



**WERRIS CREEK COAL
ENVIRONMENTAL
MANAGEMENT SYSTEM**

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WHC_PLN_WC_HERITAGE MANAGEMENT PLAN

APPENDIX C – AHIMS Site Card

(S) (III) 9085 SH/1000 TAMINORREH SH56-13. 29-2-5
 WERRIS CREEK N.S.W. [Escott/Glen] to Locality Area D AXE GRINDING GROOVES
 (Quirindi area)

Military map/other reference 1:250,000 3645-45 Tamworth AMG. 2747.6524. May 1964

Pastoral or other property, park "Narrawolga," property of Mr O'Donnell.

Description of site "On the property of Mr O'Donnell a couple of miles south of Werris Creek some evidences of grinding are visible half a mile west of the home." Information from Quirindi District Historical Society, from tape recording of Mr H. Hammond, Quirindi.

Length of site Width


Nearest water supply

Kind of rock

Number of grooves

Size of grooves

Associated with rock engravings rock paintings carved trees
 stone arrangements quarry campsite
 other walls





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APPENDIX D – G E Holt & Associates Pty Ltd, Geotechnical Assessment of Stability of Highwall at Grinding Groove Site West of Pit, 2006

WERRIS CREEK COAL PTY LIMITED

GEOTECHNICAL ASSESSMENT OF STABILITY OF HIGHWALL

AT

GRINDING GROOVE SITE WEST OF PIT

November 2006

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GEOTECHNICAL ASSESSMENT OF STABILITY OF HIGHWALL AT GRINDING GROOVE SITE WEST OF PIT

1.0 INTRODUCTION

This investigation report was requested by Werris Creek Coal Pty (WCC) Limited to determine the impact on the stability of the Western wall of the open cut if the grinding grooves, known as the "*Narrawolga Site*" remain in place.

This follows from reporting on the impact of blasting at the grinding grooves site in February this year, in which we commented that leaving a convex section of highwall in such steeply dipping strata would most likely result in wall failure and a risk to safe operations.

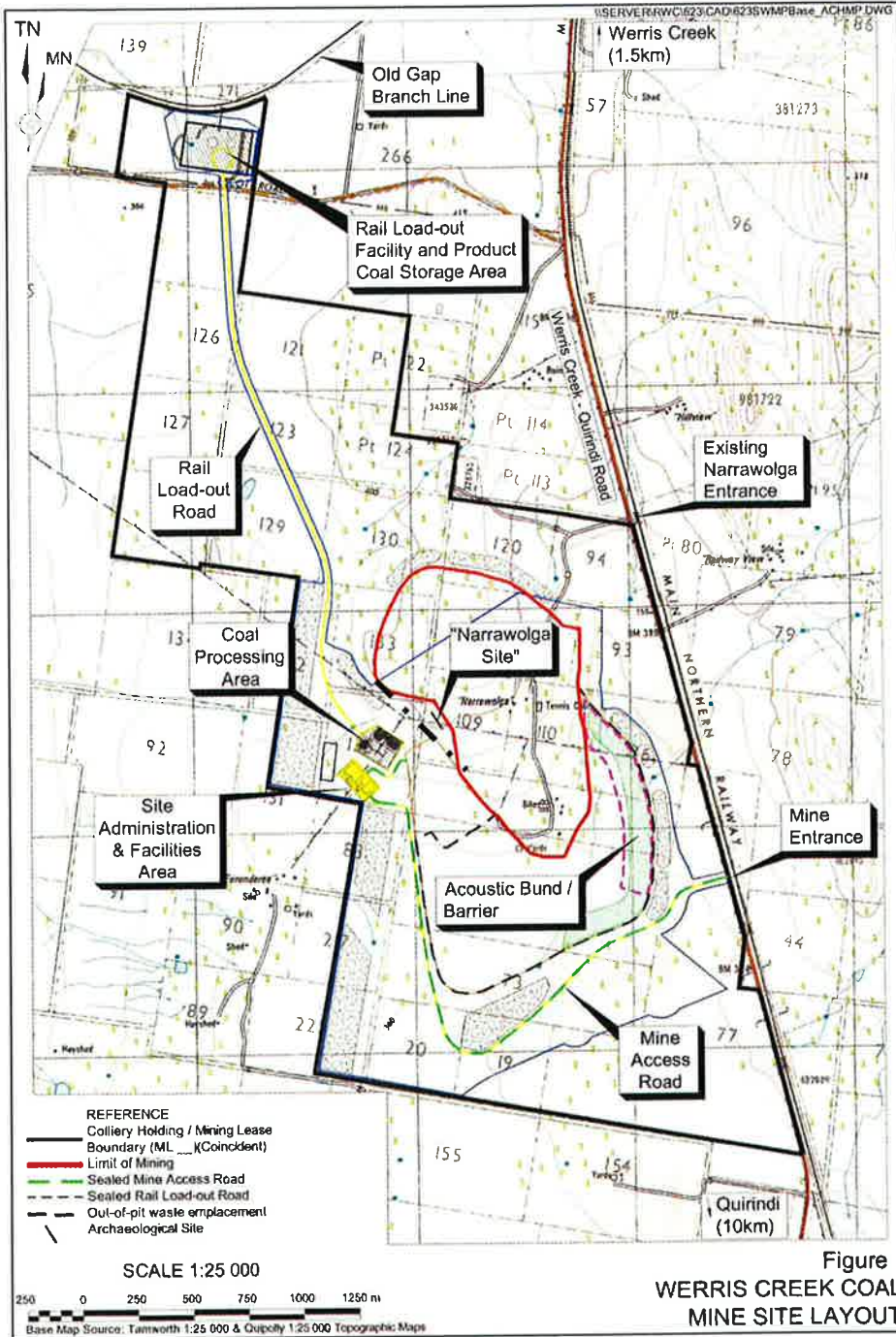
Following inspection of the site on 6 November 2006, the Department of Environment and Conservation requested "further technical clarification of the potential for the axe grinding groove site to collapse from mining activities".

This report assesses the stability of the highwall through the grinding groove site. It reports on a slope stability analysis, using a well recognised computer program to determine the likely Factor of Safety of the highwall that would result if the site was to be mined around. It links this report to the previous report by utilising the same geological cross section through the grinding grooves site that was provided in the February, 2006 report to assess highwall stability. Some information provided in the February report is repeated here to provide the context for the stability analysis.

2.0 SITE SETTING

The site, which consists of 25 or more grooves, is listed in the AHIMS (Aboriginal Heritage Information Management System). The archaeology report accompanying the Environmental Impact Statement for the proposed Werris Creek Open Cut Mine (now approved) provided full details of the site, and details of its correct location compared with that provided in AHIMS. It occurred within the original outline of the proposed open cut mine. The pit outline was altered to exclude the site by placing a convex curve in the western wall of the proposed pit. This positioned the grinding grooves closest to the pit at 30m from the crest. Its location is shown in Figure 1.

The bulge shown in the western (left) side of the pit outline in Figure 1 in red is the approved alteration to the pit outline, if the site was to remain intact. The straightened pit outline is dotted.



R.W. CORKERY & CO. PTY. LIMITED

Figure 1: Location of Narrowwolga grinding groove site adjoining Werris Creek open cut mine

The grinding grooves occur in outcrops of sandstone that are just above the surrounding grassland, as can be seen in the Figure 2 below.



Figure 2: Two grinding grooves in sandstone outcrop, closest to planned crest of open cut.

3.0 GEOLOGY

The open cut is being developed in the southern half of a closed basin, which contains the coal seams. The grinding groove site is on the western side of the basin. The coal seams are named "A" to "G" from the top to bottom of the coal seam sequence. The bottom of the pit will be at the floor of Seam "G". The sandstone bodies that contain the grinding grooves occur between the "F" and "G" coal seams. The dip of the sandstone body is between 40° and 33° as can be seen in the Cross Section through the site provided in Figure 3. The detailed location of the Cross Section is shown in Figure 4.

The basin (or synclinal) shape of the site means that geological information gained from any drillhole within the basin correlates right around the basin. The coal seams have of course been correlated right around the basin, and this provides control also for the rock strata between the coal seams.

The earlier report relied on the geological sequence encountered in a borehole

The latest inspection showed the true dip of strata beneath the grinding groove site to be 40° . This is higher than that estimated from the computed geological model. The rock sequence beneath the grinding groove site is shown in Figure 5.

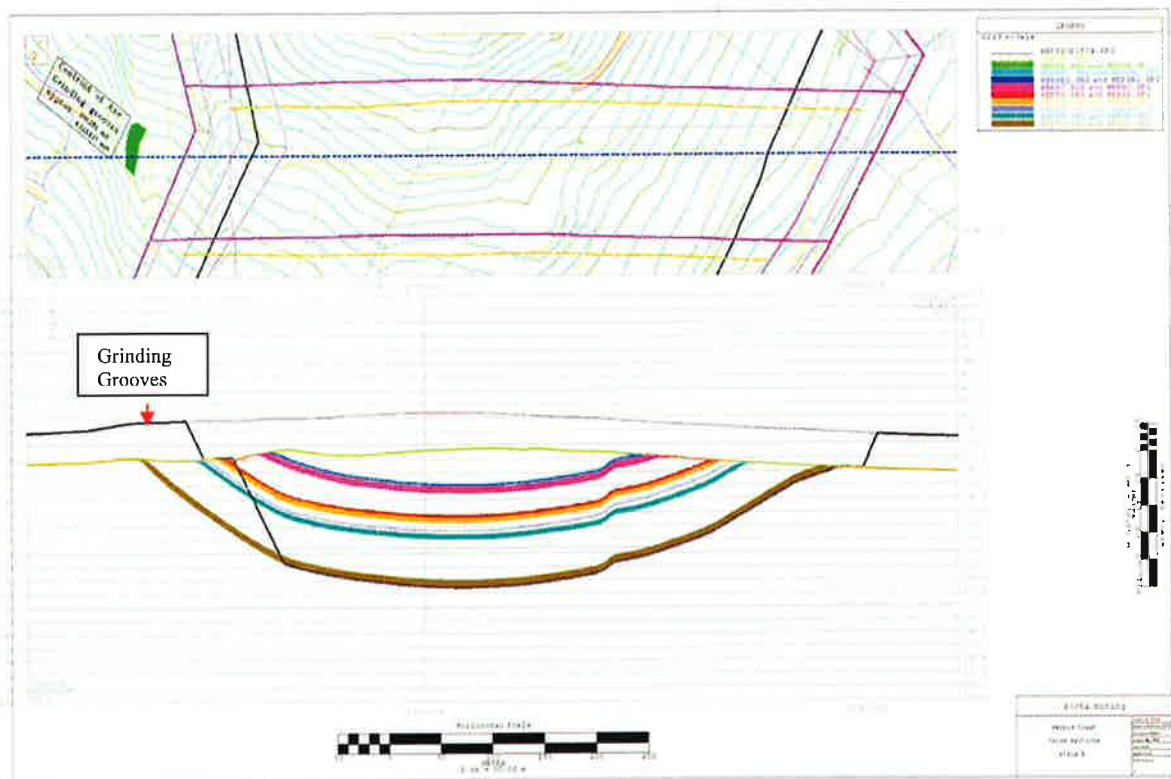


Figure 3: Cross Section through Grinding groove site. It is 30m from top of highwall at left of picture. G Seam in Brown, F Seam in Light Blue

