



**WERRIS CREEK COAL
ENVIRONMENTAL
MANAGEMENT SYSTEM**

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WHC_PLN_WC_HERITAGE MANAGEMENT PLAN

HERITAGE MANAGEMENT PLAN



Narrawolga axe-grinding grooves prior to removal

Edition	Rev.	Comments	Author	Authorised By	Date
1	RevE	First Draft for WCC	Advitech	Andrew Wright	June 2012
2	RevF	Draft for OEH and Stakeholder approval	Advitech	Andrew Wright	June 2012
3	RevG	Final for DoP Approval	WCC	Andrew Wright	October 2012
4	RevH	Relocate Narrawolga Axe Grinding Groove rocks	Advitech	Andrew Wright	June 2014
5	RevI	Final for OEH and DoP Approval regarding relocation of Axe Grinding Groove rocks	Advitech	Andrew Wright	July 2014



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EXECUTIVE SUMMARY

This document has been prepared by Werris Creek Coal (WCC) for the NSW Department of Planning and Infrastructure (NSW DoP) with assistance from an external consultant (Advitech Pty Ltd).

Werris Creek Coal was granted Project Approval (PA 10_0059) on 25th October 2011 for the Life of Mine (LOM) Project by the NSW Minister for Planning. The LOM Project involves a northerly continuation of the current mine footprint, increasing the projected mine life by approximately 15 to 20 years.

To satisfy Condition 19, Schedule 3 of PA 10_0059, WCC are required to prepare and implement a Heritage Management Plan (HMP) for the project. The plan has also been prepared to meet the management plan requirements specified in Condition 2, Schedule 5 of the Project Approval.

The HMP outlines the likely cultural heritage impacts of the LOM Project and the measures implemented to manage Aboriginal and historic heritage.

The recent amendment of the HMP outlines the revised Statement of Commitments (SoC) for managing the Narrawolga Axe Grinding Groove Site (AHIMS#29-2-0005). The amendment of the SoC was necessary following a request submitted by the Nungaroo Land Council and the Liverpool Plains Shire Council Aboriginal Advisory Committee to relocate the site features to the Willow Tree Visitor Information Centre for public display.

For ready reference to the required Section of the HMP, use the following quick key:

Responsibilities	Section 2
Approval Conditions	Section 3
Previous Monitoring Results	Section 4
Predicted Environmental Impacts	Section 5
Risk Assessment	Section 6
Heritage Criteria	Section 7
Management Strategies, Measures & Controls	Section 8
Monitoring	Section 9
Reporting	Section 11



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ACRONYMS USED THROUGHOUT THIS DOCUMENT

AEMR	-	Annual Environmental Management Report
AHIP	-	Aboriginal Heritage Impact Permit
CCC	-	Community Consultative Committee
DECCW	-	Department of Environment, Climate Change and Water (now OEH)
NSW DoP	-	NSW Department of Planning and Infrastructure
OEH	-	Office of Environment and Heritage
EMS	-	Environment Management Strategy
EPA	-	Environment Protection Authority
EPL	-	Environment Protection Licence
LALC	-	Local Aboriginal Land Council
LOM	-	Life of Mine
ML	-	Mining Lease
NSW	-	New South Wales
PA	-	Project Approval
the mine	-	Werris Creek Coal No.2 Coal Mine
WCC	-	Werris Creek Coal Pty Ltd

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1 INTRODUCTION

The existing Werris Creek Coal No.2 Coal Mine (the mine) is owned by Werris Creek Coal Pty Ltd (WCC) and is located within the North West Slopes and Plains of New South Wales (NSW) approximately 45km south west from Tamworth (**Figure 1**). The mine is currently located approximately 4km south of Werris Creek and 11km north-northwest of Quirindi (**Figure 2**).

