



WERRIS CREEK COAL PTY LIMITED

ABN: 69 107 169 103

**Archaeology and Cultural
Heritage Management Plan**

for the

Werris Creek Coal Mine

JULY 2007
Revised version 5/7/07

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1 Scope and Objectives

1.1 Definitions

A&CMP	Archaeology and Cultural Management Plan
Company	Werris Creek Coal Pty Limited
DECC	Department of Environment and Climate Change
DoP	Department of Planning
DIPNR	former Department of Infrastructure, Planning and Natural Resources
LALC	Local Aboriginal Land Council
Site Monitor	The person authorised by Nungaroo Local Aboriginal Land Council to liaise with the Company and monitor the performance of the mining operations
WCC	Werris Creek Coal Pty Limited
WCC Manager	Mine Manager, Manager or person nominated by WCC with responsibility for site environmental compliance.

1.2 Introduction

1.2.1 Documentation

This Archaeology and Cultural Management Plan (“A&CMP”) updates the previous plan dated May 2005.

This A&CMP has been prepared by Werris Creek Coal Pty Limited (“WCC”) in satisfaction of *Conditions 45 and 45A* of Development Consent, DA-172-7-2004. The A&CMP deals in particular with the ongoing protection of the axe grinding grooves site known as the “Narrawolga Site” following removal and re-location of this Site between December 2006 and March 2007.

The original DA-172-7-2004 was signed by the Minister for the former Department of Infrastructure, Planning and Natural Resources (“DIPNR”) on 18 February 2005 and subsequently modified by DA 172-7-2004-MOD 2, dated 6 March 2007.

This Notice of Modification was issued in response to an application to modify Condition 44 of DA 172-7-2004 to enable WCC to manage the removal, re-location and protection of the Narrawolga Site. Following the successful completion of this project the A&CMP dated May 2005 has been revised in accordance with new Condition 45A.

This revised A&CMP references two documents;

- “Management Plan for the removal, storage and replacement of the Narrawolga” axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, September 2006, and
- “The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, March 2007.

1.2.2 Setting

The Werris Creek Open Cut Coal Mine is located approximately 4 km south of Werris Creek and 11 km north northwest of Quirindi in central northern New South Wales. **(Figure 1)**.

The mine development lies within a 679 ha area covered by Mining Lease No. 1563 that incorporates the "Narrawolga" property and parts of the "Eurunderee" and "Cintra" properties.

The mine currently has an expected life of about 7 years with an approved production rate up to 2 Mtpa.

Mine related disturbance include:

1. A new access road from the Werris Creek – Quirindi road,
2. Surface and workshop facilities with parking hardstands,
3. Coal processing pad incorporating ROM and product stockpiles,
4. A coal haulage road from the coal processing area to the rail loading facility,
5. A rail loading bin with a stockpile area for product coal,
6. Water management structures, and
7. The open cut mining area and associated out of pit dumps,

The total disturbed area will approximate 250 ha of land within the 679 ha of ML 1563

1.3 Plan Objectives

The A&CMP objectives are:

1. To protect the "Narrawolga" site axe grinding grooves,
2. To provide a precise set of procedures to enable the identification and conservation of physical and cultural heritage sites and artefacts within the consent area,
3. To make all personnel aware of their obligations and responsibilities under the National Parks and Wildlife Act 1974 and NSW Heritage Act 1977 and related procedures.

The contents of this Plan have been supplemented by a report by archaeologist, John Appleton, included in the EIS Consultant Specialist Studies Compendium, Part 6 Aboriginal Heritage Assessment Report 623/02 and subsequent discussions with Mr Peter Allan of the Nungaroo LALC and the following reports as stated in **Section 1.2.1**.

- "Management Plan for the removal, storage and replacement of the Narrawolga" axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, September 2006, and
- "The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, March 2007.