Figure 5 shows that the rock sequence between Seams "F" and "G" is about 30m thick. A prominent sandstone/conglomerate rock unit occurs 11m below Seam "F", and is 5.8m thick. This is the only thick sandstone in the sequence of rock between the two seams. The sandstone is made up of coarse to very coarse grained particles and the conglomerate that is sandwiched in the sandstone has pebbles up to 10mm size in it. This is the rock unit that contains the grinding grooves, as the coarse nature of the unit makes an excellent grinding surface. As the rocks dip at between 30° and 40° the surface expression of the unit is wider than its thickness, and occurs over a 10m wide interval.

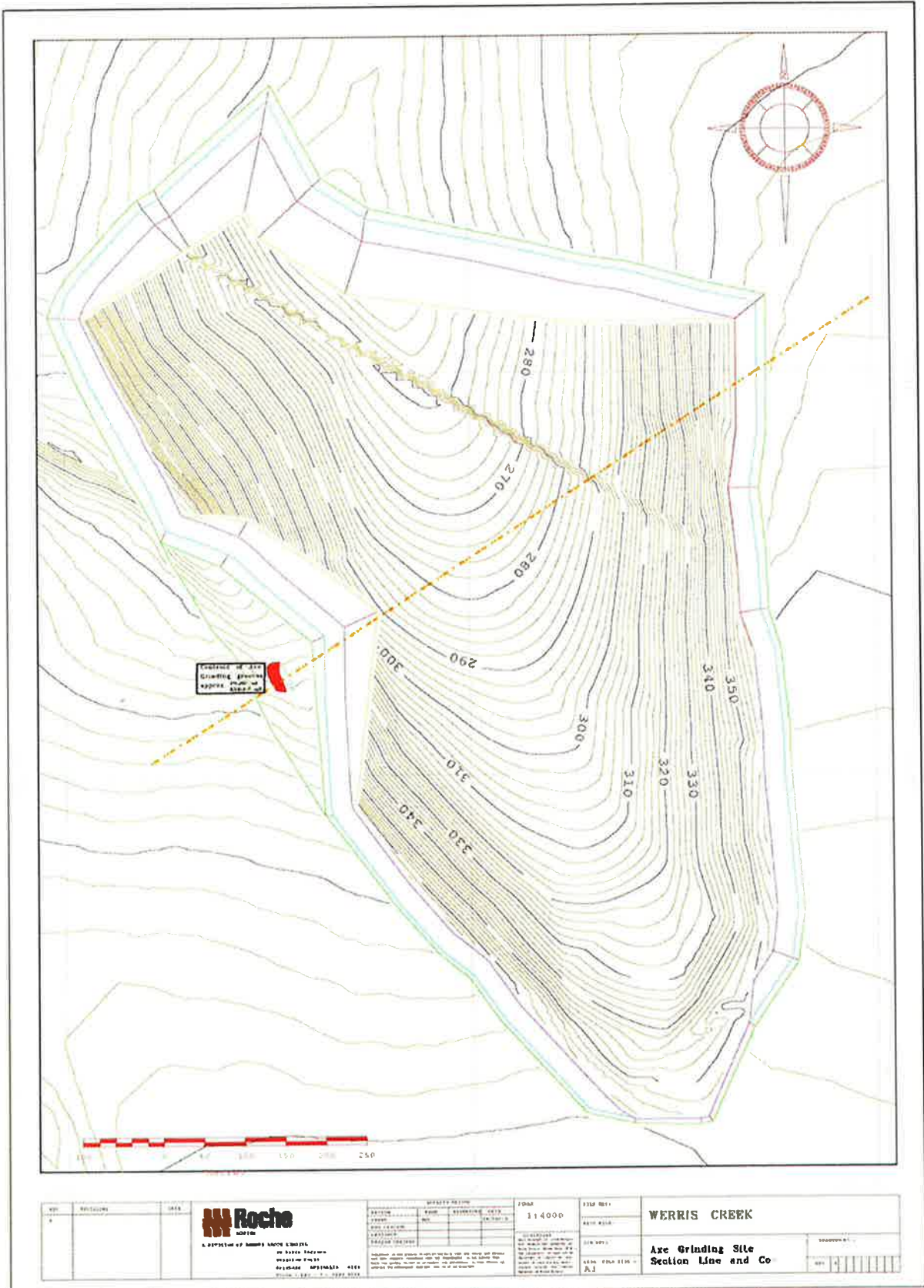


Figure 4: Detail of pit outline showing location of grinding grooves and cross section in Figure 3



Figure5: Face below Grinding Groove site. Note dip of G Seam – the lowest seam mined.

4.0 ASSESSMENT OF STABILITY OF HIGHWALL BLOCK

In February 2006 we wrote: *"The sandstone rock unit that contains the grinding grooves dips at around 30° to 33° into the pit. The current pit plan shows a convex corner around the grinding groove sites, placed to avoid the grooves. The steep dip, coupled with the convex corner will most likely cause failure along bedding if this pit outline is followed. In any event the steep dip of strata along the west side of the pit will most likely cause fretting and slip of strata off any face formed at a steeper angle, all the way back to the floor of the "G" Seam.*

From a stability viewpoint this is undesirable, and an alternative finish line for the western side of the pit in the vicinity of the grinding grooves is recommended. A preferred stable option would be to finish the side of the pit at

the floor of the "G" Seam, developing the wall on the bedding dip. This would involve mining through the grinding grooves area"

A stability analysis of the western highwall around the grinding groove site has been carried out. The highwall profile is that provided by Werris Creek Coal Pty Ltd in the cross section through the highwall shown in Figure 3. As can be seen in the cross section all strata dip into the centre of the pit from around the edges. The geological model, now verified by actual mining through the strata, shows the dips of all strata flattening towards the centre of the pit. However at the edges, dips are high for coal measures rock strata. Maximum dip is at the sub-crop of the G Seam, which is 43°. Dip flattens towards the centre of the pit to zero in the cross section through the grinding grooves site.

It is our experience that coal measures strata become unstable at dips greater than around 16°. This is the reason GHA advised the likelihood of a block of rock, retained on the western side of the open cut mine, slipping into the pit.

Confirmation of this likelihood is provided by the stability analysis described below.

4.1 Stability of Western Highwall at Grinding Grooves Site

A stability analysis was undertaken utilising the Galena Slope Stability Analysis program, developed originally by BHP Engineering, and now used world wide. GHA has used the program since 1995 to undertake stability analyses of numerous open cut coal mine operations.

A slip circle stability model was developed and run to examine likely stability and develop a Factor of Safety for the centre of the grinding grooves area. The analysis employed the Spencer-Wright multiple surface method to look at non-circular possible failure surfaces. About 240 potential surfaces were examined by the program.

The slope profile used was provided in the cross section of the planned highwall at the grinding grooves site. (All plans and profiles were developed and supplied by Roche Mining). This was shown in the February report on blasting Impacts, and repeated in this report as Figure 3.

The rock strata at Werris Creek are slightly stronger than those occurring in the Hunter Valley coal measures, but the floor strata in the pit are not particularly strong. Thus lower bound strength values were adopted for the modelling. These lower bound strength values are the same as those used recently to assess in-pit dump stability at the mine site. The material properties used are detailed in Table 1.

Material	Cohesion (kPa)	Friction Angle	Unit Weight (kN/m ³)
Weathered Rock	120	25	24
Shale Floor	100	15	24
Sandstone	175	35	24.5
Coal	125	30	13.1

Table 1: Material Strengths used in Spencer-Wright Stability Analysis

The highwall profile is that provided by the mining contractors, Roche Mining. It reflects pre-strip of the weathered rock down to a bench, then blasting of rock below this bench to the pit floor. The "normal" wall profile is the floor of the G Seam. In this case the Floor of the G Seam represents the most likely failure plane, so a "seed" failure surface was set at the floor with other potential failure surfaces ranging about this surface, all day lighting at the toe of the highwall.

4.2 Result of Stability Analysis

The analysis that returned the lowest Factor of Safety of 0.72 is shown in Figure 6. To achieve this, the potential failure surface cuts slightly into the shale floor.

Our experience of using the Galena program in the Hunter region coalmines is that this value is representative of collapse of the entire slope, most likely during development. This face development would not be recommended on safety grounds. In fact to achieve stability of a face constructed inside the confines of the G Seam the toe of the wall would have to be at about the centre of the syncline structure to have any chance of permanently holding the wall.