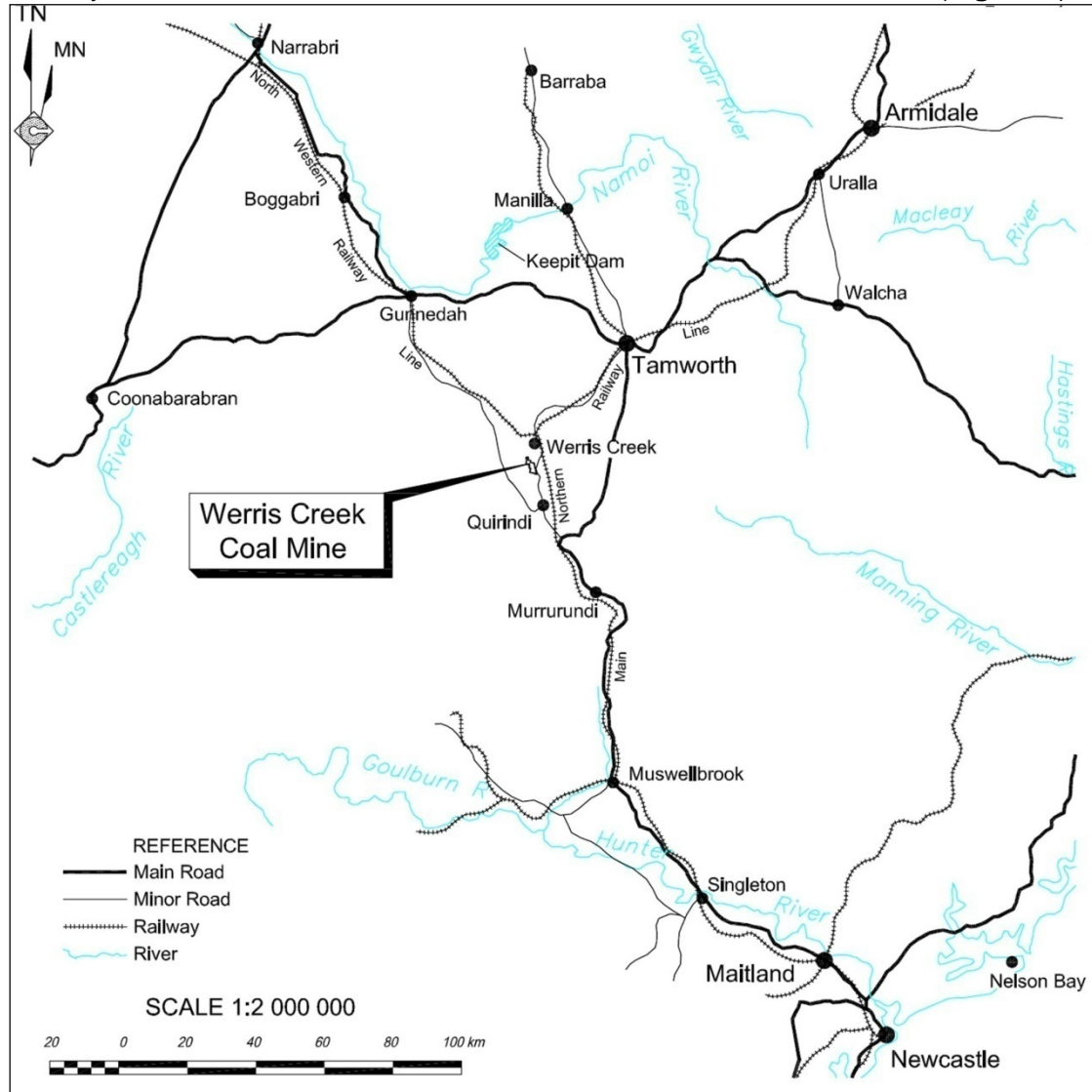


Figure 1: Regional Location (modified from Figure 1.1 R.W. Corkery & Co, 2010)

1.1 History of Operations

Underground mining at the former Werris Creek Colliery commenced commercially in 1925, closing in 1963 due to the cancellation of railway contracts for coal. The operation, owned by Preston Coal Company was small, employing a total of 13 people in 1928 (Pratt, 1996). The former Colliery was predominantly a bord and pillar underground operation in which very few of the pillars have been removed (Pratt, 1996). The operation mined the lower 2.5m of what was referred to as the “Tunnel Seam” which corresponds to the “E Seam” in the current operations.

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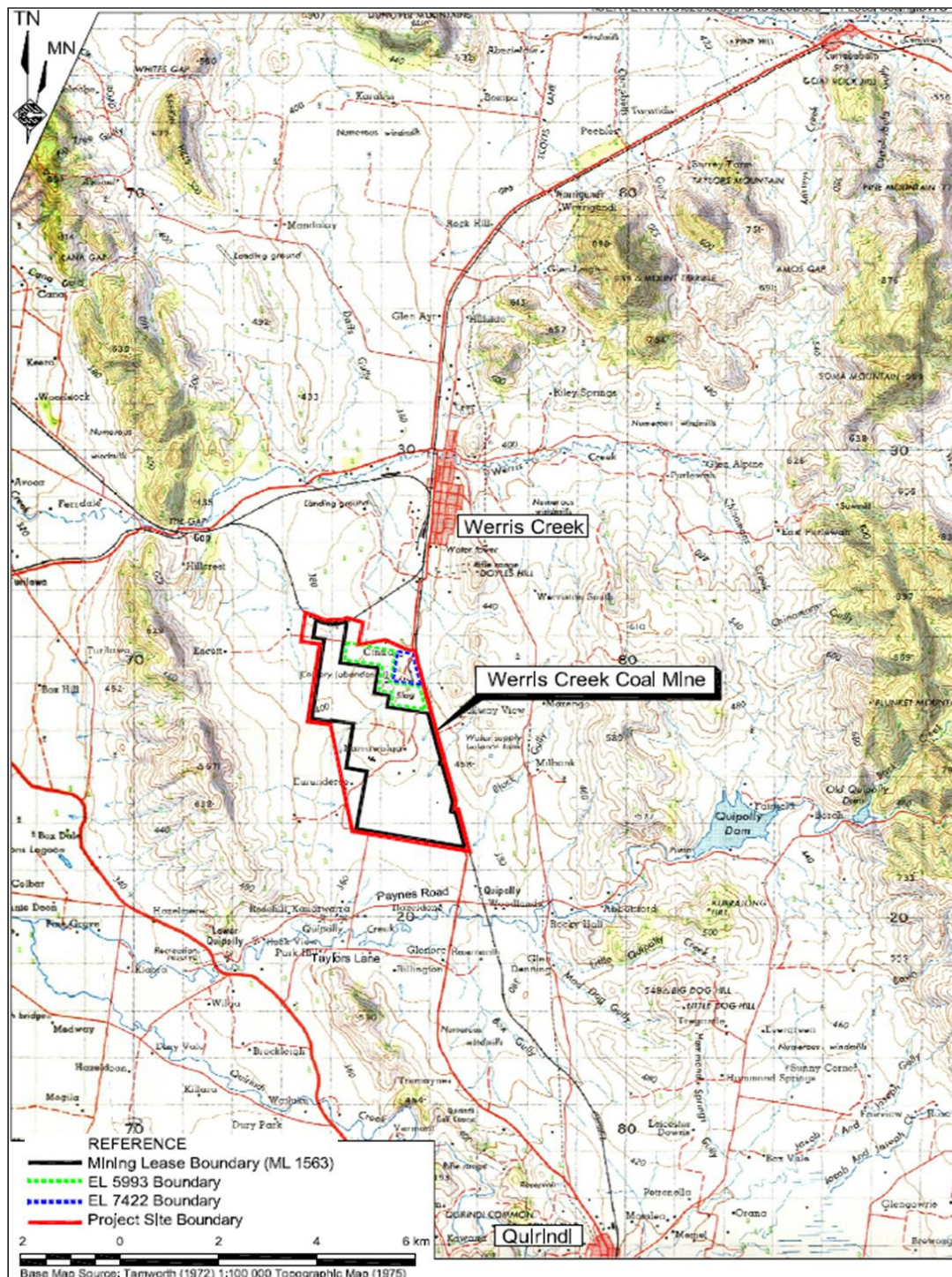


Figure 2: WCC Local Area (modified from Figure 1.1 R.W. Corkery & Co, 2011)

In 2002, Exploration License (EL) 5993 was granted to Creek Resources Pty Ltd and Betalpha Pty Ltd to undertake further exploration of the coal basin. Development Consent DA 172-7-2004 was approved on 18 February 2005 and the Mining Lease (ML) 1563 was granted on 23 March 2005. Construction for open cut operations commenced in April 2005.