1.4 Consultation Process

This Plan was initially based on the “Aboriginal Site Management and Agreement” included in the August 2004 Environmental Impact Statement for the mine. During the Plan’s preparation discussions were held with Mr Peter Allan representing the Nungaroo LALC regarding the Plans content. Assistance was also sought from consultants R W Corkery & Co Pty Limited.

Mr Peter Allan has been delegated to be the Werris Creek Coal Mine Site Monitor on behalf of the Nungaroo LALC.

Copies of the Plan were then submitted to the Nungaroo Local Aboriginal Land Council (“LALC”) and the former NSW Department of Environment & Conservation (“DEC”). The Plan is subject to the satisfaction of the Director General, of the former DIPNR now Department of Planning.

In accordance with the “Interim Community Requirements for Applicants” (Consultation Requirements) for engaging with the Aboriginal Community as part of the preparation of an application for a consent or permit under Part 6 of the National Parks and Wildlife Act 1974 an advertisement was placed in the local press inviting interested Aboriginal stakeholders to register their interest in regard the process to manage removal, relocation and protection of the “Narrawolga Site”. As a consequence the Porter and Taylor families registered an interest in the project. The proposal was presented to the Nungaroo LALC and to the registered stakeholders, all of whom, after lengthy consultation agreed to the proposal.

The Management Plan agreed to by all parties is detailed in Archaeological Surveys & Reports Pty Ltd, September 2006.

1.5 Applicable Area

This A&CMP applies to all land within the limits of ML 1563 at Werris Creek, the area referred to in the Development Consent as incorporating all works approved by the Development Consent and approved modifications. See **Figure 1**.

1.6 Plan Format

This A&CMP has been prepared in sections as follows:

- Section 1 -** discusses the scope and objectives of the A&CMP, the format and the consultation undertaken.
- Section 2 -** describes the results of the archaeological and cultural assessment undertaken over the area during the preparation of the EIS.
- Section 3 -** describes the management strategies for sites previously identified, procedures for identification and conservation of future sites, and areas not affected by mining activities
- Section 4 -** discusses ongoing consultation, monitoring and reporting.

2 Archaeology and Cultural Heritage of ML 1563

2.1 Introduction

An archaeological survey and investigation was performed by John Appleton of Archaeological Surveys and Reports Pty Ltd ("ASR") during the compilation of the EIS by R.W. Corkery & Co. Pty. Limited ("RWC") on behalf of Werris Creek Coal Pty Limited ("WCC"). Surveys were conducted in October 2003 and March 2004 within an area defined by Mining Lease Application 249 now Mining Lease No. 1563 incorporating the "Narrawolga" property in its entirety and incorporating parts of the "Eurunderee" and "Cintra" properties.

2.2 Survey Strategy

Prior to the investigation it was decided that as the survey area was not large it would be possible to undertake a comprehensive survey of the entire survey area. In effect, the grass ground cover was so dense in most of the cleared areas that it was only possible to perform a sample survey. As a consequence the survey strategy entailed walking tracks, and targeting rock and soil exposures, erosion features, drainage lines, and any tree that appeared to be old growth.

The survey was undertaken by ASR, assisted by Peter Allan and Shane Allan representing the Nungaroo LALC. The survey was made on foot, in dry conditions under a partly cloudy sky, but in light ideal for observing any artefactual material present and observable.

2.3 Survey Results, Interpretation and Site Conservation

A site, shown on **Figure 1**, comprising of 25 or more axe-grinding grooves, was recorded on the southern end of the western rim of the ridge. (Previously recorded as site # 29-2-0005 at 274800 6523300 - probably on 1: 250 000 scale map)

Site name: "Narrawolga"
Site type: Axe-grinding grooves
Location: A linear area approximately 90m long by 35m wide, between AMG. 0275094 6523542 ± 4 m, and 275134 6523452 ± 4 m Quipolly 9035-III-S, 1: 25,000 Topographic Map

In order to protect and conserve the Narrawolga Site in situ, WCC in consultation with the Nungaroo LALC agreed to undertake the following;