(A Factor of Safety of 1.0 indicates that a wall is just poised at equilibrium. Convention is that a Factor of Safety less than 1.0 indicates unstable conditions. With rock slopes where the true strength properties are rarely known it is usual to seek a minimum Factor of Safety of 1.1 for highwalls. GHA experience with the Galena program in the Hunter Valley suggests that for permanently stable highwalls, a Factor of Safety close to 1.3 is a desired minimum value).

A Factor of Safety well below 1.0, such as 0.72 determined for this particular pit profile, indicates an unstable design. A pit profile constructed as indicated in Figure 3 would not be stable.

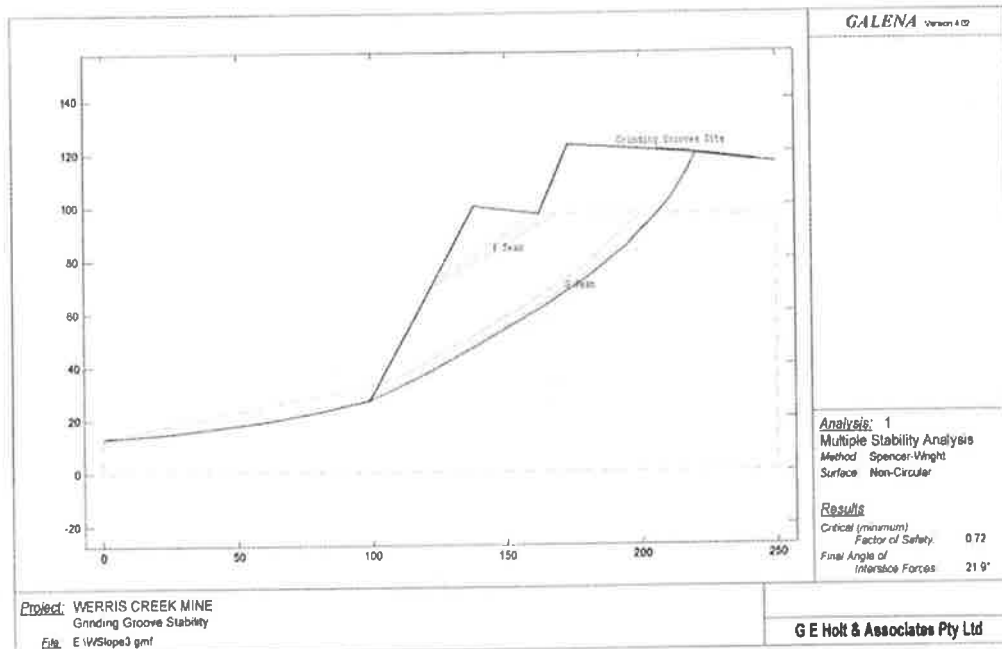


Figure 6: Result of Slope Stability Analysis – Grinding Grooves Site, Werris Creek Mine

5.0 CONCLUSIONS & RECOMMENDATIONS

Analysis of the highwall profile suggested to conserve the grinding grooves site "Narrowolga" indicates that the wall would be unstable. The final highwall profile, with the main face slope at 63° , would be unstable in such steeply dipping strata.

The size of protective buttress required to conserve the grinding grooves site would eliminate a much larger portion of the pit than that suggested by the deviation shown in Figure 1.

It is recommended that such a buttress not be used, but the pit wall be developed down the floor of the G Seam to form a safe, stable wall for the pit.

Graham Holt

Graham Holt
Principal Geotechnical Engineer

21 November 2006



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APPENDIX E – Archaeological Surveys & Reports Pty Ltd, Management Plan for the Removal, storage and replacement of the “Narrawolga” axe-grinding groove site, WCC, September 2006

MANAGEMENT PLAN

**For the removal, storage and replacement of the
"NARRAWOLGA" axe-grinding groove site,
WERRIS CREEK COAL MINE
Werris Creek, Northern NSW.**



John Appleton

ARCHAEOLOGICAL SURVEYS & REPORTS PTY LTD

SEPTEMBER 2006

Project No. 396/06

Prepared for

WERRIS CREEK COAL PTY LIMITED

ASR

**This report has been compiled in 'Plain English',
but presented in a format suitable for developing policies
for the management of the cultural resources,
and as a basis for scientific reference
in future research studies.**

Project No.396/06

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EXECUTIVE SUMMARY

This Archaeological and Cultural Management Plan has been prepared for Werris Creek Coal Pty Limited (Werris Creek Coal). It follows earlier reports of August 2004 (Archaeological Surveys & Reports Pty Ltd [ASR] 2004) prepared for R.W. Corkery & Co. Pty Limited (Corkery & Co.), and Management Plan (Werris Creek Coal 2005).

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. The mine development lies within a 679 ha area covered by Mining Lease Application 249 (MLA 249) that incorporates the "Narrawolga" property and parts of the "Eurunderee" and "Cintra" properties (Werris Creek Coal 2005).

In August 2004 ASR undertook an archaeological investigation of the site of the proposed Werris Creek Coal Mine for Corkery & Co., acting on behalf of the proponents, Werris Creek Coal. A site comprising of 25 or more axe-grinding grooves was recorded as "Narrawolga", hereafter referred to as the grinding groove site.

In March 2005 Werris Creek Coal produced an "Archaeology and Cultural Heritage Management Plan" (Werris Creek Coal 2006), in satisfaction of Condition 45 of the Development Consent for the Werris Creek Open Cut Coal Mine (Development Consent No. 172-7-2004).

In February 2006 Werris Creek Coal commissioned G.E Holt & Associates Pty Ltd (Holt) to undertake a geotechnical assessment of the potential impact of blasting on the grinding groove site (Holt 2006). Holt found that "... 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. This is not recommended from a safety viewpoint as such failure will provide little warning, failing along steeply dipping bedding planes".

After considering his options Mr Robinson, Mine Manager, concluded that given that it would not be practical or logistically possible to protect the site *in situ* and therefore not possible to remove the danger from the site, the preferable option was to remove the site from the danger. His proposal required the temporary removal of the blocks on which the axe-grinding grooves occur to allow coal mining to continue without damaging the blocks, and to storing the blocks in a secure area away from any risk of damage during mining operations, and to replacing them in exactly the same position when the mining operations have been completed and the mine rehabilitated.

In accordance with "Interim Community Consultation 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 (DEC 2004), an advertisement was placed in the local press inviting interested Aboriginal stakeholders to register their interest. As a consequence the Porter and Taylor families registered an interest in the project.

The proposal was presented to Nungaroo Local Aboriginal Land Council and to the registered stakeholders, all of whom, after lengthy consultation agreed to the proposal.

The Management Plan agreed to by all parties for the removal of the axe-grinding grooves, and subsequent replacement when mining has been concluded is as follows:

- 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 (an example is included as Appendix x), one for each block (and witnessed by the Nungaroo LALC representative). The Taylor family has 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 have also recommended that several Wollemi Pines be planted within close proximity of the grinding groove site. The Mine Manager is presently awaiting an expert's report on the suitability of the plant to the particular environment. If the expert recommends that the species would not thrive in this environment the Mine Manager will consult further with the Taylor Family to select a more suitable species.

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1. INTRODUCTION

This Archaeological and Cultural Management Plan has been prepared for Werris Creek Coal Pty Limited (Werris Creek Coal). It follows earlier reports of August 2004 (Archaeological Surveys & Reports Pty Ltd [ASR] 2004) prepared for R.W. Corkery & Co. Pty Limited (Corkery & Co.), and Management Plan (Werris Creek Coal 2005).

1.1 LOCATION

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. The mine development lies within a 679 ha area covered by Mining Lease Application 249 (MLA 249) that incorporates the "Narrawolga" property and parts of the "Eurunderee" and "Cintra" properties (Werris Creek Coal 2005).

1.2 BACKGROUND

In August 2004 ASR undertook an archaeological investigation of the site of the proposed Werris Creek Coal Mine for Corkery & Co., acting on behalf of the proponents, Werris Creek Coal. John Appleton (ASR) performed the investigation, accompanied by Messrs Peter Allan and Shane Allan, Sites Officers, Nungaroo Local Aboriginal Land Council (LALC).

During the investigation a number of axe-grinding grooves were recorded in a location, described as:

A linear area approximately 90 m long by 35 m wide, between AMG E0275094 N65235420 and E0275134 N65234520 ("Quipolly" 9035-III-S, 1: 25,000 Topographic Map).

"... comprising of 25 or more axe-grinding grooves ... The surface of the grooves are highly weathered but vary significantly in definition. It is unknown whether

the variation is a consequence of differences in resistance of the rock surfaces to weathering and deterioration, or whether the differences are because of the grooves were made at different times. If however it is because of the latter then the grooves were made over a considerable length of time".

The site was named "Narrawolga", hereafter referred to as the grinding groove site.

Partly as a consequence of the results of the field investigation the mining company chose to revise the conceptual layout of the proposed coal mine, in order to avoid impacting directly on the archaeologically sensitive area. The recording of the location of the grinding groove site necessitated the relocation of the proposed soil overburden stockpile (in the vicinity of the site), and the haul road.

When Peter Allen reported the finding of the grinding groove site to the members of the Nungaroo LALC they agreed that the site was of high cultural significance to the Aboriginal Community, and that the site should be preserved *in situ* – however, the members were also anxious not to prevent mine operations that will have the potential to invigorate the local economy as well as provide both direct and indirect employment opportunities. From that point it became an issue of how to proceed in such a way that would both preserve the site *in situ* and allow mining to proceed.

The Nungaroo LALC was directly involved in the consultation process from the commencement of the archaeological investigation, and following the recording of the site, was fully appraised of both the potential constraints that preservation of the site would place on the operation of the proposed coal mine, and the various options available to it, both in terms of the future management of the site and the future operations of the coal mine. Very conscious of the potential cultural significance of the site ASR gave the Land Council ample time for it to discuss and consider its options before discussing them further with the management of Werris Creek Coal.