Whitehaven Coal Mining Pty Ltd purchased Creek Resources Pty Ltd in 2005 which owned 40% of WCC. Whitehaven Coal purchased the remaining 60% interest in WCC in late 2007 taking management control for the operation. The WCC is a wholly owned subsidiary of Whitehaven Coal Mining Pty Ltd and Whitehaven Coal are the operators of the mine.

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1.2 Life Of Mine Project

The WCC Life Of Mine (LOM) Project covers an area of 910ha including ML1563, ML1672 (covering EL5993 and EL7422) and ML1671 for mining related purposes which covers the remaining areas within the project boundary not covered by a mining title (**Figure 2**). The LOM Project involves the following component activities and operations (**Figure 3**):

- Increase Void Water Dam 1 (VWD1) storage capacity to 250ML and modify the Biodiversity Offset Strategy to include “Greenslopes/Banool” property compensating for the increased disturbance for VWD1 and alternate LOM Explosive Magazine location in accordance with PA 10_0059(MOD1);
- Northerly continuation of the existing open cut mine to extract the entire Werris Creek outlier of the Greta Coal Measures;
- Extension of the out-of-pit overburden emplacement area to the west over the current footprint of the Coal Processing Area and Site Administration and Facilities Area (out-of-pit emplacement) and construct an “Acoustic and Visual Amenity Bund” that extends around the eastern and north eastern perimeter of the open cut. The in-pit emplacement will extend northwards over the completed sections of the open cut;
- Relocation of coal processing infrastructure (Coal Processing Area) and increase run of mine (ROM) coal stockpile (ROM Coal Pad) capacity to 200,000t;
- Maintaining road transportation of coal to domestic markets at 50,000tpa to meet the needs of local customers for low ash coal (R.W. Corkery & Co, 2011). Road transport must not go through local government areas of Muswellbrook, Singleton, Mid-Western Regional, Cessnock and Newcastle without the prior approval of the NSW DoP Director-General;
- Production of up to 2.5Mtpa of thermal and Pulverised Coal Injection (PCI) coal for the domestic and international markets;
- Product Coal Storage Area at the Rail Load-out Facility will be extended to the east to increase the capacity of the stockpile area to approximately 250,000t;
- Increase in the approved hours of operation to 24 hours, 7 day per week for all activities excluding blasting and road transport of coal from the WCC;
- Relocation of the administration and workshop areas (Site Administration and Facilities Area);
- Construction of a new northern entrance to the WCC mine and subsequent upgrade of Escott Road for direct access to the relocated coal processing infrastructure, offices and facilities has not progressed at this time. As a cost saving due to market and economic constraints, WCC extended the existing southern access road around the western side of the overburden emplacement for access to the new northern Mine Infrastructure Area (MIA);
- Construction of a second feed point to the Rail Load-out Facility to allow for product separation and reduced inter-product contamination has not progressed at this time;
- Construction of a ‘turn-around’ rail loop which would take off from the Werris Creek Rail Siding to the immediate west of the Rail Load-out Facility;
- Continued dewatering the underground workings of the former Werris Creek Colliery (approved under DA 172-7-2004) to enable open cut mining through all of these workings;

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- Construction of a Northern Void Water Dam for the storage of water which accumulates in the open cut;
- Depending on economics, allow for the construction of a conveyor to transport coal from the Coal Processing Area to the Product Coal Storage Area potentially replacing internal coal haulage; and
- Rehabilitation and new Biodiversity Offset Strategy (BOS) focusing on restoring Grassy White Box Woodland.

1.3 **Purpose**

The purpose of the Plan is to:

- Address and comply with the relevant conditions of the Project Approval (PA 10_0059);
- To provide an up to date management plan that reflects the proposed management of the heritage sites at WCC Mine;
- Provide employees with a clear outline of their obligations and responsibilities in relation to Aboriginal and historic heritage management;
- Discusses the relocation of the Narrawolga axe-grinding grooves site to the Willow Tree Visitor Information Centre and the transfer of the care agreement and responsibility from WCC;
- To provide a precise set of procedures to enable the identification and conservation of physical and cultural heritage sites and artefacts within the LOM Project area;
- Outline the results of the investigations into the former Werris Creek Colliery site and buildings;
- Address all relevant commitments made by in the WCC LOM Project Environmental Assessment; and
- To keep the local community and relevant agencies informed and to provide a mechanism to respond to heritage issues and complaints effectively.

