste Brown 1998). Nonetheless, some historical documents provide important information and insights into local Aboriginal customs and material culture at the time of non-Indigenous settlement and occupation of region.

5.2 Ethnohistory

5.2.1 Pre European contact

The study area is located in the Sydney Basin Bioregion of the Blue Mountains of NSW. A number of distinct Aboriginal groups occupied the Sydney Basin when the First Fleet arrived in 1788. The Blue Mountains region was home to three large language groups: the Dharug, the Wiradjuri and the Gundungurra.

Although tribal boundaries are now uncertain, it is thought that the Dharug people occupied much of the Sydney area. It is known that there were two Dharug dialects, one used between Sydney Harbour and Botany Bay, and the other spoken to the west towards the Hawkesbury, Blue Mountains and Nepean districts (the latter known as Muru-Murak or 'Mountain pathway') (Murray & White 1988). The Wiradjuri people were the largest language group in New South Wales, with dialects spoken from Coonabarabran in the north, the Murray River to the south, western Blue Mountains in the east and Condobolin in the west. The Gundungurra people lived chiefly in the southern highlands, but reached as far north as western Sydney near Liverpool, west to parts of the Blue Mountains and south to Lake George.

Although separate nations, all three language groups were neighbours and shared certain similarities with other Aboriginal groups in south-eastern Australia. Plants were used for food, as well as in the manufacture utilitarian items, decorative items and medicines, with some species providing more than one resource. Grass stalks could be used for weaving or basketry. Large trees provided bark and fibres which were used for tools, containers and possibly the construction of watercraft, whilst resinous saps from Grass Trees for example were an adhesive used in the hafting process. Bark fibres were twisted into

twine which could then be woven into traps, containers or baskets and a variety of wooden tools. Stone was also used for tools.

Aboriginal people used many native plants and animals. The Blue Mountains and their surrounds offered a variety of food, and these resources changed seasonally, though were more reliable in summer than in winter. Inland communities generally relied on foods such as possum, vegetable roots, seeds and berries as well as mullet, eel and kangaroo (Murray & White 1988).

Men and women in Aboriginal communities had distinct roles in the hunting and gathering of food resources. Men were responsible for hunting possums, fish, birds and kangaroo, and at times collaborated with other bands to hunt and eat the larger animals. Fire was used at times to reduce the vegetation in order to catch game. Women often harvested plant foods especially yams by means of digging sticks as these were generally the communities' staple diet (DECC 2008).

Gunyahs or bark huts were usually made from the broad leafed paperbark, box or stringybark trees and were erected mostly by women. They were generally located close to a reliable fresh water source or opportunistically situated on trade routes. Rock shelters are common in the Blue Mountains region, and would have been occupied as shelter or in association with open camp sites. Campsites were not only the place for sleeping, eating, tool making and social activity, but were also the centre for hunter-gathering in the local area (Mid Mountains Historical Society 2007). Resources gathered within an area may have been reserved to be traded with members from neighbouring tribes for items not readily available to them.

Summer weather would generally have required little in the way of protective clothing, the milder days of autumn and spring required more in the way of protection against frequent cool winds. Winter however saw the intense use of animal skins for both clothing and as blankets. These resources were exploited seasonally and included using the by-products of hunting activities, such as the skins from Possum, Kangaroo and probably Koala for items such as cloaks (Murray & White1988).

5.2.2 Post European contact

Initial contact between the European settlers and the Dharug people occurred in 1791 when Phillip's party arrived at the banks of the Hawkesbury and greetings were exchanged with the natives, peacefully sharing their campfire on the river bank at Pitt Town. Tench and Dawes made plans to explore the Blue Mountains and were ferried across the river by Aborigines in bark canoes (Mid Mountains Historical Society 2007).

In 1794, 22 settlers obtained land along the shorelines of the Hawkesbury-Nepean. Within a year there were 546 people occupying the banks of the river which accounted for the main source of the colony's food supply. This area was also an important source of food for the Dharug people (Mid Mountains Historical Society 2007).

Initially, when white explorers entered the Blue Mountains they did not record any large groups of 'Aborigines' being in residence. Aboriginal presence was noted by Blaxland in 1814 in the valleys where he heard people calling (Gollan 1987). However, an earlier expedition by Barrallier in 1802, who met and observed Aborigines in the Wollondilly Valley, was escorted out of the Blue Mountains by an Aboriginal guide who had knowledge of the tracks leading to the coast. This first contact record and contemporary opinion suggests that the identity of the mountain people adjacent to the Cumberland Plain were the Dharug (Gollan 1987).

Three Frenchmen; Quoy, Gaudichaud and Pellion travelled across the Blue Mountains to Bathurst where they encountered Aborigines in the Springwood area. Pellion made drawings of the natives, including Karadra, a sick old man lying on kangaroo skins near a fire and receiving attentions from a younger man. It was recorded that a local native man was peacefully disposed towards the explorers (Mid Mountains Historical Society 2007).

Windradyne (c.1800-1829), was an Aboriginal resistance leader, whom was also known as "Saturday". He was a northern Wiradjuri man of the upper Macquarie River region in central-western New South Wales (First Australians ND).

On arrival of the first settlers, Windradyne attempted to peacefully communicate with the European counterparts. Windradyne had Wiradjuri people befriend the new settlers and assist them with areas to camp. However, when the Europeans began to clear the land it became obvious to the Aborigines that their arrival to Australia was not on a temporary basis. The settlers started destroying the environment and places that were sacred to the natives. Windradyne was determined to not let these people destroy local families and their society. After the conflict many of the Wiradjuri surrendered to the British, but Windradyne was able to elude capture, and later in 1824 Windradyne and 130 Wiradjuri warriors walked for 17 days from Bathurst across the Blue Mountains and into the settlement of Paramatta to attend the annual native feast. On arrival to the feast Windradyne had the word peace stuck in his hat (Australians ND). He was accepted by the British as a result of this encounter.

However, as Europeans moved inland, many Aboriginal groups either dispersed or were displaced from their traditional lands. In the 1891 Census, only five people were recorded as being of Aboriginal descent in the County of Cook. In 2001, 520 people were recorded as being of indigenous background, and 604 indigenous people in 2006.

5.3 Regional Archaeological Heritage Context

The majority of the archaeological surveys and excavations in the Blue Mountains region have been in conjunction with environmental assessments for the coal mines, installation of power lines, telecommunications, and state forest works. Based on the information available, a number of trends in site location and patterning are evident.

A regional based study undertaken by Gollan (1987) conducted archaeological investigations in the Newnes Plateau region in order to provide a comprehensive assessment of the archaeological resources of the plateau and regional and local significance. This report was undertaken for the NPWS.

Gollan (1987:114-120) concluded, at a regional level, that the plateau area, being of relatively flat lying and gently sloping land, provided suitable resources for Aboriginal occupation. Gollan (1987:118) suggested that artefact scatters (and isolated finds) are likely to be found on the fringes of swamps because lithic material and food resources were available in these areas. This is evidenced by the predominance of sites in association with these areas. Gollan also found that there was evidence of the grinding of stone artefacts on the Plateau with several grinding groove sites and ground edged artefacts recorded. Shelters with art were also predominant in areas of the plateau where suitable rock types such as pagodas and inter-bedded sandstone and claystone rock outcrops were found.

Gollan (1987:130) considered the plateau to be of high scientific and social significance based on the diversity of Aboriginal cultural heritage sites in the area. At a regional level Gollan was of the opinion that the plateau area was important with respect to both inter-site as well as intra-site diversity (1987:131). Gollan (1987:114) described the forested upland areas as having the potential to have provided substantial archaeological resources for an upland hunter/ gatherer economy.

A predictive archaeological model undertaken in the Clarence Outbye Area (HSO 2008) showed that 80% of shelter sites were located along minor drainage lines and 20% along major drainage lines; 80% of artefact scatters were identified near smaller tributaries and only 16% along major drainage lines. Scarred trees were found on moderate slopes close to the 1000 m elevation and axe grinding grooves were located just below ridges at high elevations.

At a regional level, the Blue Mountains area was therefore able to provide shelter and a resource-rich habitat as evidenced by the distribution of sites in the gently sloping and relatively flat swamp margins, low lying crest areas, flat lying ridge tops, and rocky outcrops lining the various water courses.

5.4 Local Archaeological Heritage Context

The local Aboriginal heritage context provides a review of previous archaeological work conducted in the local landscape, determines whether Aboriginal sites have been previously identified (AHIMS search) in the study area and informs the predictive model of Aboriginal sites for the study area. The review of previous archaeological work includes relevant local research publications and archaeological consultancy reports. Two types of archaeological investigations are generally undertaken: excavations and surveys. Archaeological excavations can provide high resolution data regarding specific sites, such as the dates or chronology of Aboriginal occupation and information on stone tool technology (reduction sequences, raw material use, tool production, usewear and similar). Archaeological surveys generally cover wider areas than excavations and can provide

important information on the spatial distribution of sites. The detection of sites during survey can be influenced by the amount of disturbance or erosion and therefore sensitivity mapping is sometimes also required to interpret survey results. The local Aboriginal heritage context also provides a context for assessing archaeological significance of sites.