As a consequence an agreement was reached between Nungaroo LALC and Werris Creek Coal which would allow the coal mining operations to proceed to within 100

metres of the site, while affording protection and preservation of the grinding groove site until such time as there was more accurate information upon which to base further discussion of management options for continuing operations within the buffer zone. A copy of the signed agreement was received by ASR on 29th July 2004, and is included as Appendix i.

The recommendations of Nungaroo LALC were:

That no mining should occur within 100 m of the axe-grinding groove site until the results of mining and blasting in the section beyond the buffer zone are known. Werris Creek Coal is to monitor the effects and impacts from mining and blasting in the eastern section to determine the effects on the sandstone substrate on which the axe-grinding grooves occur. When the results of monitoring are known Werris Creek Coal should consult further with Nungaroo LALC to determine the appropriate management strategy for the continued operation of the mine, and the appropriate conservation or preservation strategies for the care and management of the axe-grinding groove site.

In March 2005 Werris Creek Coal produced an "Archaeology and Cultural Heritage Management Plan" (Werris Creek Coal 2006), in satisfaction of Condition 45 of the Development Consent for the Werris Creek Open Cut Coal Mine (Development Consent No. 172-7-2004). The Minister for Infrastructure and Planning signed the Development Consent on 18th February 2005 (Werris Creek Coal 2005).

2. THE GEOTECHNICAL ASSESSMENT

In February 2006 Werris Creek Coal commissioned G.E Holt & Associates Pty Ltd (Holt) to undertake a geotechnical assessment of the potential impact of blasting on the grinding groove site (Holt 2006).

The scope of works was to comprise "... a site inspection, followed by geological and mine data gathering, an assessment of current blasting practice through examination of

the blasting records, assessment of likely vibration levels, and determination of likely impacts and requirements for any protection from vibration caused by blasting".

Holt noted that the "pit outline was altered to exclude the site by placing a convex curve in the western wall of the proposed pit. This positioned the grinding grooves closest to the pit at 30 m from the crest. The grooves occur on a number of flat sandstone surfaces, which are not visibly connected because of the soil cover".

Holt found as a consequence of borehole testing that:

"... at the surface the rock is partly weathered, having been exposed in a near-to-surface location for considerable time. A feature of such weathering of near surface rock is a reduction in strength, and the development of joints and cracks, which break up the solid rock mass into discrete blocks. The blocks sit tightly together, but the sandstone unit is not a solid mass of rock near the ground surface. It is also not fully connected to the fresh rock beneath as a result of development of near-surface weathered joints and cracks. This enables the top 1.8 m on average to be removed by truck and dozer" (Holt 2006, 5-6).

In its assessment of the potential impact of blasting Holt stressed that:

"... it is vital to maintain stability of the crest of the highwall, and this is just the situation at the Narrawolga site, which is 30 m away from the planned crest of the highwall ... If back break from blasting causes too much damage in the uppermost sections of pit walls instability problems can arise" (Holt 2006, 9-10).

In their conclusions Holt stated that:

"The bedding dips into the proposed pit at between 30° and 33°. 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. This is not recommended from a safety viewpoint as such failure will provide little warning, failing along steeply dipping bedding planes" (Holt 2006, 14).

3. MANAGEMENT OPTIONS

Following receipt of the Holt report Mr Ray Robinson, Mine Manager, Werris Creek Coal Mine, considered his options, which were either to reduce the size of the pit to avoid the risk of slippage to the grinding groove site, and thereby reduce the scale of operations – which would seriously jeopardise the viability and longevity of operations; or alternatively, to remove the potential risk of damaging the grinding groove site. Given that it would not be practical or logistically possible to protect the site *in situ* and therefore not possible to remove the danger from the site, the preferable option was to remove the site from the danger.

In late February 2006 Mr Robinson forwarded a copy of the Holt report to ASR drawing attention to the conclusions of the report that although the site could be protected from blasting there was a risk that it could be damaged by slope instability. Subsequently Mr Robinson and Appleton discussed the procedure that would be necessary to remove the sandstone blocks away from the potential danger posed by slope instability, and stored until they could be safely restored to their original position after the danger had passed.

The proposal required the temporary removal of the blocks on which the axe-grinding grooves occur to allow coal mining to continue without damaging the blocks, and to storing the blocks in a secure area away from any risk of damage during mining operations, and to replacing them in exactly the same position when the mining operations have been completed and the mine rehabilitated.

Appleton's advice was that removal of the sandstone blocks, regardless of the fact that they would be subsequently replaced, would in the first instance "destroy" the integrity of the archaeological context, and would therefore require removal/salvage under Section 90 Consent.

4. Section 90 Consent

An application for Section 90 Consent requires that certain formalities are followed and specified requirements are fulfilled prior to lodgement of the application. In December 2004 DEC issued "Interim Community Consultation 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 (DEC 2004).

The Consultation Requirements specify that when a proponent or their consultant wish to proceed with an application they must follow the following procedure:

- Place an advertisement in the local press setting out the proposal and inviting Aboriginal stakeholders to register an interest in the proposal (the stakeholders must be allowed at least 10 days in which to respond).
- The consultant should prepare an assessment or management plan (or design plan).
- The proponent or their consultant should present or provide the proposed methodology to the registered stakeholders.
- The stakeholders are required to review and provide feedback to the proposal within a reasonable time (at least 21 days).
- The consultant is required to amend the management plan to reflect the wishes of the registered stakeholders.
- The revised management plan is to be presented to all registered stakeholders.
- The stakeholders are required to review and provide feedback to the revised management plan (no time limit is set by the guidelines).

- Once agreement has been reached as to the final management plan, the consultant should finalise the report and lodge it with the relevant application to DEC.

5. MANAGEMENT PLAN OBJECTIVES

As a basic requirement of the consultation process a Management Plan should be prepared which sets out how the proponent and their consultant propose to manage the sequence of events that will achieve their objective. In the case of Consents to salvage the objectives are directed to the managed removal of the archaeological evidence in such a way, insofar as it is possible, to preserve the cultural integrity of the site, optimise the scientific information that can be learnt from the site, minimise any impact to the artefactual material, and best preserve and manage the archaeological material recovered from the site.

In this instance in which it is proposed that the site will be restored once the site context has been rehabilitated the Management Plan sets out the procedure for the controlled removal (salvage) of the archaeological material, its storage, and ultimately its replacement.

The primary objectives of the Management Plan for the "Narrawolga" site are:

1. To address the concerns of the Aboriginal Community.
2. To facilitate the mining of the coal deposits in the vicinity of the axe grinding-groove site.
3. To avoid any damage to the "Narrawolga" axe grinding-groove site from mining operations by removing the sandstone blocks on which they occur to a safe place.

4. To provide a precise set of procedures to remove, store, protect and ultimately replace the sandstone blocks on which the axe grinding-grooves occur when the mine is rehabilitated upon completion of mining operations.
5. To restore the site to its former condition after mining operations have been completed.

6. PRELIMINARY CONSULTATION WITH NUNGAROO LALC

After lengthy discussions between Mr Robinson and Appleton (ASR), and subsequently between Mr Robinson and Mr Graham Holley, part owner of Creek Resources Pty Ltd (60% owners of Werris Creek Coal Mine, and a person with an established working relationship with Nungaroo LALC) Mr Holley approached Nungaroo LALC with the proposal to remove the sandstone blocks to enable the mine to continue operations as originally planned.

Subsequent to the discussion between Mr Holley and representatives of Nungaroo LALC, a constituted meeting of Nungaroo LALC unanimously agreed to the proposal and to an application for Section 90 Consent to remove the site, protect, replace and restore it as proposed. A copy of the letter conveying the Land Council's recommendations is included as Appendix ii.

In February 2006 Mr Robinson instructed ASR to proceed with the application for Section 90 Consent.

7. CONSULTATION WITH OTHER INDIGENOUS STAKEHOLDERS

Having obtained Nungaroo LALC agreement in principle to the proposal to remove the sandstone blocks the next step was to expand the consultation process in accordance with Interim Community Consultation Requirements for Applicants (National Parks and Wildlife Act 1974; Part 6 Approvals (DEC 2004).

Accordingly, an advertisement inviting all interested stakeholders to register an interest in proceedings was placed in the Quirindi Advocate of 8th March 2006, a copy of which is included as Appendix iii.

Two responses to the advertisement were received. One from Simon (and Corey) Taylor – see copy of Fax dated 15th March 2006 included as Appendix iv), and the other from Stephen (and Victor) Porter – see copy of Email dated 23rd March included as Appendix v). As a consequence of the responses a letter detailing the proposal was sent to each of the families explaining why the action was necessary, and inviting them to discuss the issues further, or to meet Mr Robinson to discuss any concerns they might have (unfortunately Appleton was to undergo a total knee replacement [at one week's notice] and the hospitalisation, recovery and minimum legally permissible period before being able to drive again, meant that Appleton would not be able to travel by car again for at least three months from the date of the operation, 8th April 2006). Copies of the letters communicating the proposal to the registered stakeholders are included as Appendix vi and Appendix vii.

Subsequently, the stakeholders contacted Mr Robinson who met them on site and discussed the proposal at length.

On Monday 26th June Appleton rang Corey Taylor to see whether Corey wished to discuss the matter further, as it was still not clear that the Taylors would support an application for Section 90 Consent. Corey stated that he wanted Appleton to meet him in Quirindi to discuss the issues further. Further delays were incurred when Appleton was required to undertake urgent investigations at Port Macquarie (a week), Emmaville (a week) and an investigation of 110 km of seismic lines south of Cobar (two weeks), each of which were outstanding commitments that Appleton had deferred pending his recovery from the knee operation.