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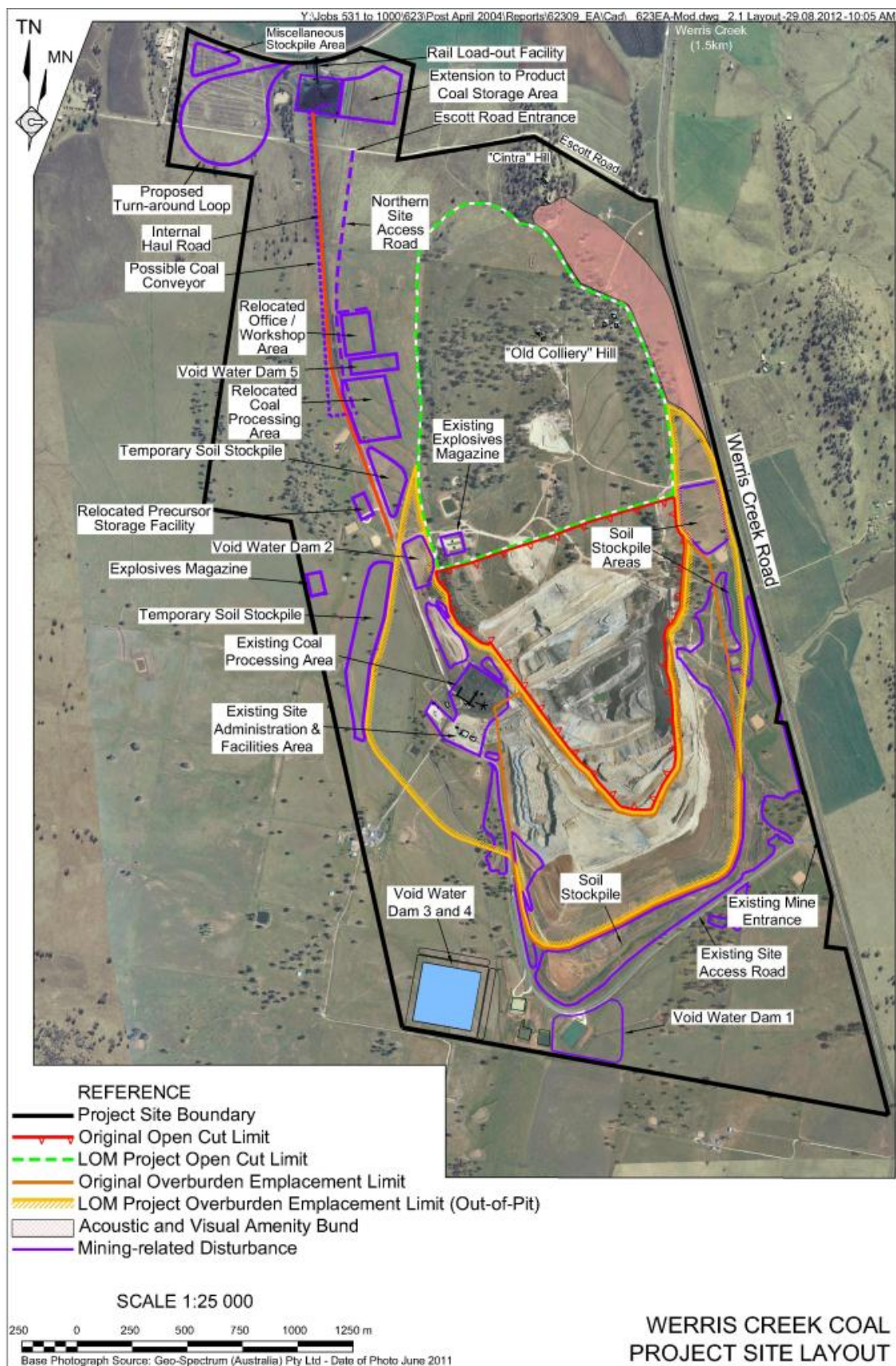


Figure 3: LOM WCC Layout (from Appendix 2 PA 10_0059 MOD1)

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Advitech archaeologists Balazs Hansel and Sam Wood were endorsed by the Director-General on 13 December 2011 to prepare the original version of the Heritage Management Plan (HMP) (**Appendix A**) with Reversion G subsequently approved by DoP on 1st November 2012. This HMP (Revision I) has been prepared by Advitech Pty Ltd and WCC with reference to relevant legislation and guidelines and is consistent with the commitments in the following documentation:

- Application for the transfer of Aboriginal objects for safekeeping (Section 85A 1(c) of the NPWS Act)
- The Life of Mine (LOM) Project Approval 10_0059 was granted by the NSW Minister for Planning on 25th October 2011;
- R.W. Corkery & Co. Pty. Limited, Environmental Assessment for Werris Creek Coal Mine Life of Mine Project, December 2010
- R.W. Corkery & Co. Pty. Limited, Response to Submissions for the Environmental Assessment for Werris Creek Coal Mine Life of Mine Project, March 2011
- Advitech Pty Ltd, Archaeological Investigation and Heritage Record: Former Werris Creek Colliery, April 2012;
- Landskape Pty Ltd, Cultural Heritage Assessment for Werris Creek Coal Mine Life of Mine Project, December 2010;
- Werris Creek Coal Pty Ltd, Annual Environmental Management Report 2010-2011, May 2011;
- Werris Creek Coal Pty Ltd, Annual Environmental Management Report 2011-2012, May 2012;
- Werris Creek Coal Pty Ltd, Independent Environmental Audit Action Plan v1, 2011; and
- Werris Creek Coal Pty Ltd, Life of Mine Mining Operations Plan for the Werris Creek, November 2011.

1.4 **Scope**

The HMP applies to all mining activities that could potentially impact on Aboriginal or historical heritage by WCC as part of the LOM Project, within the areas defined as the Project Site Boundary (**Figure 3**).

The current revision of the HMP was carried out following a formal request from the Nungaroo Land Council and the Liverpool Plains Shire Council Aboriginal Advisory Committee to relocate the Narrawolga Grinding Goove Site (AHIMS#29-2-0005) to the Willow Tree Visitor Centre for public display. WCC will revise the HMP following any of the triggering events listed in **Section 13**.



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2 RESPONSIBILITIES

Specific responsibilities in relation to heritage management for key management positions are outlined in **Table 1**.

Table 1: Roles and Responsibilities

Role	Responsibilities
WCC Operations Manager	<ul style="list-style-type: none"> Ensure that there are sufficient resources for operations to be undertaken in accordance with relevant regulations, licenses and approvals. Maintain overall responsibility for activities undertaken on the WCC site.
WCC Environmental Officer	<ul style="list-style-type: none"> Post induction education and contact with all employees and contractors on heritage issues. Undertake regular environmental inspections to ensure heritage controls are working effectively. Regularly revise the performance of heritage management strategies. Monitor the effectiveness of heritage management strategies and provide ongoing guidance as needed. Ensure all internal and external reporting requirements are met, including incident reporting in accordance with relevant internal protocols. Develop strategies to prevent or reduce environmental impacts. Attend Community Consultation Committee meetings. Receive and respond to community complaints in relation to heritage.
WCC Supervisors	<ul style="list-style-type: none"> Ensure that all operations on site are undertaken in compliance with this management plan. Ensure all site personnel have received the appropriate training for their responsibilities and are aware of the heritage obligations. Conduct regular inspections of the work area to monitor compliance with this plan and implement controls as required. Report any incidences or complaints immediately to the Environmental Officer. Provide feedback on the adequacy and effectiveness of this plan.
Employees and Contractors	<ul style="list-style-type: none"> Act in accordance with this plan by implementing heritage management procedures as relevant to their work areas. Ensure any potential or actual heritage issues, are reported to their immediate supervisor.