5.4.1 Aboriginal Heritage Information Management System (AHIMS)

A search was undertaken of the OEH Aboriginal Heritage Information Management System (AHIMS) on 31 January 2012 for a 5 km radius centred on the area and identified a total of 44 sites in the vicinity of the study area (see Table 5-1; Figure 5-1).

The most common site types within the local landscape are shelters with deposit (51.21%), followed by artefact scatters (17.07%) and shelters with art (12.20%) (Table 5-1). As can be seen from Figure 5-2 below, there are no sites recorded within the immediate vicinity of the study area. The nearest recorded sites to the borehole portion of the study area is a stone arrangement, approximately 1.3 km north west and two artefact sites (#45-1-0051 and #45-1-0052) approximately 1.7 km to the east, whilst two shelters with art (#45-1-0204 and #45-1-205) are located approximately 2 km south west of the junction of the access track with Sunnyside Ridge Road and a scarred tree site (#45-1-2600) approximately 1.5 km to the north of that junction. None of these sites will be impacted by the proposed works.

Table 5-1: AHIMS results summarised by site types.

Site Type	Frequency	Percent
Shelter with deposit	15	34.09%
Artefact sites	11	25.00%
Shelter with art	7	15.90%
Axe grinding groove	3	6.82%
Scarred tree	2	4.55%
Axe grinding groove/shelter with art	2	4.55%
Stone arrangement	2	4.55%
Axe grinding groove; shelter with deposit	1	2.27%
Axe grinding groove; rock engraving; shelter with deposit	1	2.27%
Total	44	100%

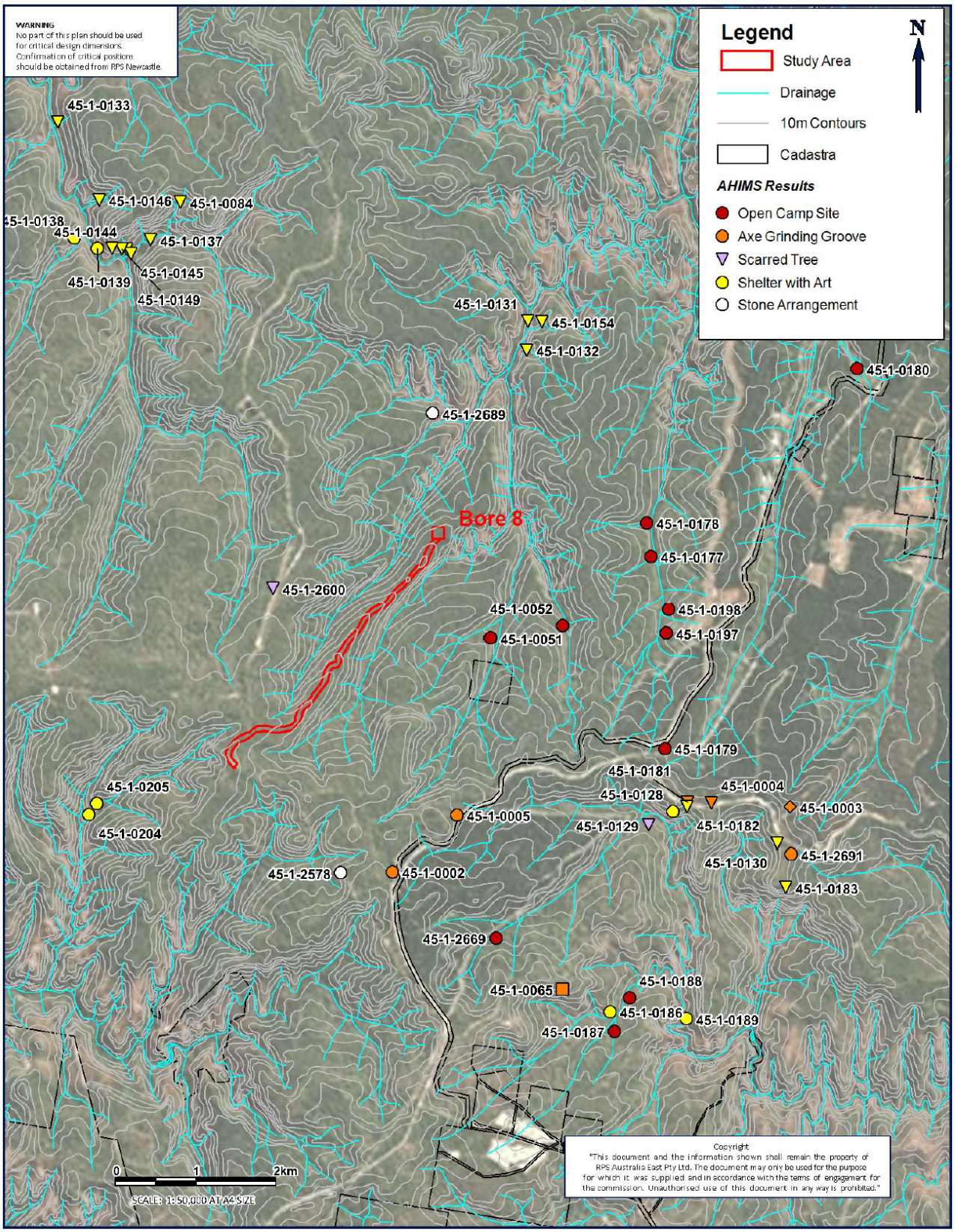


Figure 5-1: Local Area with AHIMS results

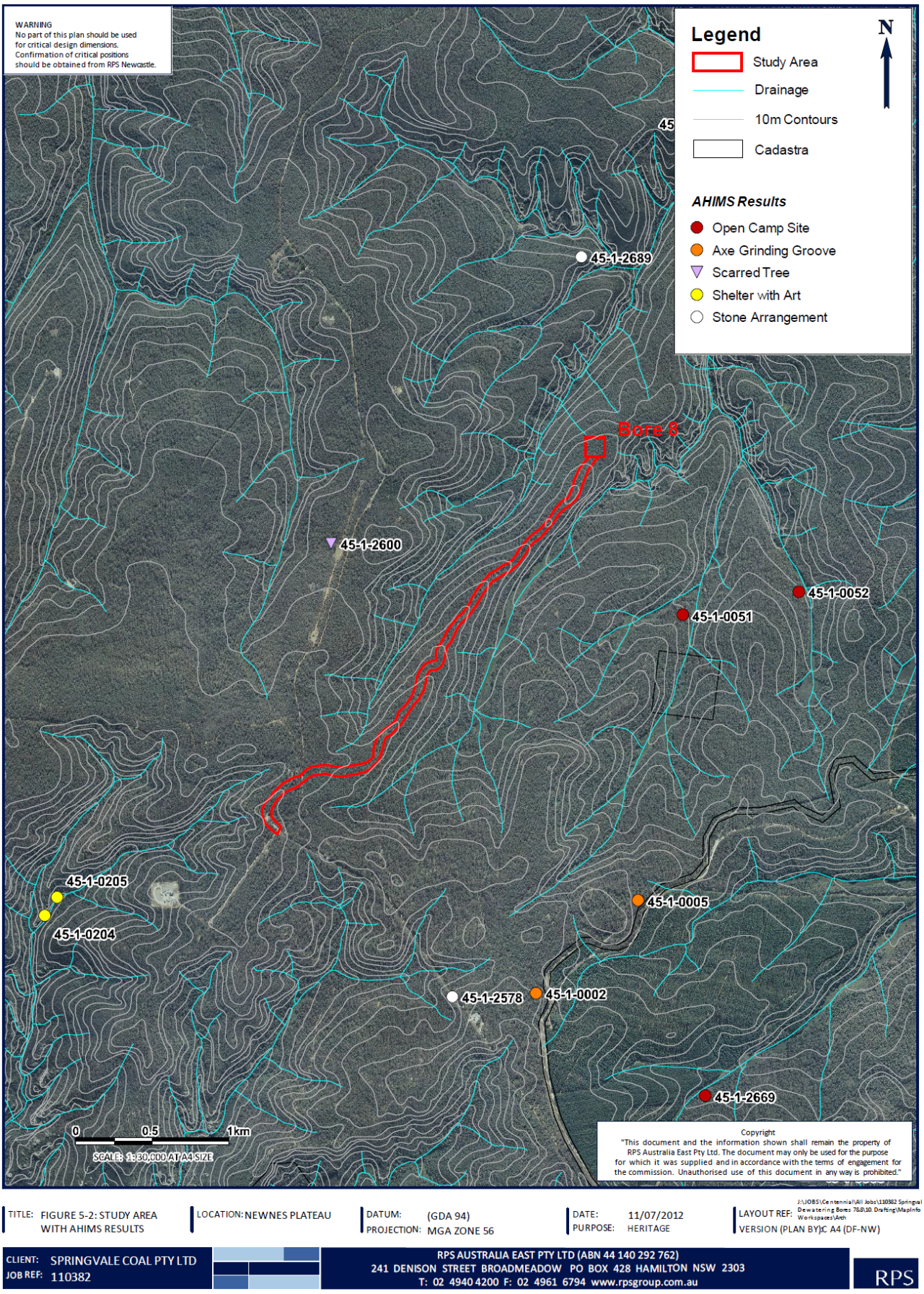


Figure 5-2: Study Area with AHIMS results

5.4.2 Local Archaeological Studies

Gaul, post 1980. Prehistoric Archaeology 391-1, Assignment 2: Black-Fellows Hands Shelter and Environs. University of New England.