As a consequence it was Monday 31st August 2006 before Appleton could meet Corey Taylor to discuss the proposal. Corey expressed the feelings of his family that they would oppose the proposal to remove the grinding grooves. Appleton and Corey

discussed the cultural and archaeological significance of the site both in terms of what was known, how the site fitted into the cultural and archaeological landscape, and how the site could be managed both in the short and long term. Discussion also included the findings and implications of the Holt geotechnical assessment and the identification of the potential risk of pit face failure. Appleton explained that if the grinding grooves were not removed there was a danger that there could be slippage of the mine face and that the grinding grooves would be destroyed. And that by removing the grinding grooves from the danger they would remain intact and could be replaced when mining was complete. The issues were discussed at great length to ensure that Corey understood the various options, risks, opportunities, and likely outcomes. Corey said that he would discuss the issues further with his father and family and advise Appleton in writing of their decision.

On 25th August Appleton received a fax from Corey stating that after lengthy consultation with the other members of his family that they agreed to the proposal, subject to several conditions. A copy of the fax is included as Appendix viii.

Following receipt of the fax Appleton contacted Mr Robinson to discuss the conditions in Corey's fax. Mr Robinson said that he had no problems with any of the conditions, other than that he would have to seek an expert's advice on whether Wollemi pines would survive in the environment (given that Wollemi Pines thrive in a moist, gorge-like environment and that the mine site is on a dry, exposed ridge).

After several unsuccessful attempts to contact Victor Porter to confirm their earlier telephone conversation in which Victor had agreed to the removal of the axe grinding grooves, and subsequent replacement when the mine had completed its operations, Appleton spoke to Victor by telephone on 1st September. Victor confirmed that he still agreed with the proposal and said that he would state as much in a letter to support the application for Section 90 Consent. Subsequently Victor's letter was received on 5th September, a copy of which is included as Appendix ix.

There being no further considerations the Management Plan was finalised as follows.

8. THE MANAGEMENT PLAN

- 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 (an example is included as Appendix x), one for each block (and witnessed by the Nungaroo LALC representative). The Taylor family has 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 have also recommended that several Wollemi Pines be planted within close proximity of the grinding groove site. The Mine Manager is presently awaiting an expert's report on the suitability of the plant to the particular environment. If the expert recommends that the species would not thrive in this environment the Mine Manager will consult further with the Taylor Family to select a more suitable species.

REFERENCES

- Appleton, J. 2004. Aboriginal Heritage Assessment: Proposed Werris Creek Coal Mine. Unpublished report prepared for R.W. Corkery & Co. Pty Limited, for Werris Creek Coal Pty Limited.
- Holt. 2006. Geotechnical Assessment of Potential Impact of Blasting on Grinding Groove Site west of pit: Werris Creek Coal Pty Limited. G.E. Holt & Associates Pty Ltd.
- Werris Creek Coal. 2005. Archaeology and Cultural Heritage Management Plan for the Werris Creek Coal Mine. Werris Creek Coal Pty Limited.

APPENDICES

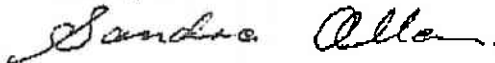
Appendix i – Nungaroo LALC correspondence dated 4th April 2005



To Whom It May Concern,

We, the Nungaroo Local Aboriginal Land Council Executive, on behalf of the Community, having read and understanding the Archaeology and Cultural Heritage Management Plan for the Werris Creek Coal Mine, do accept the Plan.

Thanking You



Sandra Allan
Chairperson
4th April 2005

Appendix ii – Nungaroo LALC correspondence (undated)



Department of Environment and Conservation

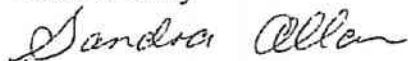
I am writing in conjunction with our telephone conversation re; Removing & Restoration of Grinding Grooves Site situated at the Coal Mine at Werris Creek, in the Nungaroo Local Aboriginal Land Council Boundary.

The Mine operators are asking for a Section 90 to Remove Site to extract Coal Deposits under the rock and they have assured the Nungaroo Local Aboriginal Land Council that they will Protect, Replace and Restore to the original place after the work is carried out.

At a Constituted Meeting of L.A.L.C's Members being and also advertised appropriately for a 3 week period, it was unanimously voted to go ahead with the project.

Nungaroo L.A.L.C. will also provide a Monitor to be present at all times that such work is being carried out.

Yours In Unity



Sandra Allan
Nungaroo LALC

Chairperson

P.O. Box 28, QUIRINDI NSW. 2343
Telephone: (02) 6746 2356, Facsimile: (02) 6746 2670, Mobile: 0427 462 356
Email: nungaroolocal@optusnet.com

Appendix iii – Advertisement in the "Quirindi Advocate" dated 8th March 2006

advocate

classifieds

Position Vacant

Experienced Body Maker, Welder, Sheetmetal Worker

Must be able to work unsupervised, be meticulous in workmanship and inventive. Wage negotiable to successful applicant.

Phone Signature Custom Floats
on 0407 001 267

Public Notices

SUBSURFACE INVESTIGATION OF A POTENTIAL

ARCHAEOLOGICAL DEPOSIT

In accordance with DEC Interim Community Consultation Requirement for Applicants for S.90 Consent, notice is hereby given of a proposal to remove sandstone floaters with axe grinding grooves at the "Narrowwolga Site", to facilitate coal mining, and to relocate them in the same location upon completion of the rehabilitation of the mining area at Werris Creek Coal Mine. Indigenous stakeholder groups wishing to be consulted about the project are invited to register their interest within 14 days (by 22nd March 2006), to

Archaeological Surveys & Reports Pty Ltd.
Tel. 02 6772 6512. Fax. 02 6772 4567.
Email: japples@northnet.com.au

INTERRUPTION TO WATER SUPPLY

Residents are advised that there will be an interruption to water supply on THURSDAY 9TH MARCH 2006 between 9.30 a.m. and 12.00 noon to enable preliminary works

Public Notices



WATER RESTRICTIONS - WALLABADAH

As a result of continued high water demand in Wallabadah, LEVEL 1 WATER RESTRICTIONS will apply to all consumers in the Wallabadah water supply area from midnight Thursday 9 February 2006, until further notice.

Under LEVEL 1 restrictions

- Sprinklers may only be used between 6pm and 8pm each day
 - Hand held hoses may be used at any time
 - Filling of pools is prohibited
- Failure to comply with water restrictions attracts a \$200 on the spot penalty.

WATER RESTRICTIONS - WERRIS CREEK

As a result of continued high water demand in Werris Creek, LEVEL 1 WATER RESTRICTIONS will apply to all consumers in the Werris Creek water supply area, including those connected to the Coesply Dam rising main, from midnight Wednesday 11 January 2006, until further notice. Under LEVEL 1 restrictions

- Sprinklers may only be used between 6pm and 8pm each day
 - Hand held hoses may be used at any time
 - Filling of pools is prohibited
- Failure to comply with water restrictions attracts a \$200 on the spot penalty.

Enquiries regarding the restrictions can be directed to Councils Water Manager on (02) 6746 1755.

QUIRINDI HOME AND COMMUNITY CARE RELOCATION

Quirindi HACC wishes to advise that they have relocated in Cunningham Court, Hill Street,

Quirindi Rotary

President Shirley Goodwin and Margaret Heath briefed members regarding details of programs for our District 9650 Annual Conference that is to be held in Tamworth this month. Our Rotary International President, Carl-Wilhelm Stenhammar will be in attendance.

When one reflects that our District is 9650, it is indeed an honour to received such a visit.

Barry McFarlane advised that six US students have applied to visit our Rotary on the short term US student exchange and our District is still seeking applications from Australian students to join the exchange to the US - contact Barry for details.

We received a letter from Derek Roberts last week. Derek, as a former Quirindi Rotarian and former Quirindi High School teacher continues to reside in Hong Kong where he and his wife, Mary, teach. His letter contained details of their recent visit to the infamous Burma Railway built by the Japanese using prisoners of war during World War II. There were 239,711 allied prisoners assigned including 13,044 Australians. It became known as the Death Railway as it claimed the lives of 98,044 prisoners including 2802 Australians. The highest losses were from the 75,000 Malays assigned. Their deaths were recorded as 42,000. Major A. E. Sagers, 2/4 Machine Gun Battalion, AIF recorded in June 1943 - "Never have I dreamt that I would see the day when human life would be held so cheaply".

Readers may recall that Rotarian, the late Mick McCarthy, was a POW who suffered at the hands of the Japanese. Our Tony Carter published Mick's story, based on interviews with Mick and his diaries that he secretly wrote whilst a prisoner.

Derek and Mary visited Rod Beattie at the Kanchanabun Museum in Thailand on December 30, 2005. They reported that there is a copy of Mick's Diary in the Rod Beattie Museum. Rod recorded in a copy of his publication "The Death Railway" - "Mick's story and that of others will not be forgotten".

NRMA offers \$100,000 for road safety

Volunteers needed to help make sick kids better

The Children's Hospital at Westmead celebrates the Bandaged Bear Day Appeal throughout the month of March, with Bandaged Bear Day falling on March 31 2006.

The Bandaged Bear Day Appeal is the Hospital's major fundraiser, with money raised going directly into the hospital to fund vital medical research, equipment and services for the thousands of sick kids and their families who visit each year from all over NSW and beyond. This year the Hospital is hoping to raise over \$750,000 as part of the Appeal.

To help The Children's Hospital at Westmead reach its target, we need hundreds of people from all over the state to hit the streets on Friday March 31 to sell Bandaged Bear merchandise.

The Hospital can arrange permits for you to sell at your local shopping centre or train station. Even if it is for a few hours on your way to work, or the entire day, your support can make a huge difference to the lives of sick kids. Volunteers will receive a free Bandaged Bear Day t-shirt!

If you're interested in volunteering on Bandaged Bear Day, please call the volunteer line on (02) 9845 3481. You can also register online at www.chw.edu.au or by emailing events@chw.edu.au

Living Parks marks a new approach

Visitors to NSW national parks and reserves will benefit from a new approach to visitor planning through the Living Parks Strategy.