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3 REQUIREMENTS

The HMP for the WCC LOM Project has been prepared in accordance with various requirements legislative instruments and industry guidelines. These requirements are outlined in the following sections.

3.1 Project Approval

Specific conditions relating to the implementation of the WCC LOM Project are outlined in PA 10_0059 (MOD1) granted by the NSW Minister for Planning and Infrastructure. PA 10_0059 was approved on 25th October 2011 and MOD1 approved on 30th August 2012. **Table 2** summarises the requirements relating to Aboriginal and historic heritage from the Project Approval, and identifies where these requirements are addressed within this management plan.

Table 2: Conditions Established in Project Approval 10_0059 (MOD1)

Schedule (Condition)	Requirement	Response Detailed in Section
3(30)	Historic Heritage By the end of April 2012, the Proponent shall: <ul style="list-style-type: none"> a) Undertake primary historical investigations and provide a report prepared by an experienced heritage consultant approved by the Director-General on the archaeological potential of the former Werris Creek Collier site, remaining buildings and surrounds; b) Provide recommendations for the management, salvage or recording of an archaeological features on the site and a timetable for the implementation of these recommendations; c) Include in this report detailed archival recording, including photographic recording and location plans of any structures relating to the former Werris Creek Colliery; and d) Provide a copy of this report to the Department, Heritage Council of NSW and Council, to the satisfaction of the Director-General. 	4.2.3 4.2.4 Appendix K Appendix K
3(31)	Human Remains This approval does not allow the Proponent to disturb any human remains found on the site.	8.4
3(32)	Heritage Management Plan The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. This plan must: <ul style="list-style-type: none"> a) Be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Director-General; b) Be prepared in consultation with OEH and the Aboriginal stakeholders (in relation to the management of Aboriginal heritage values); c) Be submitted to the Director-General for approval by the end of June 2012, unless the Director-General agrees otherwise; d) Include the following for the management of Aboriginal Heritage: <ul style="list-style-type: none"> • A description of the measures that would be implemented for: <ul style="list-style-type: none"> - Protecting, relocating, monitoring and/or managing the axe-grinding grooves known as the "Narrawolga site"; - Managing the discovery of any human remains or previously unidentified Aboriginal objects on site; - Maintaining and managing reasonable access for 	Appendix A Appendix A Appendix A 8.1 8.2 8.5 8.1



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Schedule (Condition)	Requirement	Response Detailed in Section
	<ul style="list-style-type: none"> Aboriginal stakeholders to heritage items on site and within any Aboriginal heritage conservation areas; - Ongoing consultation with the Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on site and within any Aboriginal heritage conservation areas; and - Ensuring any workers on site receive suitable heritage inductions and that suitable records are kept of these inductions; • A strategy for the storage of any heritage items salvaged on site, both during the project and the long-term; 	8.3
	<ul style="list-style-type: none"> e) Include the following for the management of historic heritage: <ul style="list-style-type: none"> • A detailed plan for the implementation of any measures resulting from the further investigations into the former Werris Creek Colliery site and buildings; • A description of the measures that would be implemented for: <ul style="list-style-type: none"> - Managing the discovery of human remains or previously unidentified heritage items on site; and - Ensuring any workers on site receive suitable heritage inductions and that suitable records are kept of these inductions 	10
		8.1
		8.6 to 8.11
		8.5
		10
	<p><i>Note: It is accepted that the detailed plan for the implementation of any measures resulting from further investigations into the former Werris Creek Colliery site will not be submitted with the initial Heritage Management Plan. They should be progressively added to the plan once they are completed.</i></p>	

3.2 Statement of Commitments

The requirements for Aboriginal and historic heritage management outlined in the Final Statement of Commitments in the “Response to Submissions for the Environmental Assessment for Werris Creek Coal Mine Life of Mine Project” (R.W. Corkery & Co, 2011) are summarised in **Table 3: Statement of Commitments** and identifies where these requirements are addressed within the HMP.

Table 3: Statement of Commitments

Desired Outcome	Action	Response Detailed in Section
Maintain Aboriginal heritage value on site.	4.1 Update the Aboriginal Cultural Heritage Management Plan to reflect the approval of the LOM Project.	HMP – this document
	4.2 Re-instate the Narrawolga Axe Grinding Grooves to a position as close as possible to their original location following rehabilitation of the Project Site in consultation with local Aboriginal community representatives.	8.1
	4.3 Continue awareness training of staff and contractors for cultural heritage matters.	10
	4.4 In the event the Project Site disturbance footprint changes, ensure that appropriate consultation and field survey is undertaken to confirm no sites or objects of Aboriginal heritage significance are impacted.	8.13
	4.5 In the event any previously unidentified ‘objects’ or other	8.3 & 8.5



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Desired Outcome	Action	Response Detailed in Section
	Aboriginal sites (such as burials) are uncovered, ensure that work in that area is suspended and the DECCW Western Regional Archaeologist (Dubbo Office) and local Aboriginal community are contacted to discuss how to proceed.	
Develop an historic context for the Project Site particularly in reference to the operation of the former Werris Creek Colliery.	4.6 Salvage the concrete marked with the hand and footprints of the former Deputy Mine Manager's daughter at the residence and provide to Ms Dora Koops (one of the daughters) for posterity.	4.2.4
	4.7 Provide the photo record held by the Proponent and its consultants to the Werris Creek Historical Society (or other similar community group) as a record of the remnant features at the time of removal.	Appendix A
	4.8 Provide a copy of the Cultural Heritage Assessment (Landskape, 2010) to the Werris Creek Historical Society (or other similar community group) as a record of the remnant features at the time of removal.	Appendix A

3.3 OEH Checklist for Aboriginal Cultural Heritage Management Plan

In response to the draft HMP, OEH in undated correspondence (**Appendix A**) provided a checklist for "Preparation and Implementation of an Aboriginal Cultural Heritage Management Plan". **Table 4** outlines where these requirements are addressed within the HMP.