1. Construct a fenced buffer around the "Narrawolga Site" of at least 30 metres;
2. install and maintain a protective barrier or mat over the "Narrawolga Site";
3. engage a suitably qualified, experienced and independent blasting expert, whose appointment has been approved by the Director-General, to assess and report on the likely impacts of blasting on the "Narrawolga Site" and recommend measures to protect the site from any potential blasting impacts;
4. Provide a copy of the report to the Nungaroo LALC; and
5. following validation by the Nungaroo LALC, implement the recommendations of the report

2.4 Geotechnical Assessment of Potential Impact of Blasting

In accordance with protection control, Item 3 in **Section 2.3** a Geotechnical Assessment of Potential Impact of Blasting on the "Narrawolga Site" was undertaken in February 2006 by GE Holt & Associates Pty Ltd.

Geological aspects rather than blasting impacts were identified as the most likely impact on the axe grinding grooves and in fact by re-aligning the pit outline to avoid the site, "there is every chance that if the pit is oriented around the grinding grooves, as currently proposed, the face will fail, taking the sandstone containing the grinding grooves into the pit".

2.5 Removal, Re-location and Protection of the "Narrawolga Site"

In association with the A&CMP's primary objective to protect and conserve the "Narrawolga Site" an option to manage removal, relocation and protection of the axe grinding grooves was prepared in accordance with the "Interim Community Requirements for Applicants" (Consultation Requirements) for engaging with the Aboriginal Community as part of the preparation of an application for a consent or permit under Part 6 of the National Parks and Wildlife Act 1974.

As detailed in **Section 1.4** – Consultation, an advertisement was placed in the local press inviting interested Aboriginal stakeholders to register their interest in regard the process to manage removal, relocation and protection of the "Narrawolga Site". As a consequence the Porter and Taylor families registered an interest in the project. The proposal was presented to the Nungaroo LALC and to the registered stakeholders, all of whom, after lengthy consultation agreed to the proposal.

The Management Plan agreed to by all parties is detailed in;

- "Management Plan for the removal, storage and replacement of the Narrawolga" axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, September 2006.

and includes the following requirements;

1. A qualified surveyor, assisted by a qualified archaeologist (to identify the relevant blocks) would accurately provenance each of the sandstone blocks on which the grinding-grooves occur, and draw up a scaled plan of the site showing both the surface topography of the ridge on which the site occurs (to include the site and the surrounding area for a distance of 30 m from the outer limits of the site) and the alignment of each block.
2. Each block would be numbered, photographed, and archaeologically recorded in detail by the archaeologist and a representative of Nungaroo LALC.
3. Each block would be carefully removed by the appropriate machinery, numbered by the archaeologist with marking-paint on a surface other than the upper surface), and conveyed by truck to an enclosed (fenced) storage area: the procedure being monitored by the archaeologist and a representative of Nungaroo LALC. Representatives of the Taylor family wish to observe the removal of the blocks.
4. Once placed in the storage area each block would be examined for its condition, damage, etc. details of which should be recorded by the archaeologist on prepared Condition Reports, one for each block. The Taylor family expressed their wish to view the storage area.

5. Upon completion of the transfer of all of the blocks to the storage compound the archaeologist should prepare a report of the procedure, including details of the site, a copy of the surveyor's plan of the site, copies of the Condition Reports, and a photographic record of the events.

Access to the storage compound by suitably qualified people would only be permitted with the authority of the Mine Manager (Nungaroo LALC would be given periodic access to the storage area to check on the condition of the blocks and grinding grooves – Nungaroo LALC to give the Mine Manager 48 hours notice of its intended visit).