National Parks and Wildlife Service (NPWS) Head Dr Tony Fleming said Living Parks is the state's first visitation strategy that will apply to all lands reserved under the National Parks and Wildlife Act. "NSW parks are living parks. They are part of local communities, and part of our Australian culture," Dr Fleming said. "So it is important that we help visitors enjoy a fulfilling experience while ensuring

Appendix iv – Fax from Simon Taylor dated 15th arch 2006

Archaeological Surveys & Reports Pty Ltd
Fax. 02 6772 4567

Dear Sir or Madam:

RE: 'Narrawolga' Site at Werris Creek Coal Mine

I am writing to you to express my interest in the proposed removal of sandstone floaters to facilitate coal mining at the Werris Creek Coal Mine.

My family, the Taylor family, has been in the Quirindi area, approx 15kms from the current mine site, for several generations and are concerned about the possible destruction of Aboriginal sites of importance due to mining activities. We identify as, and are accepted as, an Aboriginal family from the Quirindi area. Most family members are members of both Nungaroo LALC and Quirindi Aboriginal Corporation.

We are requesting a written response from you to the following concerns;

Why are they required to be removed?

How you plan to remove the sandstone floaters.

How many stones with axe grinding grooves are there?

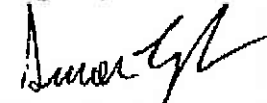
Once removed, where will they be stored and for how long?

How will you regenerate the site and maintain it once mining has ceased?

Written correspondence can be forwarded to Mr Corie Taylor 219 Hawker Street Quirindi NSW 2343.

Should you require further information, please contact me on 0427 719 979.

Regards,



Simon Taylor
15/03/06

Appendix v – Email from Stephen Porter dated 23rd March 2006

John Appleton

From: m.f.porter [mfv@bigpond.net.au]
Sent: Thursday, 23 March 2006 5:17 PM
To: japples@northnet.com.au
Subject: confirmation of e-mail address

Hi John

This message is being sent from my mums computer hence the e-mail address. You can send any information to this address. Just put for the attention of Stephen Porter.

As stated before on our phone conversation today I would like to register an interest in the axe grinding site issue on behalf of my self and my father and other clanal members and their kin. If you would like to meet with us so we can discuss our cultural association with the Lands in question in person, you are most welcome to visit us at 18 Dewhurst st Werris Creek.

Our association with the area is extensive and we may be able assist in the management process of the site and other management aspects of our cultural heritage in the area affected by the mine site should any future issues arise. I am a great supporter of Archaeologists working in partnership with Traditional owners. I think this situation presents a unique opportunity to promote this type of methodology. The Traditional owners of this area have had little involvement with Archaeology and for that matter cultural resource management.

I hope we can work together to show the traditional owners ways in which western science and Indigenous cultural knowledge systems when used in unison can mutually benefit our knowledge and appreciation of all aspects our cultural inheritance that exists in the Landscape of this area and others.

Yours Sincerely
Stephen Porter

Appendix vi – Correspondence to Mr Victor Porter dated 3rd April 2006

**Archaeological
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John Appleton
A.C.I.S., A.C.I.M., B.A. (Hons)
16 Curtis Street, Armidale, NSW 2350
Tel. 02 6772 6512 Fax. 02 6772 4567 Mob: 0428 651 789
Email japples@northnet.com.au

ABN 67 075 625 722

Mr Victor Porter
18 Dewhurst St.
Werris Creek 2341

3rd April 2006

c.c. Mr R. Robinson – Mine Manager
Werris Creek Coal Mine

Re: Narrawolga Archaeological Site

Dear Mr Porter

Thankyou for asking Stephen Porter to register your interest in the axe grinding groove site, 'Narrawolga'. I have attached a number of documents for your information to provide you with some background to the proposal for removing the axe grinding groove site to facilitate coal mining in the area, and the subsequent replacement of the axe grinding grooves in exactly the same location after rehabilitation of the mine site.

1. Background

In March 2004 I undertook an investigation for sites of Indigenous cultural significance on the site of the proposed Werris Creek Coal Mine. The survey was undertaken in accordance with DEC (formerly NPWS) requirements that such an investigation should be made with consultation with the elected Local Aboriginal Land Council (LALC). Messrs Peter Allan and Shane Allan, Nungaroo LALC Sites Officers, assisted in the field work.

2. The Site

An axe grinding groove site was observed and recorded during the survey. The site comprised 25 or more axe grinding grooves on a series of sandstone surfaces along a low ridge in the south-western section of the survey area, but outside the immediate footprint of the proposed open cut area. The grooves were highly weathered and difficult to see when first observed due to the encroaching grass cover and surface sand and grit derived from the weathering of the surfaces. At the time it was believed that the sandstone on which the grooves occurred were probably the exposed end of a sandstone strata that dipped steeply below the surface towards the east.

3. Consultation

Following the investigation, and as a consequence of recording the axe grinding grooves, further consultation was undertaken with Mr Peter Allan, Mrs Rhonda Hilt, Coordinator Nungaroo LALC, Miss Karen Glover, Aboriginal Sites Officer, NPWS, and Mr Rob Naden of the Aboriginal Cultural Heritage Unit, Coffs Harbour as to the various management options for the future protection of the site.

As a consequence of that meeting it was recommended that mining should be allowed to proceed from the east to within 100 metres of the axe grinding grooves, during which the impacts to the underlying sandstone strata (on which the grinding grooves occur where it surfaces) from shock and vibration from blasting should be monitored by the company, and that no work could take place within the 100 metre 'zone' until the company had discussed the results of the monitoring with Nungaroo LALC.

4. Testing & impact assessment

Coal mining proceeded according to the agreement and in early 2006 Werris Creek Coal Mine commissioned G.E. Holt & Associates Pty Ltd (G.E. Holt), geotechnical engineers, to undertake an assessment of potential impact of blasting on the axe grinding groove site. G.E. Holt reported that the grinding grooves site occurred 30 metres from the edge

of the proposed pit, and that the sandstone strata on which the grooves occur dips at between 30° and 33°, and that at the surface the width of the seam is approximately 10 metres wide. Significantly they reported that the sandstone at the surface had weathered into discrete blocks that had separated from the main strata (they were in effect "floaters"), and that "this enables the top 1.8 m on average to be removed by truck and dozer".

In regards to the potential impact from blasting G.E. Holt stated that because the sandstone floaters on which the grooves occur were not attached to the main strata, that the shock and vibration would not impact on the blocks on which the grooves occur, however, there was a potential for the unstable face of the pit to slip and for the blocks to be undermined. In addition, there was also some potential for the axe grinding grooves to be damaged by fly rock (rocks that are blown into the air during blasting).

5. Proposal to temporarily remove the site

As a consequence of the G.E. Holt report, Werris Creek Coal Mine contacted Nungaroo LALC and requested that they consider the temporary removal of the grinding grooves to allow coal mining to continue.

Nungaroo LALC advertised a meeting of LALC members for a three-week period, at which the issue of removing the grooves was discussed. The members unanimously agreed that the grooves could be temporarily removed to ensure that they were not damaged by mining activities.

Werris Creek Coal Mine advised me of what had occurred and requested that I proceed with obtaining Section 90 Consent. Strictly speaking in terms of the National Parks & Wildlife Act 1974 (as amended) the removal of the grooves would constitute destruction of the site, however, in this instance the proposal is to replace the grooves exactly as they had been when the mine is rehabilitated, but unfortunately there is no alternative Permit that will allow removal and replacement – although it is possible that DEC may consent under some other Provision.

6. Section 90 Consent

To enable a Section 90 (or Section 87 Consent) to be processed certain requirements are imposed under "Interim Community Consultation Requirements for Applicant" (National Parks & Wildlife Act 1974: Part 6 Approvals – December 2004): a copy of the requirements is attached. As you will see I have followed the procedure up to this point.

7. The proposal

The proposal that has been agreed to by Werris Creek Coal Mine and Nungaroo LALC is as follows:

- 1) Werris Creek Coal will commission a surveyor to provenance (map the exact location) of each block of stone on which axe grinding grooves occur, their alignment, their slope, their elevation, and their relationship to each other.
- 2) The surveyor will map the results to provide an exact plan of the axe grinding groove site.
- 3) All workers involved with the removal and handling of the blocks on which the axe grinding grooves occur will be briefed beforehand by the archaeological consultant and Nungaroo LALC, as to the cultural significance of the site, the procedure they must follow, and the potential implications and penalties that might arise from failing to observe those procedures
- 4) Each block will be marked with white paint, on an edge not visible from above, with a reference number according to the surveyor's plan.
- 5) Each block will be systematically and carefully removed from its location by dozer and truck, monitored by a consultant archaeologist and Nungaroo LALC.

- 6) Each block will be placed on the ground in a fenced enclosure out of range of fly rock. The enclosure will have a locked gate to protect the grooves from damage. Access to the enclosure will only be permitted on the authority of Nungaroo LALC and the Mine Manager, Werris Creek Coal Mine.
- 7) Upon completion of mining the mine will be rehabilitated in accordance with its mining licence approval (which requires the mine site to be restored to a landscaped surface). Although it is not intended for mining activities to directly impact on the area in which the grooves occur there is potential for there to be minor alteration from slippage or peripheral activity, in which case the surface will be restored to resemble its present profile and character.
- 8) The blocks on which the axe grinding grooves occur will be replaced exactly according to the surveyor' plan of their present configuration, under direct supervision of an archaeological consultant and Nungaroo LALC.

8. Your participation

I would like you to read the attached documents and consider whether you wish to discuss the proposal with me, or whether you wish to have a meeting with the Mine Manager to discuss the matter. Unfortunately I will be in Brisbane from Friday 7th April for at least a week having a total knee replacement, and so it is unlikely that I will be able to travel to Quirindi for at least a month – by law, I will not be able to drive a vehicle for six weeks from the operation. However, arrangements can be made for you to discuss any concerns with the Mine Manager.