Table 4: OEH Aboriginal Cultural Heritage Management Plan

Number	Requirement	Response Detailed in Section
1.1	Provide clear information about the nature, design and expected life of the Project as well as its location and extent.	1.2
1.2	Provide suitably detailed maps of the area covered by the ACHMP with relevant information on Aboriginal cultural heritage highlighted.	Figure 10
2.1	Outline the key factors that the ACHMP has been formulated to address such as consent conditions, legislative requirements; protection of Aboriginal cultural heritage resources within the project Area; avoidance, mitigation and management of likely development impacts including salvage; and the purpose and maintenance of consultation with relevant Aboriginal community stakeholders.	3 8.1, 8.2, 8.3 & 8.4
2.2	Indicate whether the Plan is to apply to all or only a portion of the Project Area and/or whether it is to apply to one or more stages of a multi-stage development.	1.4
2.3	Indicate clear time frames for both the duration and periodic review of the ACHMP.	12.4
3.1	Provide summary details of the known and predicted Aboriginal cultural heritage resources within the Project Area as identified in the Aboriginal cultural heritage survey and assessment report.	4.1
3.2	Provide a description/listing of any recommended strategy for the avoidance and/or mitigation of impacts for each known Aboriginal object/site within the Project area.	8.1, 8.2, 8.5



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Number	Requirement	Response Detailed in Section
4.1	The plan should ensure ongoing consultation with and involvement of the Aboriginal community in all facets of Aboriginal cultural heritage addressed within the ACHMP.	8.3
5.1	Outline the obligations and/or requirements of all employees, contractors, sub-contractors and visitors with respect to the protection of Aboriginal cultural heritage within the Project Area. Ensure responsibilities are assigned to communicate these obligations to individuals involved.	8 10
5.2	Consider Aboriginal cultural heritage awareness training for all employees, contractors, sub-contractor and visitors as part of work-place induction procedures.	10
5.3	Outline the protocols for operation of the ACHMP and clearly indicate the roles and responsibilities of particular staff in relation to the timing and implementation of all protocols.	8
5.4	Outline the key criteria by which effective compliance and performance review of the ACHMP will be measured.	7 & 12
6.1	Where actions are required as part of an agreed avoidance or site impact mitigation strategy then the ACHMP should outline details such as the appropriate processes and protocols	8.1, 8.2, 8.3, 8.4 & 8.5
7.1	Where salvage of objects or test excavation of probable sites is proposed as a mitigation strategy the ACHMP should specify and include plans appropriate for site to be so managed	8.5, 8.6, 8.7
8.1	Outline the procedures for all statutory reporting of Aboriginal cultural heritage within the project area. This should include: <ul style="list-style-type: none"> The procedure for the notification to OEH of Aboriginal objects revealed through any ground disturbing or survey works associated with the on-going operation of the Project as per Section 91 of the NP&W Act; Identification of the procedure to be adopted in the event that human skeletal remains are found within the project area; including 'stop work' protocols, notification procedures and guidance on site access restrictions; Identification of procedures to be adopted in the event of protection, salvage and/or site destruction to ensure OEH receives updated information relating to all sites within the Project Area; Identification of the roles and responsibilities of all staff with respect to notification and reporting of Aboriginal cultural heritage matters. 	8.3, 8.4 12.4
9.1	Include a schedule for periodic review of the ACHMP and develop appropriate reporting mechanisms (e.g. proforma) for these reviews.	12
9.2	Include provisions for monitoring and/or review of key performance criteria outlined in the ACHMP.	9 12
10.1	Include a list of definitions of key terms and, if used, include an explanatory list for all abbreviations	Page 8



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3.4 LPSC Response to Historical Heritage Investigation Report

In response to the “Archaeological Investigation and Heritage Record: Former Werris Creek Colliery” (Advitech, 2012); Liverpool Plains Shire Council (LPSC) outlined in correspondence dated 25th June 2012 (**Appendix A**) additional items to be addressed by WCC regarding Historical Heritage items listed in **Table 5**.

Table 5: LPSC Response to Historical Heritage Investigation

Number	Requirement	Response Detailed in Section
1	Coal Loading Ramp – A plan of the Coal Loading Ramp and a plan and elevations of loading ramp structure	8.6 Appendix L
2	Exposure of Relics – Recommend that Council’s Heritage Advisor be contacted if relics are exposed	8.5

3.5 Relevant Legislation and Guidelines

In addition to the regulatory requirements outlined in **Sections 3.1 to 3.4**, Aboriginal and historic heritage management at WCC mine will be undertaken with regard to the following standards and guidelines.

3.5.1 Legislation

- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984;*
- *National Parks and Wildlife Act 1974;*
- *NSW Environmental Planning and Assessment Act 1979; and*
- *NSW Heritage Act 1977.*

3.5.2 Guidelines

- *Aboriginal cultural heritage consultation requirements for proponents, DECCW 2010;*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010;*
- *Due Diligence Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010;*
- *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW, OEH 2011;*
- *National Parks and Wildlife Regulations, 2009;*
- *NSW Heritage Office, Historical Archaeological Sites: Investigation and Conservation Guidelines, 1993;*
- *NSW Heritage Office, Historical Archaeology Code of Practice, 2006;*
- *NSW Heritage Office, Archaeological Assessment Guidelines, 1996;*
- *NSW Heritage Office, Assessing Significance for Sites and ‘Relics’, 2009;*
- *NSW Heritage Office, Statements of Heritage Impact, 2002; and*
- *The Burra Charter (The Australia ICOMOS charter for the conservation of places of cultural significance).*

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4 BASELINE CONDITION

This section is a summary of the cultural heritage studies conducted at the WCC. **Figure 4** outlines the location of WCC's cultural and historical heritage sites.