6. At such time as mining in the locality of the axe grinding-groove site has been completed, and the ridge on which the axe-grinding groove site occurred has been restored and rehabilitated and there is no further possibility that mining operations will impact upon the site, the blocks on which the axe grinding-grooves occur shall be mechanically replaced in accordance with the surveyor's site plan. The operation shall be monitored by the archaeologist and a representative of Nungaroo LALC.
7. A sign is to be erected at the roadside to the entrance to the mine to inform the public of the controlled removal and subsequent replacement of the grinding groove blocks with Aboriginal agreement.
8. Upon completion of restoration of the site the archaeologist shall prepare an amended Site Recording Form detailing what has taken place – attached to which shall be a brief photographic and descriptive report of the replacement procedure, and the condition of the restored grinding groove site – and lodge the completed form and attachments with DEC (copies also to the Mine Manager, Nungaroo LALC, and to each of the three Aboriginal groups involved in the community consultation process).
9. The Taylor family also recommended that several Wollemi Pines be planted within close proximity of the grinding groove site. The Mine Manager was awaiting an expert's report on the suitability of the plant to the particular environment. If the expert recommended that the species would not thrive in the environment the Mine Manager would consult further with the Taylor Family to select a more suitable species.

Salvage and Removal of the "Narrawolga Site"

A record of the salvage and removal of the cluster of axe grinding grooves known as the "Narrawolga Site" in accordance with the agreed Management Plan is contained in

- "The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, March 2007.

In accordance with the management Plan Items numbered 1 to 5 were completed. The remaining Items numbered 6 to 9 have been included in this revised A&CMP.

3 Site Identification and Conservation Procedures

3.1 Introduction

WCC recognises the importance of Aboriginal relics and sites to the Nungaroo community and its obligations under the National Parks and Wildlife Act 1974 (as amended), and will undertake all activities in a manner which conserves the cultural heritage values of the area. Central to the satisfaction of this commitment will be the continuation of the existing open and honest relationship between WCC management and the Nungaroo LALC, regular consultation with the LALC and an involvement with community members.

3.2 Consultation Protocol

Subject to any modifications initiated by the Nungaroo LALC, the following protocol will be followed with respect to consultation.

Note Items 1 and 2 have now been completed following completion of mine development and commencement of coal mining in August 2005.

1. The Mine Manager will advise the chairperson of the LALC of the date of planned commencement of activities at the Werris Creek Coal Mine.
2. The Mine Manager will contact the LALC chairperson monthly to advise of the mine's progress and programme for the ensuing period. All consultation will be diarized.
3. Prior to any topsoil stripping campaign, WCC Manager will notify the Chairperson of the LALC or, if so directed by the Chairperson, the nominated Sites Officer advising of the extent, location, timing and expected duration of the planned campaign and inviting a representative to monitor the topsoil stripping activities.
4. At the request of the Chairperson or Site Monitor, the WCC Manager will avail themself to attend Community meetings at the LALC office or to arrange site visits for interested LALC personnel or members.
5. In the event that any possible archaeological sites are identified in the absence of the Site Monitor, the WCC Manager will notify the Chairperson and/or Site Monitor following the initiation of the procedures identified in **Section 3.5**.

3.3 Narrawolga Site Protection

Following the successful removal and relocation of the "Narrawolga Site" it has been agreed that:

- access to the storage compound by suitably qualified people would only be permitted with the authority of the WCC Manager. (Nungaroo LALC would be given periodic access to the storage area to check on the condition of the blocks and grinding grooves. Nungaroo LALC to give the WCC Manager 48 hours notice of its intended visit).

In addition and in accordance with the Management Plan described in Section 2.5 it has also been agreed that;

6. At such time as mining in the locality of the axe grinding-groove site has been completed, and the ridge on which the axe-grinding groove site occurred has been restored and rehabilitated and there is no further possibility that mining operations will impact upon the site, the blocks on which the axe grinding-grooves occur shall be mechanically replaced in accordance with the surveyor's site plan. The operation shall be monitored by the archaeologist and a representative of Nungaroo LALC.
7. A sign is to be erected at the roadside to the entrance to the mine to inform the public of the controlled removal and subsequent replacement of the grinding groove blocks with Aboriginal agreement.
8. Upon completion of restoration of the site the archaeologist shall prepare an amended Site Recording Form detailing what has taken place – attached to which shall be a brief photographic and descriptive report of the replacement procedure, and the condition of the restored grinding groove site – and lodge the completed form and attachments with DECC (copies also to the WCC Manager, Nungaroo LALC, and to each of the three Aboriginal groups involved in the community consultation process).