Yours faithfully

Appendix vii – Correspondence to Mr Corie Taylor dated 3rd April 2006

**Archaeological
Surveys
&
Reports
Pty Ltd**

John Appleton

A.C.I.S., A.C.I.M., B.A. (Hons)

16 Curtis Street, Armidale, NSW 2350

Tel. 02 6772 6512 Fax. 02 6772 4567 Mob: 0428 651 789

Email japples@northnet.com.au

ABN 67 075 625 722

Mr Corie Taylor
219 Hawker St.
Quirindi 2343

3rd April 2006

c.c. Mr R. Robinson – Mine Manager
Werris Creek Coal Mine

Re: Narrawolga Archaeological Site

Dear Mr Taylor

Thankyou for registering your interest in the axe grinding groove site, 'Narrawolga'. I have attached a number of documents for your information to provide you with some background to the proposal for removing the axe grinding groove site to facilitate coal mining in the area, and the subsequent replacement of the axe grinding grooves in exactly the same location after rehabilitation of the mine site.

1. Background

In March 2004 I undertook an investigation for sites of Indigenous cultural significance on the site of the proposed Werris Creek Coal Mine. The survey was undertaken in accordance with DEC (formerly NPWS) requirements that such an investigation should be made with consultation with the elected Local Aboriginal Land Council (LALC). Messrs Peter Allan and Shane Allan, Nungaroo LALC Sites Officers, assisted in the field work.

2. The Site

An axe grinding groove site was observed and recorded during the survey. The site comprised 25 or more axe grinding grooves on a series of sandstone surfaces along a low ridge in the south-western section of the survey area, but outside the immediate footprint of the proposed open cut area. The grooves were highly weathered and difficult to see when first observed due to the encroaching grass cover and surface sand and grit derived from the weathering of the surfaces. At the time it was believed that the sandstone on which the grooves occurred were probably the exposed end of a sandstone strata that dipped steeply below the surface towards the east.

3. Consultation

Following the investigation, and as a consequence of recording the axe grinding grooves, further consultation was undertaken with Mr Peter Allan, Mrs Rhonda Hilt, Coordinator Nungaroo LALC, Miss Karen Glover, Aboriginal Sites Officer, NPWS, and Mr Rob Naden of the Aboriginal Cultural Heritage Unit, Coffs Harbour as to the various management options for the future protection of the site.

As a consequence of that meeting it was recommended that mining should be allowed to proceed from the east to within 100 metres of the axe grinding grooves, during which the impacts to the underlying sandstone strata (on which the grinding grooves occur where it surfaces) from shock and vibration from blasting should be monitored by the company, and that no work could take place within the 100 metre 'zone' until the company had discussed the results of the monitoring with Nungaroo LALC.

4. Testing & impact assessment

Coal mining proceeded according to the agreement and in early 2006 Werris Creek Coal Mine commissioned G.E. Holt & Associates Pty Ltd (G.E. Holt), geotechnical engineers, to undertake an assessment of potential impact of blasting on the axe grinding groove site. G.E. Holt reported that the grinding grooves site occurred 30 metres from the edge

of the proposed pit, and that the sandstone strata on which the grooves occur dips at between 30° and 33°, and that at the surface the width of the seam is approximately 10 metres wide. Significantly they reported that the sandstone at the surface had weathered into discrete blocks that had separated from the main strata (they were in effect "floaters"), and that "this enables the top 1.8 m on average to be removed by truck and dozer".

In regards to the potential impact from blasting G.E. Holt stated that because the sandstone floaters on which the grooves occur were not attached to the main strata, that the shock and vibration would not impact on the blocks on which the grooves occur, however, there was a potential for the unstable face of the pit to slip and for the blocks to be undermined. In addition, there was also some potential for the axe grinding grooves to be damaged by fly rock (rocks that are blown into the air during blasting).

5. Proposal to temporarily remove the site

As a consequence of the G.E. Holt report, Werris Creek Coal Mine contacted Nungaroo LALC and requested that they consider the temporary removal of the grinding grooves to allow coal mining to continue.

Nungaroo LALC advertised a meeting of LALC members for a three-week period, at which the issue of removing the grooves was discussed. The members unanimously agreed that the grooves could be temporarily removed to ensure that they were not damaged by mining activities.

Werris Creek Coal Mine advised me of what had occurred and requested that I proceed with obtaining Section 90 Consent. Strictly speaking in terms of the National Parks & Wildlife Act 1974 (as amended) the removal of the grooves would constitute destruction of the site, however, in this instance the proposal is to replace the grooves exactly as they had been when the mine is rehabilitated, but unfortunately there is no alternative Permit that will allow removal and replacement – although it is possible that DEC may consent under some other Provision.

6. Section 90 Consent

To enable a Section 90 (or Section 87 Consent) to be processed certain requirements are imposed under "Interim Community Consultation Requirements for Applicant" (National Parks & Wildlife Act 1974: Part 6 Approvals – December 2004): a copy of the requirements is attached. As you will see I have followed the procedure up to this point.

7. The proposal

The proposal that has been agreed to by Werris Creek Coal Mine and Nungaroo LALC is as follows:

- 1) Werris Creek Coal will commission a surveyor to provenance (map the exact location) of each block of stone on which axe grinding grooves occur, their alignment, their slope, their elevation, and their relationship to each other.
- 2) The surveyor will map the results to provide an exact plan of the axe grinding groove site.
- 3) All workers involved with the removal and handling of the blocks on which the axe grinding grooves occur will be briefed beforehand by the archaeological consultant and Nungaroo LALC, as to the cultural significance of the site, the procedure they must follow, and the potential implications and penalties that might arise from failing to observe those procedures
- 4) Each block will be marked with white paint, on an edge not visible from above, with a reference number according to the surveyor's plan.
- 5) Each block will be systematically and carefully removed from its location by dozer and truck, monitored by a consultant archaeologist and Nungaroo LALC.

- 6) Each block will be placed on the ground in a fenced enclosure out of range of fly rock. The enclosure will have a locked gate to protect the grooves from damage. Access to the enclosure will only be permitted on the authority of Nungaroo LALC and the Mine Manager, Werris Creek Coal Mine.
- 7) Upon completion of mining the mine will be rehabilitated in accordance with its mining licence approval (which requires the mine site to be restored to a landscaped surface). Although it is not intended for mining activities to directly impact on the area in which the grooves occur there is potential for there to be minor alteration from slippage or peripheral activity, in which case the surface will be restored to resemble its present profile and character.
- 8) The blocks on which the axe grinding grooves occur will be replaced exactly according to the surveyor' plan of their present configuration, under direct supervision of an archaeological consultant and Nungaroo LALC.

8. Your participation

I would like you to read the attached documents and consider whether you wish to discuss the proposal with me, or whether you wish to have a meeting with the Mine Manager to discuss the matter. Unfortunately I will be in Brisbane from Friday 7th April for at least a week having a total knee replacement, and so it is unlikely that I will be able to travel to Quirindi for at least a month – by law, I will not be able to drive a vehicle for six weeks from the operation. However, arrangements can be made for you to discuss any concerns with the Mine Manager.

Yours faithfully

Appendix viii – Fax from Corie Taylor dated 25th August 2006

23-08-06

Dear Ray,

Firstly let me apologise for the late nature of our response, but I'm sure you could appreciate that my family and I have gone to great lengths to ensure that we have made the right determination.

We, as a family, have decided to give our consent for the removal of the stone containing the axe grinding grooves. However, we do so providing some conditions are met.

Firstly, we ask that our family be present on the mine site on the day that the stones are removed to witness the removal.

Secondly, we ask that we be shown the area in which the stones are to be stored, and the manner in which they are to be kept. Further, we ask that access to the storage area be limited to persons of senior authority within the mine and suitably qualified people.

Thirdly, we ask that the stones be checked regularly for any signs of weathering or damage, and that should this be the case then the stones are to be removed to a safe location to facilitate their better storage. We ask this so that the stones are not irreparably damaged before they are replaced.

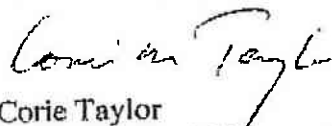
Fourthly, we ask that a plaque/sign/information board be erected on the road-side to inform any passers-by of the removal and subsequent replacement of the stones. We feel that this is an important part of acknowledging the traditional importance of the site, but also advantageous for the mines public image, as it demonstrates the mine's ability to negotiate successfully with indigenous stakeholders. We ask that the expense for this plaque/sign/information board be met by the mine.

Finally, we ask, that upon rehabilitation of the site, the mine to plant several, (5), Wollemi Pines within close proximity to the original site of the axe grinding grooves. We ask this as philosophical gesture of good faith from the mine as we feel the Wollemi Pine represents the enduring culture of the local Kamilaroi people, as the Wollemi Pine itself has endured in its current form for millions of years.

Again, let me state that, *after extensive family consultation we agree to the safe removal and storage of the stone containing the axe grinding grooves, so that they can subsequently be replaced once mining operations have ceased.*

On behalf of my family group may I take this opportunity to thank you for your consultation with the local Kamilaroi people, and for the interest you have shown in ensuring an amicable resolution for all concerned stakeholders.

Yours sincerely

A handwritten signature in cursive script that reads "Corie Taylor". The signature is written in black ink and is positioned above the printed name.

Corie Taylor

- for Simon and Shannon Taylor.

Appendix ix – Correspondence from Victor Porter
(undated, but received 5th Sept. 2006)

John Appleton

I, Victor Edward Parker being a
Elder of the Kamehameha peoples of the
Waihi Creek area give on behalf of myself
and fellow Elders the authority to remove
the rock on which the marks of spears
and skinning tools were sharpened to be
placed back in the same position when
mining has finished

Yours sincerely

Victor E. Parker

Appendix x – Condition Report

Date

CONDITION REPORT

No. .../.....

"NARRAWOLGA" AXE GRINDING-GROOVE SITE

BLOCK NO...... **Surveyor's Identification**

Dimensions: L.....cm W.....cm Other

No. of grooves Grooves on adjacent blocks: (Y/N) Block Nos.