This site was recorded pre 1979 but was not registered until Gaul undertook research in the 1980s. It has since been recorded with OEH AHIMS #45-1-0007 (Gaul, post 1980). The assignment was aimed at recording the art component of a group of three rock shelters at the western escarpment of the Blue Mountains, west of Sydney. Three shelters were surveyed using a 20 m tape, string level and a camera.

Site A – Blackfellows Hand Shelter was located 1km north east from the start of Blackfellows Hand Track. It comprised a large open shelter with the main section being 60m long. The shelter contained occupational deposit slopes that continued for about 40m and also included a small number of chert flakes near the entrance of the shelter. The art panel contained a combination of motifs including arms, feet, weapons and kangaroo appendages. The colours of the motifs comprised of white, yellow and red.

Site B – Shelter was located approximately 700 m down Black Fellows Hands Track. The area contained a 40 m long shelter with a low overhanging roof. The floor contained a deposit suspected to be 50 cm – 1 m in depth. Red hand stencils were found on walls and ceiling. Those on the ceiling were the best preserved art motifs.

Site C – Shelter was situated approximately 300 m further down the track. The shelter was 30 m long and strewn with large rocks from roof-fall. There was little space for deposit with the majority of it having eroded down the slope. The numbers of stencils were difficult to measure and contained mainly fingertips. The stencils were coloured white and yellow but many of them were faded (Gaul post 1980).

Gorecki, 1983. Archaeological Survey Kariwara Colliery Lease, Lithgow NSW.

A field survey was undertaken from January 24th to January 29th 1983 commissioned by Longworth and McKenzie Pty Limited. The survey was conducted on the Newnes Plateau approximately nine kilometres north of Lithgow in the Newnes State Forest. The survey aimed to locate and establish archaeological significance of Aboriginal relics and provide recommendations regarding protective measures for Aboriginal relics. Gorecki's previous assessment was situated immediately east of the current study area.

The survey area in the study was divided into four environmental zones based upon geology, topography, vegetation cover and ground cover visibility. The archaeological potential of these zones were assessed. The four zones incorporated the following:

- Zone 1. Lagoon paddock
- Zone 2. Valley floors. These included Sawyers Swamp Creek, Kangaroo Creek and Wolgan River.
- Zone 3. Escarpments

- Zone 4. Plateau

The results of the survey found five archaeological sites and 19 potential occupation sites. Common sites found were a combination of shelters with art and deposit, with the deposited raw material consisting of quartz, chert, indurated mudstone, quartzite and fine grained igneous inclusions. Potential occupation sites were referred to as shelters which were possibly used in the past, but had no deposit at all; some may have had the potential for relics in their deposit.

Stockton, 1983. A Survey for Prehistoric Sites on the proposed Clarence Transfer for the Lithgow Water Supply, NSW.

This study was conducted to support the water requirements of the City of Greater Lithgow due to the rapid increase in coal mining and power generation in the area. Groundwater would be used from Clarence Colliery to supplement natural surface flows into council's Farmer's Creek Dam. The project requirements were a rising dam, settling ponds and a lined channel. The project was located 7 km north east of Lithgow Post Office and incorporated the gently sloping ridge of the undulating surface of the Newnes Plateau.

The field survey was conducted in three stages. The creek channel section uncovered one isolated find comprised of grey chert and small artefact scatter comprised of two grey quartzite pieces.

Stockton recommended that additional archaeological surveys should always be carried out prior to any clearing or construction work in relation to the project.

Rich, 1988. Proposed Prison at Marrangaroo Creek near Lithgow, NSW.

The archaeological assessment for the proposed construction works were located 6 km north of Lithgow. The proposed development included prison construction, access roads, additional buildings, car parks and a lake. This study was located approximately 5 km south of the current study area.

Two known Aboriginal sites were previously recorded in the survey area (#45-1-89 and #45-1-90) in 1983. Transects were made between the creek in the south and the railway line in the north. Sandstone ledges north of the railway line were inspected for shelters.

The survey uncovered eight open sites, and ground truthing of the two sites as mentioned above. The isolated finds and artefacts identified in the open sites were generally small to medium size and were manufactured from quartz, quartzite and mudstone. Existing registered sites in the area were relocated and audited: Marrangaroo Creek Site #45-1-89 was located along a track and eroded bank of a small gully. Five artefacts were identified comprising of flaked pieces of chert, milky and yellow quartz. Marrangaroo Creek Site #45-1-90 was located on a levee bank between Marrangaroo Creek and a flood overflow channel. The artefact scatter site contained approximately 11 artefacts comprising flakes of indurated mudstone, quartz and milky quartz. A previously recorded (1983) quartzite multifaceted core could not be relocated in the survey.

The natural presence of quartz and quartzite for stone tool manufacture in the survey area indicates that the pebbles may have been readily available

Rich and Gorman, 1992. Proposed Springvale Colliery and Conveyor, Wallerawang: Archaeological Survey for Aboriginal Sites.
An archaeological assessment was conducted for the proposed Springvale Colliery and related facilities located near Wallerawang in the Blue Mountains. The survey was divided into four locations; Springvale Pit Top Area 500 m x 350 m, Proposed Springvale Longwall Mine Area 7.5 km x 5 km, Proposed Conveyor Route measuring less than 10 m wide and approximately 10km long and the Proposed Washery covering an area of 1 km x 500 m, including the reject emplacements and dams.

The field survey uncovered 11 artefact scatter sites, an isolated find, two possible site locations, and three shelters with PAD (Potential Archaeological Deposit).

The artefact scatters were generally located on well exposed areas containing several artefacts with dominant raw materials comprising of quartz, quartzite and mudstone. Shelters were predominantly composed of sandstone pagodas which are typical for the regional landscape and commonly located along tributary lines. Two of the shelters contained evidence of rock art.

Archaeological test excavations were recommended to be carried out at the two potential site locations to determine the presence of sites and if proposed works will impact on them.

Rich, 1993. Springvale Coal Project, Wallerawang, NSW: Archaeological Inspection of Aboriginal Sites affected by Construction Works.
This report was undertaken by Rich subsequent to the 1992 archaeological assessment undertaken by Rich and Gorman (1992). An assessment was made of existing recorded sites that had been, or were likely to be, affected by development works.

Several recommendations were made additional to those outlined in the 1992 report. These included the updating of existing recorded site cards where necessary (Rich 1993).

Central West Archaeological and Heritage Services Pty Ltd, 2000. An Aboriginal Archaeological Study of the Marangaroo Department of Defence Site, Lithgow, NSW
Central West Archaeological and Heritage Services Pty Ltd carried out an Aboriginal archaeological study of the Marrangaroo Department of Defence Site. The site entrance was located approximately 2.2 km east of the Great Western Highway and 10 km north of Lithgow. The study area was approximately 1,700 ha. The survey was both by vehicle and on foot.

The survey yielded 17 Aboriginal sites which consisted of 10 rock shelter sites, two rock shelter sites with art and one with deposits. Four artefact scatter sites and one isolated artefact were also found. In addition 12 Potential Archaeological Deposits were recorded in the survey area.

It was recommended that protective buffer zones be established for the rock shelter sites and that if the proposed works were likely to impact on a site then a S87 and/or S90 Permit should be obtained.

OzArk Environmental & Heritage Managament P/L, 2007. Flora/ Fauna and Heritage Assessment: Eight Proposed Dewatering Borehole Sites, Newnes State Forest, Lithgow, NSW.

The report was commissioned by Centennial Coal, Clarence and details the results of a heritage assessment of approximately 1 ha of land in the Newnes State Forest, Lithgow. The survey was conducted by pedestrian transects.

The survey recorded no Aboriginal sites in the locations of the eight proposed dewatering boreholes and associated easement and access tracks. There were no constraints to the proposed development and no further archaeological investigation was considered necessary.

OzArk Environmental and Heritage Management P/L, 2007. Indigenous Heritage Assessment for Subsidence Management Plan over Three Proposed Longwalls (29 – 31), Baal Bone Colliery.

OzArk Environmental and Heritage Management P/L was commissioned by Xstrata Coal Pty Ltd for the preparation of a Subsidence Management Plan (SMP) over proposed longwalls 29 – 31 located beneath the Ben Bullen State Forest, Cullen Bullen, NSW. This Study Area was located 7 km north west of the current study area. OzArk's study comprised an extensive plateau of erosion resistant Triassic sandstone dissected by steep – sided valleys. The area contains remnant surface layers of weathered sandstone and shales of the Narrabeen Group overlaying a complex stratigraphical sequence including the Lidsdale and Lithgow Seams, which are both sub – groups of the Illawarra coal Measures.

A pedestrian field survey of a 250 ha area was conducted and yielded one isolated find and one rock shelter with no surface evidence of Aboriginal occupation. The report stated that if subsidence predictions indicate that the location of the shelter is likely to suffer extensive disturbance, and plans of the underlying longwalls cannot be altered, then a programme of limited sub surface test excavation in the rock shelter and its immediate environment should occur to determine the presence or absence of Aboriginal occupation.