The Taylor family also recommended that several Wollemi Pines be planted within close proximity of the grinding groove site. The WCC Manager was awaiting an expert's report on the suitability of the plant to the particular environment. If the expert recommended that the species would not thrive in the environment the WCC Manager would consult further with the Taylor Family to select a more suitable species.

3.4 Workforce Induction - Environmental

Prior to any person undertaking work on the Werris Creek Coal Mine site, that person will undergo a general induction programme which will incorporate environmental aspects including archaeological and cultural heritage management, procedures and obligations. The form and detail of the induction will be determined by the nature of the work to be undertaken.

A copy of the proposed general induction documentation with respect to Aboriginal heritage is attached in **Appendix 1** and includes the procedures to be adopted in the event of the discovery of a potential site or artefact.

These procedures are incorporated into both WCC and the principal mining contractor's induction documentation. Copies of these documents are available at the respective site offices for inspection.

Notwithstanding the presence of Aboriginal monitors during soil disturbing activities, all operators engaged in soil disturbing / soil stripping activities will be given additional training in the recognition of Aboriginal sites by experienced personnel in this field.

In addition to the induction and task specific training, a poster identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions / responses has been prepared by WCC's consultant archaeologist. Copies are exhibited within employee lunch rooms.

3.5 Management of Other Aboriginal Sites

The surface area within ML 1563, which has been significantly altered by clearing and agricultural activity over the last 100 years, was examined by representatives of the Nungaroo LALC during the EIS process, with the "Narrawolga Site", the only site identified. It was also considered that there was only a very low potential for the area to contain any other archaeological material and, even if present, would likely only constitute very small isolated artefacts.

Notwithstanding, in the event of the discovery of a potential site or artefact, the following procedure will be followed.

1. Work will cease in the area of the discovery.
2. If the area of discovery is in deposited material then work will also cease in the area where the material has come from.
3. The person discovering the artefact will notify their supervisor who will ensure that work has ceased and the area(s) is / are cordoned off with tape.
4. The supervisor (contractor or WCC) will notify their senior Manager who will in turn inform the WCC Manager or senior WCC person on site.
5. The WCC Manager will:
 - a. request a qualified archaeologist to attend the site and advise on its archaeological significance;
 - b. request the Site Monitor for Nungaroo LALC, if not already present, to attend and advise on its cultural significance in consultation with the qualified archaeologist; and
 - c. if the find is determined to be a site, notify DECC with the advice from the archaeologist and Nungaroo LALC for determination of further procedures.
6. The WCC Manager will implement the procedures issued by DECC.

3.1 European Heritage

3.1.1 Narrawolga Homestead

In accordance with Condition 46 of DA-172-7-2004, WCC will within 12 months of the date of this consent, ensure that a qualified heritage architect will fully and appropriately record the "Narrawolga" homestead building in a report that:

- records the material elements of the building; and
- identifies materials to be recovered during the demolition of the building for reuse.

This recording and subsequent report was completed by John Carr of Hill Lockart Architects in November 2005.

3.1.2 Other European Sites

There is no potential for other European heritage sites to be impacted within the area of consent.

The Werris Creek underground mine was worked from 1925 until 1966 and could contain implements of interest to the coal mining community. The current mine plan does not include intersection with any of these workings and negates any significant discoveries.

Survey work will be undertaken to define the limits of underground workings in accordance with safe work procedures.

4 Ongoing Consultation, Monitoring and Reporting

4.1 Consultation

Ongoing consultation will continue as outlined in **Section 3.2**.