Remarks.....

.....

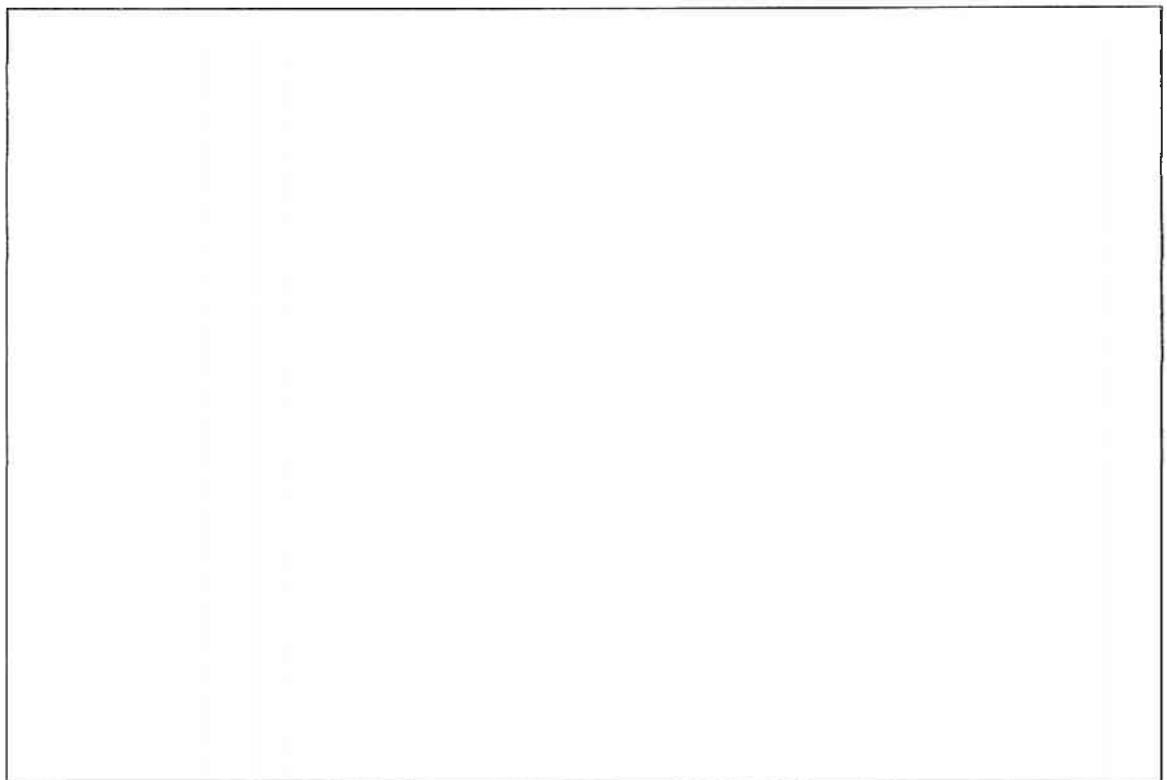
Site.....

.....

Storage

.....

Photograph in situ



Archaeologist

Indigenous rep.

Organisation

Signature

Signature



**WERRIS CREEK COAL
ENVIRONMENTAL
MANAGEMENT SYSTEM**

Document Owner:	Environmental Officer
Revision Period:	3 YEARS
Issue:	FINAL
Last Revision Date:	02/07/2014
Date Printed:	02/07/2014

WHC_PLN_WC_HERITAGE MANAGEMENT PLAN

APPENDIX F – Aboriginal Heritage Impact Permit # 2588



Department of
Environment and Conservation (NSW)

Fax to: RAY ROBINSON **of:** WERRIS CREEK COAL PTY LTD
Fax no: 67441151
From: Phil Purcell **of:** DEC
Phone no: 68835341
Date: 8/12/06 - 68835330

cc:

Number of pages (including this page):

Dear Ray

I refer to your application for a section 90 consent with salvage under *the National Parks and Wildlife Act 1974 (NPW Act)* and accompanying information provided.

The DEC has considered the application and accompanying information and has decided to issue consent subject to conditions. The Consent is attached. You should read the consent carefully and ensure Werris Creek Coal Pty Ltd comply with its conditions. Of note please ensure that the Special and Specific Conditions 1-5 are properly adhered to.

You should note that it is an offence under the NPW Act to knowingly destroy, deface or damage, or knowingly cause or permit the destruction or defacement of (or damage to) an Aboriginal object or Aboriginal Place without consent. The maximum penalty that a court may impose on a corporation is \$22,000, or \$5,500 and, or 6 months imprisonment for an individual.

If you have any questions or wish to discuss this matter further please contact me on the above details.

Yours sincerely

Phillip Purcell

Archaeologist

Department of Environment and Conservation

NW EPRD

Dubbo

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our environment it's a *living thing*

CONSENT # 2588



(HO use only)

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90**

CONSENT WITH SALVAGE

**CONSENT TO CARRY OUT THE REMOVAL OF OBJECTS FROM THE "NARRAWOLGA"
ABORIGINAL SITE**

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute Aboriginal objects within the meaning of Sections 5(1) and 90 of the National Parks and Wildlife Act 1974 ("Aboriginal objects"), and WHEREAS application has been made by:

Werris Creek Coal Pty Ltd
ABN: 69107169102

Postal Address:

PO Box 5
Curlewis
NSW
2381

FOR CONSENT to destroy those objects identified in Schedule A and situated in the lands described in Schedule B. This Consent also authorises the collection of Aboriginal objects by representatives of the Aboriginal community and employees and contractors of Werris Creek Coal Pty Ltd involved in the salvage of objects at the "NARRAWOLGA" Aboriginal site.

NOW I, Lisa Corbyn, Director-General of the Department of Environment and Conservation under delegated authority and in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions as well as the Special and Specific Terms and Conditions detailed in the attached pages.

DATED at DUBBO this 8th day of, December 2006

for Director-General of the Department of Environment and Conservation

SCHEDULE A:

All Aboriginal objects located within the boundaries of the lands described in Schedule B and including the known sites listed below.

SITE NAME	SITE TYPE	EASTINGS	NORTHINGS
"Narrawolga" Which consists of sandstone boulders with Aboriginal grinding grooves	Aboriginal axe grinding grooves	275090	8523640

SCHEDULE B:

The land subject of Approval under Development Application DA-172-7-2004 issued by the Minister for Planning for Werris Creek Coal Ltd.

SPECIAL and SPECIFIC CONDITIONS

1. This consent gives authority to remove sandstone boulders with Aboriginal axe grinding grooves described in Schedule A in the area designated in Schedule B.

Implementation of the Werris Creek Coal Risk Assessment Plan

2. For the purpose of removing the boulders with axe grinding grooves, the Consent holder will implement the Risk Assessment Plan developed by Werris Creek Coal (WCK-ENV-RA10).
3. This consent gives authority to Werris Creek Coal Pty Ltd and their contracted, employed or invited archaeologist and Aboriginal representatives to undertake subsurface investigation in the areas designated, with the intent to find Aboriginal objects and to remove those objects for the purpose of salvage.

Temporary storage of the axe grinding grooves

4. The consent holder will ensure that the removed boulders with axe grinding grooves are placed in a secure location within appropriate proximity to their original location.

Return of the axe grinding grooves to their original location.

5. This consent instructs and authorises the consent holder to return the boulders with axe grinding grooves to their original location as part of the rehabilitation program of the mine site.

OPERATION OF CONSENT**Commencement of consent**

- 5 This consent commences on the date it is signed unless otherwise provided by this consent.

Lapsing of consent

- 6 This consent lapses if the activities relating to this consent have not substantially commenced within 2 years of the date of this consent.

Duration of consent

7. The consent remains in force for 5 years from the date of commencement, unless it is otherwise revoked in writing.

INVOLVEMENT OF ABORIGINAL GROUPS**Involvement of Aboriginal representatives**

8. The consent holder must invite a representative(s) of the Aboriginal community to participate in the salvage and subsurface operation.
9. The consent holder must invite representatives of the Aboriginal community to participate in the return of the salvaged axe grinding grooves to their original location.

Reports and notifications

10. During the term of this Consent, Werris Creek Coal Pty Ltd will furnish the Department of Environment and Conservation with a written report on the activities relating to the Consent, if required by the Director General or their delegates and within such timeframe as specified.

Copy of Consent and Risk Assessment to be available for inspection

11. A copy of this Consent and the Werris Creek Risk Assessment Plan (DA-172-7-2004) will be held on site during the works and be available for inspection by Werris Creek Coal Pty Ltd, its employees, contractors and Aboriginal monitors during the period of the consent.

Human skeletal remains

12. The consent does not permit any act or thing in relation to human skeletal remains, which may be located in the area of consent. Should any human skeletal remains be uncovered or disturbed all work at the particular location will immediately cease. The consent holder must then immediately notify by fax or telephone the local police and the DEC archaeologist at Dubbo of the remains and their approximate location.

GENERAL TERMS AND CONDITIONS

13. A Consent covers only that area stated in the Instrument of Consent and in any Schedules thereto.
14. The Person to whom the Consent granted shall be responsible for the manner in which the work, covered by the Permit or Consent is performed.
15. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

Written indemnity

16. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.

Records, reports, information and publications relating to this permit

17. The Department of Environment and Conservation shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
18. The Department of Environment and Conservation and the Australian Museum, may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities. Upon request by the Department of Environment and Conservation, the holder of the Permit or Consent shall supply summary of his/her findings with photographs, diagrams, etc, as required, to local Aboriginal communities or other interest local groups
19. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the Department of Environment and Conservation, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Department.
20. The holder of the Consent will keep field records and a copy of all such records shall be lodged with the Department of Environment and Conservation on request.
21. The holder of the Consent will notify the local office of the Department of Environment and Conservation at the commencement and completion of fieldwork, and shall supply to officers details of field work programs and results if requested.