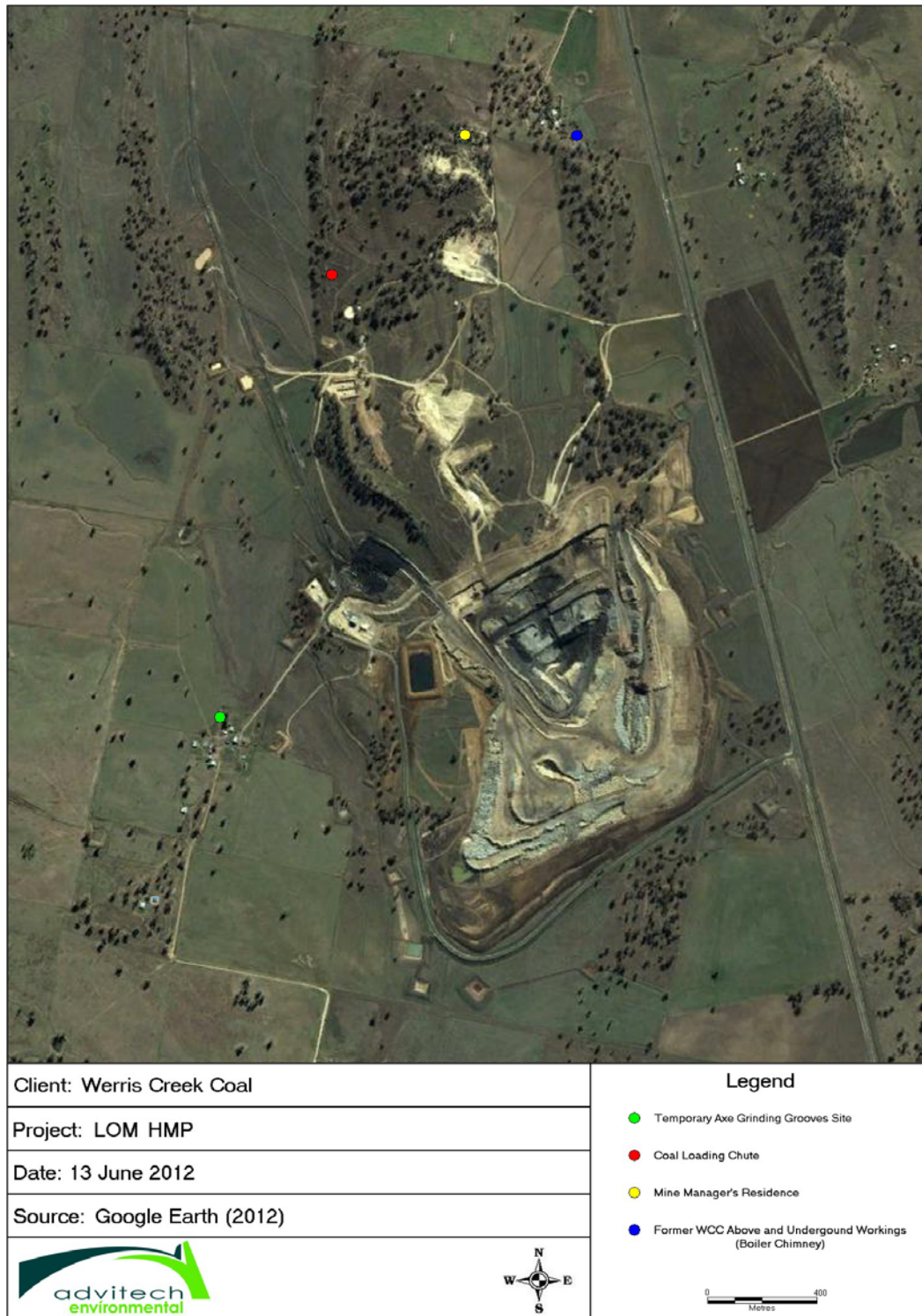


Figure 4: Location of LOM heritage sites

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4.1 Aboriginal Cultural Heritage Studies

An Aboriginal Heritage Information Management System (AHIMS) site register search was conducted for this HMP (valid for 12 months - **Appendix M**) and identified only one site within a 1 km radius of the mine site being the Narrawolga Axe Grinding Grooves (Site 29-2-0005). Previous AHIMS searches have identified only three sites in total within 5km of the mine site. In addition to the Narrawolga Axe Grinding Grooves, the other sites were stone artefact scatters at The Gap (3 km northwest) and a site on the “Escott” property (1.5 km west). The following summarises the results of the Aboriginal heritage assessments completed on behalf of WCC for the mine site.

4.1.1 Archaeology and Cultural Heritage Studies associated with DA 172-7-2004

An archaeological survey and investigation was performed by John Appleton of Archaeological Surveys and Reports Pty Ltd (ASR 2004) during the compilation of the Environmental Impact Statement for approval of the LOM Project (EIS) by R.W. Corkery & Co. Pty. Limited (RWC) on behalf of WCC (**Figure 5** and **Appendix B**). A single site, #29-2-0005, an axe grinding groove site, comprising at least 25 grooves on several sandstone slabs south of “Old Colliery” Hill, was re-identified. It was first identified and recorded in 1964 (**Appendix C**).

The original location was described by ASR (2006) as “A linear area approximately 90 m long by 35 m wide, between AMG E0275094 N65235420 and E0275134 N65234520 (“Quipolly”9035-II-S, 1: 25,000 Topographic Map)”. Detailed survey of the individual grooves orientation and location of each rock slab was completed with the accurate centroid coordinates of the original “moon” shape location defined as MGA Zone 56 275260E 6523625N (**Figure 6** and **Appendix O**).

WCC in consultation with the Nungaroo LALC agreed to protect the site in situ pending the report of a geotechnical consultant.