RPS (2010) Cultural Heritage Impact Assessment, Angus Place Colliery, s75W modification.

RPS was commissioned by Centennial Angus Place to prepare a CHIA for proposed modifications under s75W of the EPA Act to the existing approval for works associated with Longwalls 910 and 900W within the Angus Place coal lease. The proposed amendments related to the construction of a de-watering plant, a borehole and associated infrastructure.

A pedestrian survey identified a single site, being a rock shelter with PAD. The site was identified within the western section of the proposed Longwall 910. A subsidence study predicted that the site would not be affected by subsidence, nor would the proposed works impact upon the site.

It was therefore recommended that the site be monitored periodically, in association with the Bathurst Local Aboriginal Land Council.

5.5 Predictive Model for Archaeology in the Study Area

A predictive model is created to provide an indication of Aboriginal sites likely to occur within the study area. It draws on the review of the existing information from the regional and local archaeological context and from the environmental context. The predictive model is necessary for the formulation of appropriate field methodologies and to provide information for the assessment of archaeological significance.

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

5.6 Site Predictions

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

5.6.1 Site Type

Based on previous archaeological investigations and Aboriginal sites recorded on the AHIMS database, the most likely site type to be encountered within the study area is the shelter with art and/or deposit. Artefact scatters are also likely. In areas where old growth vegetation remains, scarred trees are also possible.

5.6.2 Site Locations

Shelter sites are usually identified in cliff faces and rock overhangs. As the study area is situated on a plateau, the topography is not conducive to these types of sites being identified.

However, artefact scatters and isolated finds may be found in any landscape, but more often within 100 m of a watercourse. It is therefore predicted that the locations near watercourses within the study area will have a higher potential for containing artefact scatters and/or isolated finds.

5.6.3 Site Contents

A review of previous archaeological investigations indicates that artefact scatters and isolated finds generally comprise flaked stone artefacts made from the following stone raw materials: chert, silicified tuff, quartzite and silcrete. It is therefore predicted that sites with artefacts within the study area will comprise flaked stone tools, cores and flakes and that they will likely be made from chert, silicified tuff, quartzite and silcrete.

6 Archaeological Field Survey

6.1 Survey Methodology

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

6.1.1 Survey Aims

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

6.1.2 Survey Strategy

As the study area is relatively small, it was decided to survey it in its entirety. This included both the existing track and bore location. For a description of the survey area and survey methodology, please see Section 6.2.

6.1.3 Field Methods

The survey was conducted on foot (pedestrian) and targeted the landforms identified in the survey strategy above. The area surveyed was recorded in survey units. Each survey unit was mapped and recorded in accordance with landforms, study area boundaries, impact area boundaries, changes in survey conditions (such as visibility or ground surface exposure) and/or other relevant considerations. The mapping of survey units was undertaken on the basis of GPS recorded data and with reference to aerial and topographic information. The recording of survey units was undertaken using representative digital photographs and field notes which included observations of soils, ground surface exposure and visibility, vegetation cover, rock outcrops, levels of ground surface disturbance, erosion and similar observations. The field notes provide a basis for the reporting of survey coverage and calculating survey effectiveness as presented in the survey results section. It is required that any Aboriginal sites identified are recorded and submitted to the AHIMS database. Such recording involves the documentation of the material traces of past Aboriginal land use, including the spatial extent of sites and any other obvious physical boundaries. Aboriginal cultural sites identified by Aboriginal stakeholders may not always involve material traces and boundaries of such sites need to be mapped on the basis of information provided by the stakeholders. The position of such sites need to be recorded by GPS receivers and mapped accordingly.

6.2 Survey Units

A pedestrian survey of the study area was undertaken by RPS archaeologist, Deborah Farina, and Aboriginal stakeholders representing Bathurst Local Aboriginal Land Council, Gundungurra Tribal Council Aboriginal Corporation, Wiradjuri Council of Elders, Mingaan Aboriginal Corporation, Warrabinga Native Title Claimants Aboriginal Corporation and North East Wiradjuri Aboriginal Corporation on 12 January 2012. The study area was surveyed in two survey units; exposure and visibility for each survey unit was assessed according to the criteria listed in Table 6-1 and the survey coverage for the study area was recorded in Figure 6-1 and Table 6-2. With regard to the existing access track, although it is proposed to widen the existing track to 10 m, a total of 10 m either side of the track was surveyed, over and above the necessary coverage.

Survey Unit 1

This unit comprised the access track to dewatering borehole 8. This track measured approximately 5 m wide and is graded along the entire route to the borehole location. The length of the track from near the junction of Sunnyside Ridge Road near Blackfellows Hands Road is approximately 3.5 km.

The track forming this survey unit is well formed the entire length to the bore site, although some parts consisted of a sand base, whilst other sections were affected by erosion from runoff. The alignment of the track from Sunnyside Ridge Road was undulating, though generally moved downhill to the bore location.

Leaf litter was thick along the verges of the track, with very little ground surface visible. Pebbles were noted infrequently on the surface both along the tracks and in the impact zones either side of the tracks, however no Aboriginal artefactual material was observed. The vegetation is regrowth, with evidence of previous clearance. Very few examples of old growth trees were observed and those that were noted were located outside of the impact area proposed by this project. No culturally modified trees were identified.

No Aboriginal sites were identified within this survey unit.

Survey Unit 2

Survey Unit 2 comprised an area of 120 m x 120 m to be utilised for the proposed dewatering bore #8. It was located on mostly level ground on a mid-slope and bisected by the access track.

Two survey marker trees were noted on the eastern side of the track, both pointing inwards to a survey marker with the identification of “ELN 85”. The inspection focussed on the western side of the track owing to a steep slope on the eastern side, approximately 20 m east of the track.

The vegetation on both sides of the track was a mix of regrowth vegetation, with thick, shrubs in the understory. Access was varied; in some places the thickness of the understory prevented proper inspection, in others, grasses and thick leaf litter obscured

much of the ground surface. Visibility was therefore low, with the largest exposure being the access track.

No Aboriginal sites were identified within this survey unit.

Table 6-1: Ground Surface Visibility Rating

GSV Rating	Overall Rating	Description
0 – 9%	Low	Heavy vegetation with scrub foliage, debris cover and/or dense tree cover. Ground surface not clearly visible.
10 – 29%	Low	Moderate level of vegetation, scrub or tree cover. Small patches of soil surface visible resulting from animal tracks, erosion or blowouts. Patches of ground surface visible.
30 – 49%	Moderate	Moderate levels of vegetation, scrub and/or tree cover. Moderate sized patches of soil surface visible possibly associated with animal tracks, walking tracks and erosion surfaces. Moderate to small patches across a larger section of the study area.
50 – 59%	Moderate	Moderate to low level of vegetation, tree and/or scrub. Greater amounts of areas of ground surface visible in the form of erosion scalds, recent ploughing, grading or clearing.
60 – 79%	High	Low levels of vegetation and scrub cover. High incidence of ground surface visible due to recent or past land–use practices such as ploughing, grading and mining. Moderate level of ground surface visibility due to sheet wash erosion, erosion scalds and erosion scours.
80 – 100%	High	Very low to nonexistent levels of vegetation and scrub cover. High incidence of ground surface visible due to past or recent land use practices, such as ploughing, grading and mining. Extensive erosion such as rill erosion, gilgai, sheet wash, erosion scours and scalds.

Table 6-2: Survey Coverage Data.

Survey Unit	Landform	Survey Unit Area (Square metres)	Exposure (%)	Visibility (%)	Effective Coverage Area (square metres)	Effective Coverage (percent)
1	Track; variable	178,900	10	10	1,789	1%
2	Lower slope	14,400	30	10	432	3%