4.2 Monitoring and Reporting

The Company will report annually in the AEMR on the measures implemented to preserve and protect Aboriginal and European cultural heritage

5 Figures

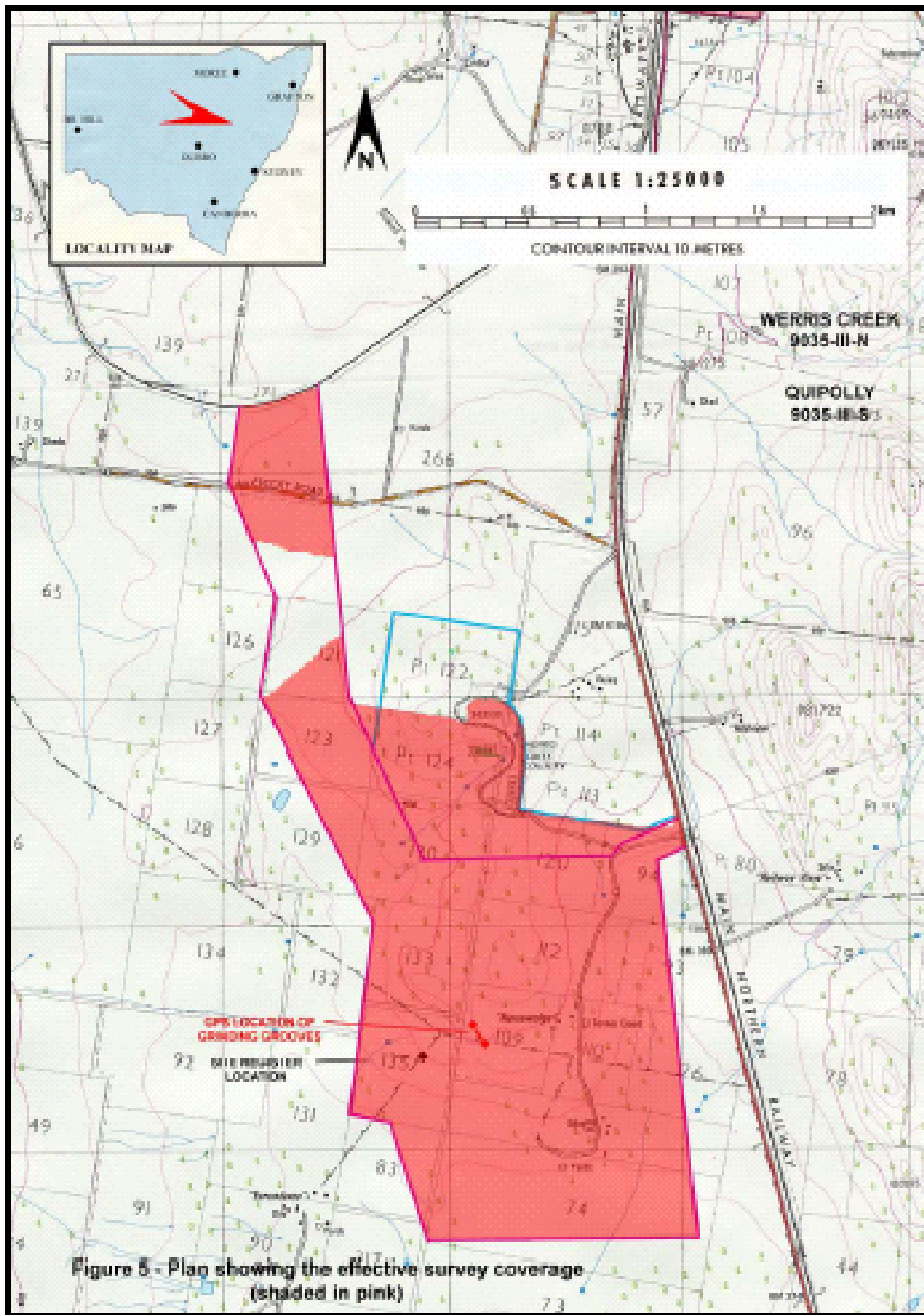


Figure 1 Archaeological Survey Coverage & Location of Site

6 Appendix 1

The following information is extracted from the Werris Creek coal mine site induction for all personnel:



Aboriginal Heritage

- *National Parks and Wildlife Act 1974 (NPW Act)*
- *Environmental Planning and Assessment Act 1979(EP&A)*
- *Heritage Act 1977*

The NSW Legislation protects:

- Any place of importance or significance connected with traditional cultural life.
- Any sacred, ritual or ceremonial site.
- Any place associated with Aboriginal people which is of interest.
- Any place where objects are traditionally stored, or have been taken or removed.

Aboriginal Heritage

These may include:

- Burial grounds
- Stone structures
- Symbols
- Arranged stones
- Objects
- Carved or scarred trees
- Paintings / Engravings



If you discover what appears to be something out of context that may be an Aboriginal artefact or site, you must stop work, cordon off the area and report it to your supervisor.

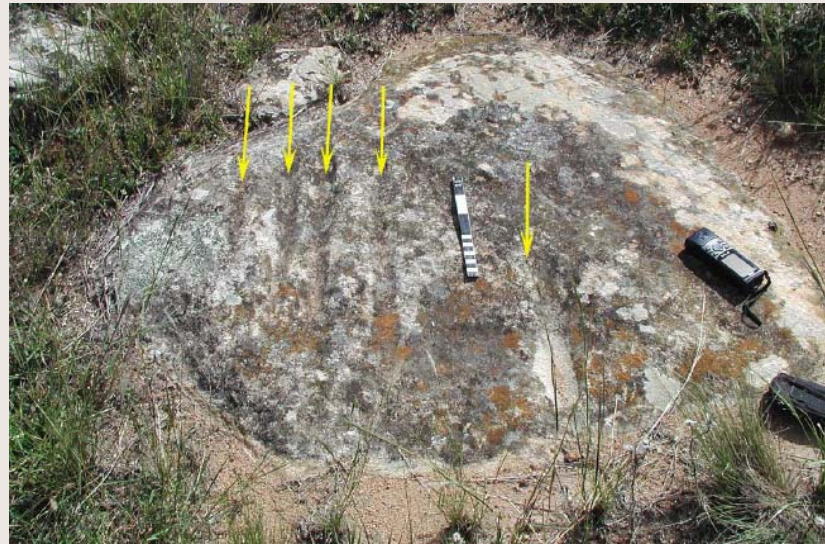
Aboriginal Heritage Werris Creek Coal Mine

Typical rock outcrop occurring on the eastern and western sides of the coal reserves



A culturally significant site containing axe grinding grooves is located on these rocks which have been relocated for preservation.

Aboriginal Heritage Werris Creek Coal Mine



**Axe Grinding Grooves removed from the mining
area to protect them.**

Aboriginal Heritage Werris Creek Coal Mine



Axe Grinding Grooves

Aboriginal Heritage Werris Creek Coal Mine

Procedure for discovering a possible artefact or site:

1. Work will cease in the area of the discovery,
2. If the area of discovery is in deposited material then work will also cease in the area where the material has come from,
3. The person discovering the artefact or site will notify their supervisor who will ensure that work has ceased and the area is cordoned off.
4. The supervisor will notify the Senior Mining Official on site who will notify the Mine Manager
5. The Mine Manager will notify WCC management who will ;
 - a) Request a qualified archaeologist to attend the site and advise on its archaeological significance,
 - b) Request the Site Monitor for Nungaroo LALC, if not already present, to attend and advise on its cultural significance in consultation with the qualified archaeologist,
 - c) If (a) & (b) determine that the find is an artefact or site notify DEC with the information for advice on further actions.

The Mine Manager will implement the action plan provided by DEC.