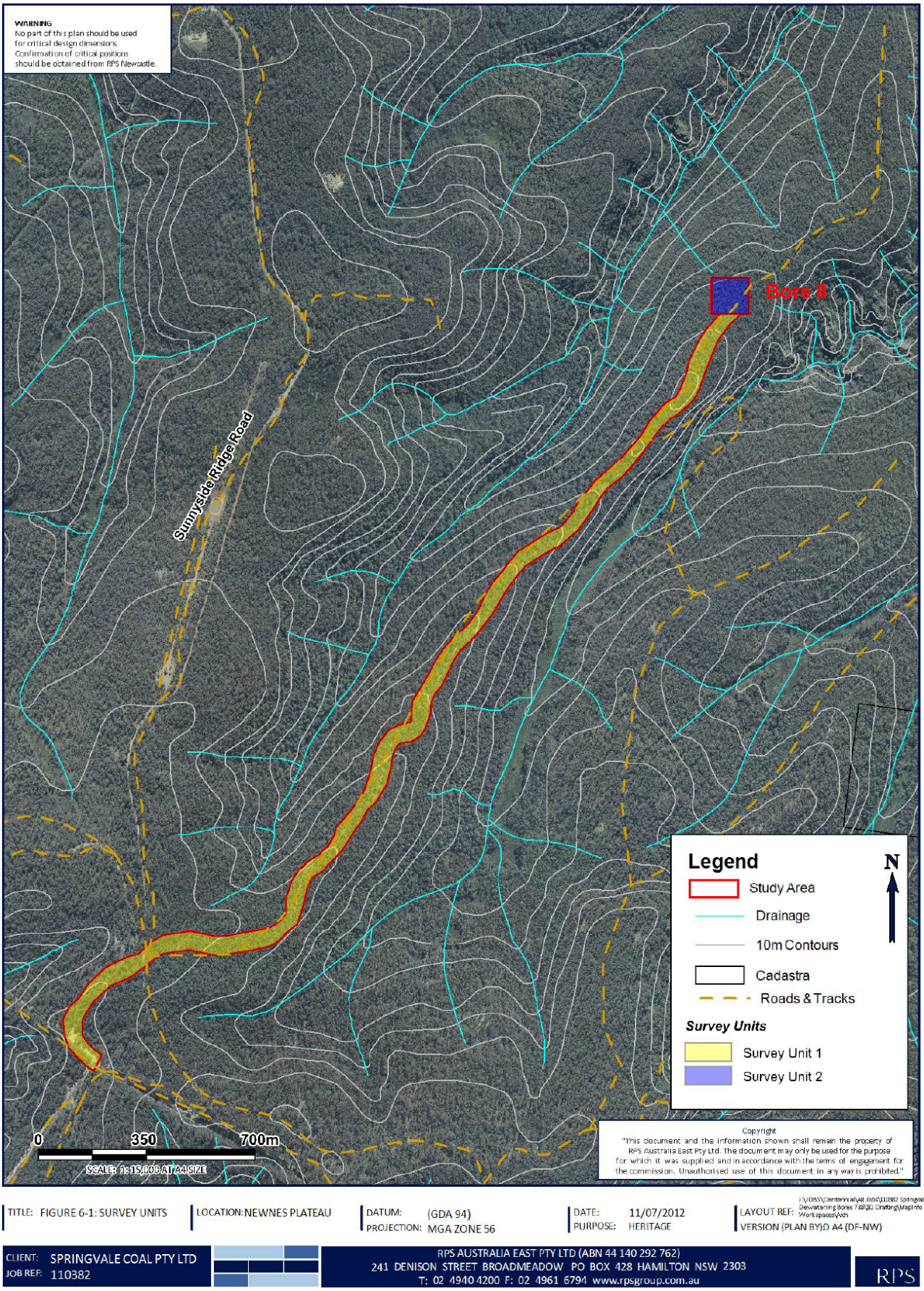


Figure 6-1: Survey Units

6.3 Survey Results

No Aboriginal sites were identified during the survey.

6.4 Discussion of Survey Results

On the basis of a review of the relevant environmental and archaeological information a predictive model of the study area was formulated. Based on AHIMS data and previous archaeological investigations in the vicinity of the study area, it was predicted that the most common types of sites would be shelters with/without art and/or deposit and artefact scatters/isolated finds. It was predicted further that the archaeological contents of such artefact sites would comprise flaked stone artefacts; that up to 30 artefacts would be expected as a maximum frequency for artefact scatters and that raw materials would include silcrete, mudstone, tuff and chert. It was also predicted that the location of the sites would be within 200 m of watercourses.

The majority of the study area is a plateau, it is unsuitable for rock overhangs needed for shelters. Further, the nearest watercourse was 250 m to the west of the study area, and therefore outside the predicted maximum of 200 m. The absence of sites within the study area would therefore appear to support the predictive model.

It should be borne in mind that heavy vegetation across the study area obscured much of the ground surface, thereby limiting the ability to identify sites such as artefact scatters and/or isolated finds. As these sites can be in any landscape, it may be that these types of sites are present within the study area, beneath the leaf litter.

On the other hand, the dominant site types identified within the vicinity of the study area as demonstrated by the AHIMS results are shelters, either with/without art and/or deposit and/or grinding grooves. Artefact scatters are located in the vicinity of the study area, as shown in Figure 5-2, however, they are exclusively located in association with watercourses. Whilst this may be the result of survey bias, i.e. the intensive surveying of watercourses for various projects, it is nonetheless plausible that even with optimum visibility, such site types would not be present on the plateau.

Whilst modified trees are present in AHIMS results, much of the vegetation in the study area is regrowth vegetation and therefore not suitable for the presence of such sites. However, where old growth trees were observed, they were checked for scars and/or carving, particularly in areas where the proposed works would impact upon the vegetation. No culturally modified trees were identified in the study area.

7 Conclusions and Recommendations

This report has considered the environmental and archaeological context of the study area, developed a predictive model and reported on the results of an archaeological survey of the study area. The survey did not locate any items of Aboriginal significance within the study area, and as such the assessment concludes there are no constraints to the project in respect of Aboriginal heritage.

The following recommendations apply to the overall management of proposed works within the study area.

Recommendation 1

No Aboriginal objects or places have been identified within the study area and therefore an Aboriginal Impact Permit (AHIP) is not required for the proposed activity.

Recommendation 2

All relevant Centennial Coal staff should be made aware of their statutory obligations for heritage under NSW *NPW Act 1974* and the NSW *Heritage Act 1977* which may be implemented as a heritage induction.

Recommendation 3

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

Recommendation 4

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

Recommendation 5

If, during the course of development works, suspected European cultural heritage material is uncovered, work should cease in that area immediately. The NSW Heritage Branch should be notified and works only recommence when an appropriate and approved management strategy instigated.

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9 Plates



Plate 1: Survey Unit 1; looking east



Plate 2: Survey unit 1 looking west. Note survey tree adjacent to track.



Plate 3: Survey marker in the eastern portion of survey unit 2.



Plate 4: Survey unit 2 – western portion.

Appendix 1

Legislative Requirements

Summary of Statutory Controls

The following overview of the legal framework is provided solely for information purposes for the client, it should not be interpreted as legal advice. RPS will not be liable for any actions taken by any person, body or group as a result of this general overview and recommend that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the summary below.

COMMONWEALTH

***Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act),**

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).

It would appear that 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).

Australian Heritage Commission Act 1975

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

The *Australian Heritage Council Act 2003* together with the *Environment Protection & Biodiversity Conservation Act 1999* includes a National Heritage List of places of National heritage significance, maintains a Commonwealth Heritage List of heritage places owned or managed by the Commonwealth and ongoing management of the Register of the National Estate.

STATE

It is incumbent on any land manager to adhere to state legislative requirements that protect Aboriginal Cultural heritage. The relevant legislation in NSW includes but is not limited to:

National Parks & Wildlife Act 1974 **(NPW Act)**

The NPW Act provides statutory protection for all Aboriginal heritage, places and objects (not being a handicraft made for sale), with penalties levied for breaches of the Act. This legislation is overseen by the Office of Environment & Heritage (OEH) (formerly Department of Environment, Climate Change and Water (DECCW)). The relevant portion of the Act is Part 6 and is concerned with Aboriginal objects and places, with Sections 86 and 90 being the most pertinent. In 2010, this Act was substantially amended, particularly with respect to Aboriginal cultural heritage requirements. Relevant sections include:

Section 86

This section now lists four major offences:

(2) A person must not harm an object that the person knows is an Aboriginal object;

(3) A person must not harm an Aboriginal object;

(4) For the purposes of s86, "circumstances of aggravation" include (a) the offence being committed during the course of a commercial activity; or (b) that the offence was the second or subsequent offence committed by the person.

(5) A person must not harm or desecrate an Aboriginal place.

Offences under s86 (2) and (4) are now strict liability offences, i.e., knowledge that the object or place harmed was an Aboriginal object or place needs to be proven. Penalties for all offences under Part 6 of this Act have also been substantially increased, depending on the nature and severity of the offence.

Section 87

This section now provides defences to the offences of s86. These offences chiefly consist of having an appropriate Aboriginal Heritage Impact Permit (AHIP), not contravening the conditions of the AHIP or demonstrating that due diligence was exercised prior to the alleged offence.

Section 87A & 87B

These sections provide exemptions from the operation of s86: Section 87A for authorities such as the Rural Fire Service, State Emergency Services and offices of the National Parks & Wildlife Service in the performance of their duties and s87B for Aboriginal people performing traditional activities.

Section 89A

This section provides that a person who knows of an Aboriginal object or place and does not advise the Director-General of that object or place within a reasonable period of time, is guilty of an offence.

Section 90
This section authorises the Director-General to issue an AHIP.

Section 90A-90R
These sections govern the requirements relating to applying for an AHIP. In addition to the amendments to the Act, DECCW have issued three new policy documents clarifying DECCW's requirements with regards to Aboriginal archaeological investigations: *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* and *Code of Practice for Archaeological Investigations in NSW*. The Consultation Requirements formalise the consultation with Aboriginal community groups into four main stages and include details regarding the parties required to be consulted and the methods of establishing the necessary stakeholders to be consulted, advertisements inviting Aboriginal community groups to participate in the consultation process, requirements regarding the provision of methodologies, draft and final reports to the Aboriginal stakeholders and timetables for the four stages. The Due Diligence Code of Practice sets out the minimum requirements for investigation, with particular regard as to whether an AHIP is required. The Code of Practice for Archaeological Investigation sets out the minimum requirements for archaeological investigation of Aboriginal sites.

Aboriginal Heritage Impact Permits (AHIP)
DECCW encourages consultation with relevant Aboriginal stakeholders for all Aboriginal Heritage assessments. However, if an Aboriginal Heritage Impact Permit (AHIP) is required for an Aboriginal site, then specific DECCW guidelines are triggered for Aboriginal consultation.

Aboriginal Cultural Heritage Consultation Requirements for Proponents
In 2010, the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs) were issued by DECCW (12th of April, 2010). These consultation requirements replace the previously issued *Interim Community Consultation Requirements* (ICCR) for Applicants (DEC 2004). These guidelines apply to all AHIP applications prepared after April 12, 2010; for projects commenced prior to April 12, 2010 transitionary arrangements have been stipulated in a supporting document, Questions and Answers 2: Transitional Arrangements.

The ACH Consultation Requirements 2010, include a four stage Aboriginal consultation process and stipulates specific timeframes for each stage. Stage 1 requires that Aboriginal people who hold cultural information are identified, notified and invited to register an expression of interest in the assessment. Stage 1 includes the identification of Aboriginal people who may have an interest in the study area and hold information relevant to determining the cultural significance of Aboriginal objects or places. This identification process should draw on reasonable sources of information including: the relevant DECCW EPRG regional office, the relevant Local Aboriginal Land Council(s), the registrar, Aboriginal Land Rights Act 1983, the Native Title Tribunal, Native Title Services Corporation Limited, the relevant local council(s) and the relevant catchment management authority. The identification process should also include an advertisement placed in a local newspaper circulating in the general location of the study area. Aboriginal organisations and/or individuals identified should be notified of the project and invited to register an expression of interest (EoI) for Aboriginal consultation. Once a list of Aboriginal stakeholders has been compiled from the EOIs, they need to be consulted in accordance with ACHCRs Stages 2, 3 and 4.

For projects commenced before the 12 April, 2010, Section 1 (Q1) of the transitional arrangements indicates that if Aboriginal consultation was commenced prior to the 12 April 2010 (including advertising and notification of stakeholders) then consultation is to be continued under the previous ICCR guidelines.

*Interim Community Consultation Requirements (ICCR) for Applicant*s (DEC 2004) required a three stage process of which timeframes were stipulated for specific components. Stage 1 required the notification and registration of interests. Notification included an advertisement in a local print media, as well as, as contacting the Local Aboriginal Land Council(s), the registrar of Aboriginal Owners, Native Title Services, local council(s) and the Department of Environment and Conservation. Stage 1 also required the invitation for expressions of interest (EoI) to be sent to interested Aboriginal parties and an Aboriginal stakeholder list compiled. Stage 2 required the preparation of an assessment design to be sent to the Aboriginal stakeholders for comment and review. Stage 3 required that the assessment report be provided to registered Aboriginal stakeholders for review and comment.

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

This 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 (1979)*, Parts 3, 4 and 5 relate to Aboriginal heritage.

Part 3 regulates the preparation of planning policies and plans. Part 4 governs the manner in which consent authorities determine development applications and outlines those that require an environmental impact statement. Part 5 regulates government agencies that act as determining authorities for activities conducted by that agency or by authority from the agency. The National Parks & Wildlife Service is a Part 5 authority under the *EP&A Act (1979)*.

In brief, the *NPW Act (1974)* provides protection for Aboriginal objects or places, while the *EP&A Act (1979)* ensures that Aboriginal cultural heritage is properly assessed in land use planning and development.

Heritage Act 1977

This Act protects the natural and cultural history of NSW with emphasis on non-indigenous cultural heritage through protection provisions and the establishment of a Heritage Council. Although Aboriginal heritage sites and objects are primarily protected by the *National Parks & Wildlife Act 1974*, if an Aboriginal site, object or place is of great significance, it may be protected by a heritage order issued by the Minister subject to advice by the Heritage Council.

Other legislation of relevance to Aboriginal cultural heritage in NSW includes the *NSW Local Government Act 1993*. Local planning instruments also contain provisions relating to indigenous heritage and development conditions of consent.

Appendix 2

Aboriginal Consultation – Published Advertisement



PUBLIC NOTICES

Centennial Coal

Registration of Interest
for Aboriginal Cultural Knowledge Holders
Centennial Coal Western Region

Centennial Coal is requesting registrations of interest from Aboriginal Stakeholders for projects in the Capertee, Blackmans Flat, Lidsdale and Newnes Plateau localities.

The purpose of this community consultation with Aboriginal people is to assist the proposed applicant in the potential preparation of applications for Aboriginal Heritage Impact Permits and to assist the Director General of Office of Environment and Heritage in his or her consideration and determination of the applications.

As per Department of Environment Climate Change and Water (now Office of Environment and Heritage) 2010 Aboriginal Cultural Heritage Consultation Requirements for Proponents responses are to be received before **Friday 21 October 2010.** *Written applications* should be forwarded to:

Tony Seibel-Barnes
Centennial Coal Company
Locked Bag 1002
Wallerawang NSW 2845
Mobile: 0448 443864
tony.seibel-barnes@centennialcoal.com.au

Further information will be provided upon registration.

9392-121

Appendix 3

Aboriginal Consultation – Written Responses from the Aboriginal Community Stakeholders

1. Gundungurra Tribal Council Aboriginal Corporation

Springvale Mine Dewatering Bores 7 & 8
Aboriginal Culture & Heritage Survey Assessment
May 2012

Introduction:
Springvale Coal Pty Limited requested Gundungurra cultural site officers to attend an Aboriginal Cultural Heritage Consultation and Investigation for the construction of Dewatering Bores 7 & 8 at Springvale Mine Springvale Coal Pty Limited.
The main objective of the Aboriginal Heritage Assessment is to assess the proposal for its likely and potential impacts on places or items of significance to Gundungurra Heritage.

Project Location:
The project location is situated at Springvale within the Lithgow Local Government Area (LGA). Wywandy Clan of the Gundungurra people's traditional land makes up a major part of the projects location. The specific area also is a part of the east coast of Australia Aboriginal song line and boarders on the connection between the North Coast and South Coasts of New South Wales trade route and traditional walkways.

Project Description:
The study area, located at Springvale within the Lithgow Local Government Area (LGA), falls within the existing Springvale mining lease and is located entirely within the Newnes State Forest. Springvale seeks to modify development consent S91/06569/001 to allow for the construction and operation of two additional

dewatering facilities (Bores 7 and 8) within the Newnes State Forest on the Newnes Plateau, as well as an increase in Run of Mine (ROM) coal production from 3.4 Mtpa to 4 Mtpa (the Project).

Disturbance Area:

A review of the disturbance history in discussion with relevant personnel of RPS and Springvale Coal indicates that the proposed site and surrounding areas have been subject to disturbance of varying types over a significantly long period. Given the location and the significance of the cultural connection of the area, it is imperative that consultation between stakeholders occurs as a matter of priority if there are any changes in the study area and surrounding boundaries.

Legislation Requirements:

Commonwealth Legislation:

The Native Title Act 1993 provides recognition of the indigenous inhabitation of this land prior to the arrival of European settlement. In terms of this project, the application of this act has occurred previously in the advertising of all relevant details required under Section 29 by Enhance Place Pty Ltd in which all crown lands contained within the boundary of the assessment lease was advertised for Native title claimants. Gundungurra Tribal Council Aboriginal Corporation has a registered claim for native title. To date successful negotiations have occurred between relevant parties.

State Legislation:

The legislative requirement for the protection and management of Aboriginal heritage and more specific Gundungurra Heritage is facilitated under various Acts. This proposed development is subject to the various provisions within these legislations pertaining to the assessment of potential impacts of the development on our Heritage being Gundungurra Heritage within the Project Site.

Gundungurra Tribal Council Aboriginal Corporation:

The Gundungurra Tribal Council is the recognised representative Corporation on behalf of all of our members and Gundungurra descendants that belong to and reside in our traditional boundary area that include the Blue Mountains; Wollondilly; Burragorang Valley & Lithgow and surrounding areas.

The management of our country and the protection of our cultural and heritage is of critical and fundamental importance to Gundungurra Tribal Council and our members.

The proposed development site is within the traditional boundary area of Gundungurra Aboriginal Nation and our members and Gundungurra descendants are the key stakeholders in the conduct of this cultural and heritage assessment.

Background:

Gundungurra Culture & Heritage Investigations/Assessments:

Our culture and heritage assessments take into consideration various facets of Gundungurra cultural and heritage and include Aboriginal sites; our history both verbal and written knowledge of specific areas and our social and spiritual connection of our traditional lands.

Field Survey Findings:

- High volume of vegitation and ground coverage, which impacted upon visual of artifact reminants and other cultural activities and evidence of sites of cultural significance or otherwise.
- No evidents of flakes; artifact reminants and other cultural activities and evidence of sites of cultural significance or otherwise.

- No sites of cultural significance were identified during the survey.
- Sites that have already been recorded were apart of the site survey.

Conclusion: Gundungurra Tribal Council Aboriginal Corporation advise that the proposed development site carries no potential for direct impacts on the cultural heritage values of Gundungurra by the proposed work activities.

Recommendations:

The following recommendations are made by Gundungurra Tribal Council to account for any risidual risks:

- Gundungurra Tribal Council are consulted when any changes are made to the proposed locations or where the project scope is altered in any way.
- Where changes are made to the project plans in regard to the proposed disturbance zones, further field surveying is carried out.
- If any potential places, sites or items of cultural signifcance are identified, all activities are to cease until such time as the appropriate representatives of Gundungurra Tribal Council have assessed the site in assistance with archaeological investigation ensuring adequaste site management plans have been devised.

SUMMARY

Gundungurra Tribal Council Aboriginal Corporation are of the opinion that Springvale Mine will make every effort to preserve any potential places, sites or items of cultural significance if they are identified as recommended.

We are very keen to support and work with Springvale Mine with preserving our heritage and culture.

Thanking you in anticipation to Springvale Mine for giving us the opportunity of being involved with this stage and we look forward to working together again.

This report will be presented to the next Gundungurra Tribal Council Aboriginal Corporation meeting.

Appendix 4

Aboriginal Consultation Log

Aboriginal Consultation Log

Date	Consultation Description	Method of Contact	Outcomes
04/11/2011	From Tonilee Scott of Bathurst LALC	Email	Registered interest
08/11/2011	To Dhuuluu-Yala Aboriginal Corporation	Letter	Invitation to express interest
08/11/2011	To Wiradjuri Council of Elders	Letter	Invitation to express interest
08/11/2011	To Robert Clegg	Letter	Invitation to express interest
08/11/2011	To Wiradjuri Traditional Owners Central West Aboriginal Corporation	Letter	Invitation to express interest
08/11/2011	To Wiray-dyuraa Ngumbaay-dyil	Letter	Invitation to express interest
08/11/2011	To Gundungurra Tribal Council Aboriginal Corporation	Letter	Invitation to express interest
08/11/2011	To Gundungurra Aboriginal Heritage Association Inc.	Letter	Invitation to express interest
08/11/2011	To Mingaan Aboriginal Corporation	Letter	Invitation to express interest
08/11/2011	Aboriginal Reference Group of Hawkesbury-Nepean Catchment Management Authority	Letter	Invitation to express interest
08/11/2011	To Warrabinga Native Title Claimants Aboriginal Corporation	Letter	Invitation to express interest
08/11/2011	To North East Wiradjuri	Letter	Invitation to express interest
08/11/2011	To Blackshield Lawyers on behalf of the Warrabinga-Wiradjuri People	Letter	Invitation to express interest
08/11/2011	To Eddy Neumann Lawyers on behalf of GTCAC (represented by Mervynn Trindall, Elsie Stockwell and Pamela Stockwell)	Letter	Invitation to express interest
21/11/2011	To Blackshield Lawyers	Phone	Following up letter of 08/11/2011; left message
21/11/2011	To GTCAC	Phone/ email	Following up letter of 08/11/2011; left message
21/11/2011	To Wendy Lewis of Warrabinga	Phone	Said she had moved and did not receive the first letter. Explained contents and she confirmed she wished to register
21/11/2011	To Lyn Syme of North East Wiradjuri	Phone	Stated she wished to register interest
21/11/2011	To Sharon Riley of Mingaan	Phone	Following up letter of 08/11/2011. Left message
21/11/2011	To Teitzel & Partners (representing Wiray-dyuraa Ngumbaay-dyil and Wiray-dyuraa Maying-gu	Email/ Phone	Following up letter of 08/11/2011. Left message and re-sent email.
21/11/2011	To Eddy Neumann Lawyers representing native title claimants from GTCAC	Email	Following up letter of 08/11/2011. Attaching copy of letter and requesting response ASAP.
21/11/2011	From Sharon Brown of GTCAC	Email	Registered interest and requesting emailed copy of original letter.

21/11/2011	To Helen Riley of Mingaan	Phone	Confirmed Mingaan wished to register interest
21/11/2011	To Eddy Neumann Lawyers	Phone	Confirmed GTCAC wished to register interest
21/11/2011	From Eddy Neumann Lawyers	Email	Confirmed in writing GTCAC wished to register interest
21/11/2011	To Robert Clegg	Email	Attaching copy of letter of 08/11/2011 requesting a response ASAP
21/11/2011	To Dhuuluu-Yala Aboriginal Corporation	Email	Attaching copy of letter of 08/11/2011 requesting response ASAP
21/11/2011	To Rochelle of Dhuuluu-Yala Aboriginal Corporation	Phone	Stated she did not remember the letter but said she would check her email and respond. She also believed that they would not have a sites officer available.
21/11/2011	To Neville Williams of Mooka	Email	Attaching copy of letter of 08/11/2011 requesting response ASAP
21/11/2011	To Neville Williams of Mooka	Phone	Said he did not remember receiving the letter but would check his email and respond
21/11/2011	From Neville Williams on behalf of Sharon Williams of Mooka	Email	Registering interest.
21/11/2011	To Wiradjuri Traditional Owners Central West Aboriginal Corporation	Email	Following up on letter of 08/11/2011. Sent copy of letter and requesting response ASAP
21/11/2011	To Brian Grant of Wiradjuri Traditional Owners Central West Aboriginal Corporation.	Phone	No response. No voice mail to leave message.
21/11/2011	Attempted to contact Gundungurra Aboriginal Heritage Association Inc.	Phone	Was informed this group may no longer exist.
22/11/2011	From Rochelle of Dhuuluu-Yala Aboriginal Corporation	Phone	Advised that as they don't have a sites officer available they would not be registering interest
22/11/2011	To Simon of Blackshield Lawyers	Phone	Said the Warrabinga-Wiradjuri people would like to register their interest
22/11/2011	To Brian Grant of Wiradjuri Traditional Owners Central West Aboriginal Corporation	Phone	Left message on home phone; mobile engaged.
28/11/2011	From Robert Clegg of Wiradjuri Traditional Owners Central West Aboriginal Corporation	Email	Advice that Sharon Riley or Helen Riley will be their representatives for registration
28/11/2011	From John Lennis of Hawkesbury-Nepean Catchment Management Authority	Phone	Confirmed they did not wish to register interest in any of the projects
23/11/2011	Letter to Bathurst LALC	Email	Attaching methodology of Western Holdings Project

			including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to GTCAC	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Mingaan Aboriginal Corporation	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Mooka Traditional Owners	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Wiradjuri Council of Elders	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Warrabinga Native Title Claimants Aboriginal Corporation	Mail	Enclosing methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to North East Wiradjuri	Mail	Enclosing methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Eddy Neumann Lawyers	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Teitzel & Partners	Mail	Enclosing methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
23/11/2011	Letter to Blackshield Lawyers	Email	Attaching methodology of Western Holdings Project including Springvale Bores 7 & 8; requesting comments by 23/12/2011
07/12/2011	Jason Brown on behalf of GTCAC	In person	Information session at Black Gold Cabins, Wallerawang, regarding Western Holdings Project, including Springvale Bores 7 & 8
07/12/2011	Elwin Wolfenden on behalf of Mingaan	In	Information session at Black

		person	Gold Cabins, Wallerawang, regarding Western Holdings Project, including Springvale Bores 7 & 8
07/12/2011	Robyn Williams on behalf of NE Wiradjuri	In person	Information session at Black Gold Cabins, Wallerawang, regarding Western Holdings Project, including Springvale Bores 7 & 8
07/12/2011	Wendy Lewis on behalf of Warrabinga Native Title Claimants Aboriginal Corporation	In person	Information session at Black Gold Cabins, Wallerawang, regarding Western Holdings Project, including Springvale Bores 7 & 8
07/12/2011	Helen Riley on behalf of Wiradjuri Council of Elders	In person	Information session at Black Gold Cabins, Wallerawang, regarding Western Holdings Project, including Springvale Bores 7 & 8
07/12/2011	Helen Riley on behalf of Wiradjuri Council of Elders	In person	Advice that they approved methodology
07/12/2011	Wendy Lewis of Warrabinga	In person	Approved methodology
16/12/2011	Letter to Bathurst LALC	Email	Asking whether they still wished to be involved with project
20/12/2011	Sharon Riley on behalf of Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu	Phone	Approving methodology
21/12/2011	Jason Brown on behalf of GTCAC	Email	Approving methodology
21/12/2011	Lyn Syme on behalf of NE Wiradjuri	Phone	Approving methodology
21/12/2011	Tonilee Scott, Bathurst LALC	Email	Approving methodology
22/12/2011	Letter to Bathurst LALC	Email	Advising of fieldwork and inductions
22/12/2011	Letter to GTCAC	Email	Advising of fieldwork and inductions
22/12/2011	Letter to GTCAC	Email	Requesting copies of Certificates of Currency
22/12/2011	Letter from Jason Brown of GTCAC	Email	Attaching copy of certificate of currency
22/12/2011	Letter to Mingaan	Email	Advising of fieldwork and inductions
22/12/2011	Letter to NE Wiradjuri	Mail	Advising of fieldwork and inductions
22/12/2011	Letter to Warrabinga Native Title Claimants Aboriginal Corporation	Mail	Advising of fieldwork and inductions
08/01/2012	Resending letter to Lyn Syme of NE Wiradjuri	Mail	Advising of fieldwork and inductions
09/01/2012	Letter to Jason Brown of GTCAC	Email	Requesting current copy of Certificate of Currency
10/01/2012	Attendance at inductions at Springvale mine	In person	Attendees: Deborah Farina (RPS); Chantel Peters-Chapman of Bathurst LALC, Jack Pennell (NE Wiradjuri),

			Kevin Williams (Warrabinga) and Elwin Wolfenden (Mingaan). Site reconnaissance conducted following formal induction
12/01/2012	Fieldwork	In person	Attendees: Deborah Farina (RPS), Richard Peters (Bathurst LALC), Trevor Brown (GTCAC), Jack Pennell (NE Wiradjuri), Kevin Williams (Warrabinga) and Elwin Wolfenden (Mingaan).
01/06/2012	Letter to Bathurst LALC	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to GTCAC	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Mingaan	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Mooka	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Wiradjuri Council of Elders	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Warrabinga	Mail	Enclosing draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to North East Wiradjuri	Mail	Enclosing draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Sharon Riley on behalf of Wiray-dyuraa Ngambaay-dyil and Wiray-dyuraa Maying-gu	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Eddy Neuman Lawyers	Email	Attaching draft report for comment; requesting comments by 29/06/2012
01/06/2012	Letter to Blackshield Lawyers	Email	Attaching draft report for comment; requesting comments by 29/06/2012
29/06/2012	To Helen Riley of Mingaan	Phone	Asked whether they had any comments regarding draft report; said she would need to speak to Elwin Wolfenden.
29/06/2012	To Neville Williams of Mooka	Phone	Asked whether they had any comments regarding draft report; said he would have to check his emails and get back to us.
29/06/2012	To Wendy Lewis of Warrabinga	Phone	No answer; left voice mail.
29/06/2012	To Lyn Syme of NE Wiradjuri	Phone	No answer; left voice mail
29/06/2012	From Lyn Syme of NE Wiradjuri	Phone	Said she was in Wollongong

			and would get back to me.
29/06/2012	From Helen Riley	Phone	Provided Elwin's number
29/06/2012	To Elwin Wolfenden	Phone	No answer.
02/07/2012	From Helen Riley	Phone	Said she spoke to Elwin, who said that he had no problems with the report.

Appendix 5

AHIMS Search

Office of Environment & Heritage

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 110382

Client Service ID : 61361

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-1-0144	18 Newnes State Forest	AGD	56	236350	6306800	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Mnl George					Permits		
45-1-0145	19; Newnes State Forest	AGD	56	236400	6306750	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Mnl George					Permits		
45-1-0146	20; Newnes State Forest	AGD	56	236050	6307300	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Mnl George,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0149	23 NewnesState Forest	AGD	56	236300	6306800	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0154	30;Carne Creek;	AGD	56	240700	6306150	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Peter Higgins,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0157	33_PAD 7;Newnes State Forest;	AGD	56	235200	6308700	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0065	Mt Horne Paddys Creek	AGD	56	241100	6299220	Closed site	Valid	Artefact : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Deposit	130
	Contact	Recorders	ASRSYS					Permits		
45-1-0005	Old Bells Line Track;	AGD	56	239960	6301000	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1474
	Contact	Recorders	Ann Jelinek					Permits		
45-1-0128	2 Newnes State Forest	AGD	56	242200	6301100	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	339,2016,2220
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0129	3 Newnes State Forest	AGD	56	241950	6300950	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0130	4 Newnes State Forest	AGD	56	243300	6300800	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0131	5 Newnes State Forest	AGD	56	240550	6306150	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		

Report generated by AHIMS Web Service on 31/01/2012 for Deborah Farina for the following area at Datum :GDA, Zone : 56, Eastings : 234199 - 244199, Northings : 6299014 - 6309014 with a Buffer of 50 meters.Additional Info : As part of an archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 44

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Office of Environment & Heritage

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 110382

Client Service ID : 61361

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-1-0132	6 Newnes State Forest	AGD	56	240550	6305850	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Mnl George					Permits		
45-1-0137	11 Newnes State Forest	AGD	56	236600	6306900	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0138	12 Newnes State Forest	AGD	56	235800	6306900	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre,Ms.Kerry Powell					Permits		
45-1-0139	13 Newnes State Forest	AGD	56	236050	6306800	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-0002	Bungleboori;Old Bells Line Track;	AGD	56	239300	6300400	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	Contact	Recorders	Ann Jelinek					Permits		
45-1-0003	Waratah Ridge;Mt Horne;Mt Horne Engravings;	AGD	56	243420	6301180	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Rock Engraving,Shelter with Deposit	743
	Contact	Recorders	Klim Gollan,Ann Jelinek					Permits		
45-1-0004	Mt Horne;Newnes State Forest;1/Mt Horne;	AGD	56	242600	6301200	Closed site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art	339,743,2016,2220
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre,Sharon Sullivan					Permits		
45-1-0084	Location 15, Site 3;Newnes State Forest;	AGD	56	236900	6307300	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016,2220
	Contact	Recorders	Paul Gorecki					Permits		
45-1-0177	CC 3 Newnes SF	AGD	56	241900	6303750	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0178	CC 4 NEWNES SF	AGD	56	241850	6304100	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0179	CC 5;NEWNES SF;	AGD	56	242100	6301750	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0180	CC 6 NEWNES SF	AGD	56	244000	6305750	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		

Report generated by AHIMS Web Service on 31/01/2012 for Deborah Farina for the following area at Datum :GDA, Zone : 56, Eastings : 234199 - 244199, Northings : 6299014 - 6309014 with a Buffer of 50 meters.Additional Info : As part of an archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 44

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Extensive search - Site list report

Your Ref Number : 110382

Client Service ID : 61361

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-1-0181	Mt Horne_1;NEWNES SF;	AGD	56	242350	6301200	Closed site	Valid	Art (Pigment or Engraved) : -, Grinding Groove : -	Axe Grinding Groove,Shelter with Art	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0182	Mt Horne_2;NEWNES SF;	AGD	56	242350	6301150	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0183	Mt Horne_3;NEWNES SF;	AGD	56	243400	6300350	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0186	PC 3;NEWNES SF;	AGD	56	241600	6299000	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0187	PC 4;NEWNES SF;	AGD	56	241650	6298800	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0188	PC 5;NEWNES SF;	AGD	56	241800	6299150	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0189	PC 6;NEWNES SF;	AGD	56	242400	6298950	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0197	CC 1;NEWNES SF;	AGD	56	242080	6302950	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0198	CC 2;NEWNES SF;	AGD	56	242100	6303200	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Klim Gollan					Permits		
45-1-0204	S11;Newnes Plateau;	AGD	56	236120	6300900	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	2300
	Contact	Recorders	Mr.Neville Baker,Elizabeth Rich					Permits		
45-1-0205	S10;Newnes Plateau;	AGD	56	236200	6301020	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	2300
	Contact	Recorders	Mr.Neville Baker,Elizabeth Rich					Permits		
45-1-0051	Nine Mile Pine Plantation;Carne Creek;	AGD	56	240250	6302850	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	L Bostock					Permits		
45-1-0052	Cairne Creek;Bird Rock;Nine Mile Pine Plantation;	AGD	56	241000	6303000	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	Recorders	Wieslaw Lichacz					Permits		
45-1-2578	Springvale 1	AGD	56	238760	6300377	Open site	Valid	Stone Arrangement : 2		

Report generated by AHIMS Web Service on 31/01/2012 for Deborah Farina for the following area at Datum :GDA, Zone : 56, Eastings : 234199 - 244199, Northings : 6299014 - 6309014 with a Buffer of 50 meters.Additional Info : As part of an archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 44

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Extensive search - Site list report

Your Ref Number : 110382

Client Service ID : 61361

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Leila McAdam					Permits		
45-1-2600	SV3-ST1	AGD	56	237975	6303313	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact Bathurst LALC	Recorders	Doctor;Jodie Benton,Mr.Phillip Cameron					Permits		
45-1-0133	7 Newnes State Forest	AGD	56	235600	6308100	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-2669	NPSPR55-OS1	GDA	56	240500	6299924	Open site	Valid	Artefact : 5		
	Contact	Recorders	OzArk Cultural Heritage Management					Permits		
45-1-0150	24 Newnes State Forest	AGD	56	236200	6306800	Closed site	Valid	Artefact : -	Shelter with Deposit	339,2016
	Contact	Recorders	Denise Donlon,Susan (Now McIntrye-Tamwoy) McIntyre					Permits		
45-1-2689	AngusPlaceStoneArrangement#1	GDA	56	239700	6305359	Open site	Valid	Stone Arrangement : 2		
	Contact	Recorders	Mr.Toivo Kim Tuovinen					Permits		
45-1-2691	BC1 (Lithgow)	AGD	56	243446	6300691	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	RPS Australia East Pty Ltd -Hamilton					Permits		

Report generated by AHIMS Web Service on 31/01/2012 for Deborah Farina for the following area at Datum :GDA, Zone : 56, Eastings : 234199 - 244199, Northings : 6299014 - 6309014 with a Buffer of 50 meters.Additional Info : As part of an archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 44

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Appendix 6

Glossary of Site Types

Glossary of Site Types

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 are 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 soft rocks (particularly sedimentary), generally 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. Numerous isolated finds have been recorded within the study area. 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 rock shelters. Quality deposits provided a valuable resource with evidence of wide spread trade of the substance.

Rock Shelters may contain Art and / or Occupation Deposit

Rock shelters occur where geological formations suitable for habitation or use are present, such as rock overhangs, shelters or caves. Rock shelter 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 rock shelters 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.