Figure 5: Outcrop pre-removal with Aboriginal stakeholders from Nungaroo LALC

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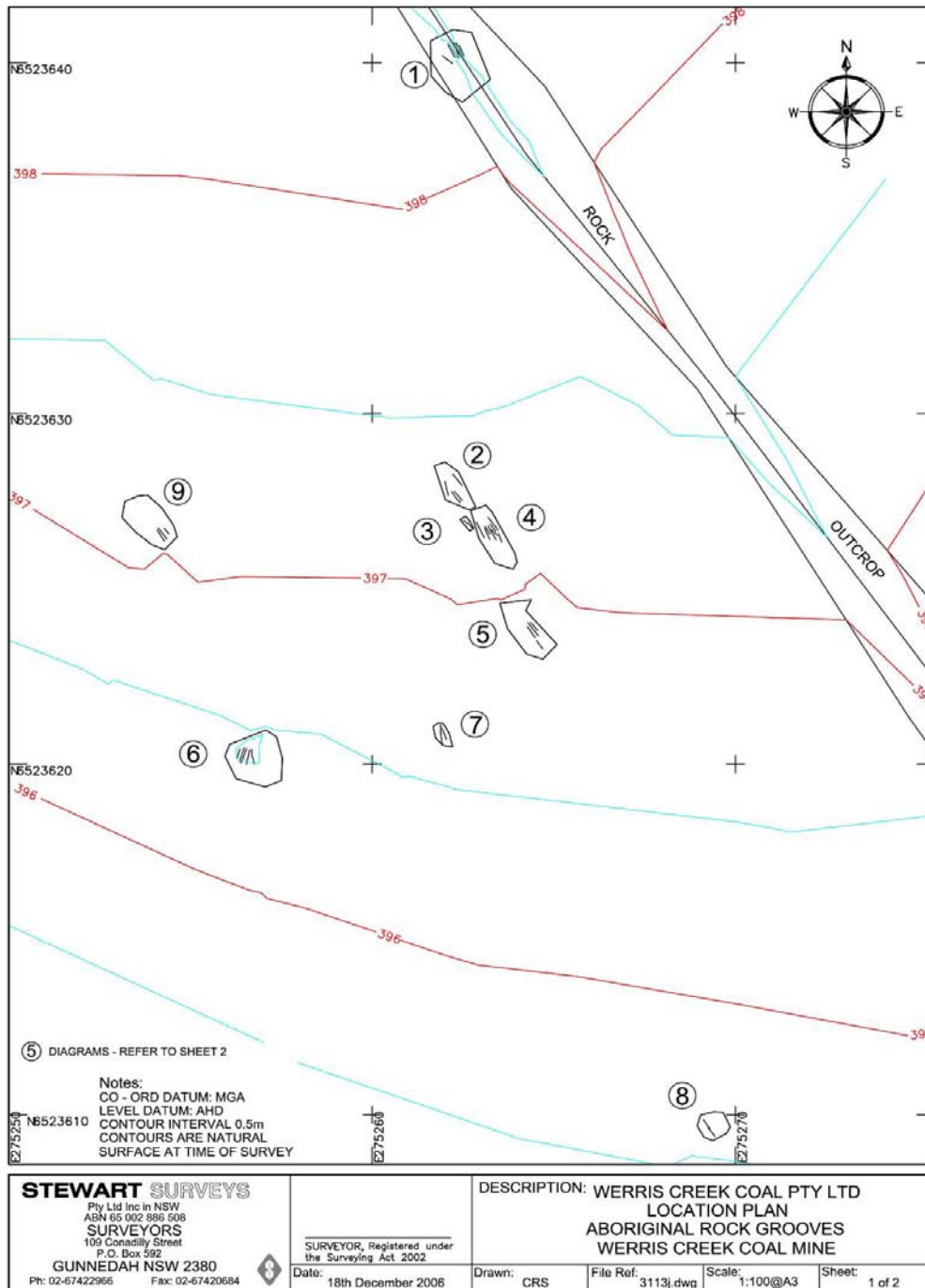


Figure 6: Grinding Groove locations (Stewart Surveys, 2006)

4.1.2 Geotechnical Assessment of Potential Impact of Blasting

A Geotechnical Assessment of Potential Impact of Blasting on the “Narrawolga Site” was undertaken in February 2006 by GE Holt & Associates Pty Ltd (**Appendix D**).

Geological aspects rather than blasting impacts were identified as the most likely impact on the axe grinding grooves. The report concluded that 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”.

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4.1.3 Removal, Re-location and Protection of 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*.

After a consultation process with stakeholders and Nungaroo LALC, the “Management Plan for the removal, storage and replacement of the Narrawolga” axe-grinding groove site by Archaeological Surveys & Reports Pty Ltd, September 2006 (ASR 2006), was agreed to by all parties (**Appendix E**). An Aboriginal Heritage Impact Permit (AHIP #2588) under Section 90 of the *National Parks and Wildlife Act 1974* was issued to WCC to temporarily remove the axe-grinding groove site (**Appendix F**). 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 (**Appendix G**).

4.1.4 Temporary Narrawolga Axe Grinding Grooves Storage Area

In consultation with the local Aboriginal community, the Narrawolga Axe Grinding Grooves site was relocated on 30th March 2007 (ASR 2006 - **Appendix E**) to enable mining to be undertaken through the original location whilst maintaining the heritage values provided by the site. The Narrawolga Axe Grinding Grooves are registered with OEH on AHIMS as site number 29-2-0005 and the site card is included in **Appendix C**.

The storage area for the axe grinding grooves was located adjacent to the mine site on the “Eurunderee” property until 2014 within a fenced area and sign posted (**Figure 4** and **Figure 7**). The grinding groove slabs were placed on crusher dust to support their weight to minimise the chance of cracking.



Figure 7: Narrawolga axe-grinding grooves in temporary storage area

4.1.5 Cultural Heritage Assessment WCC LOM 2010 (Landscape 2010)

Landscape (2010) (**Appendix H**) assessed the primary historical and archaeological heritage impacts related to the area associated with the now approved LOM Project. Landscape (2010) assessed the heritage significance and made recommendations for management of impacts which are further discussed in **Section 5**. The assessment noted that the Narrawolga axe grinding grooves (Site 29-2-0005) had been previously relocated and no additional Aboriginal sites were identified within the Project Site.

4.2 Historical Heritage Studies

4.2.1 Narrawolga Homestead

In accordance with Condition 46 of DA-172-7-2004, WCC recorded the “Narrawolga” homestead building for archival purposes. This recording and subsequent report was completed by John Carr of Hill Lockart Architects in November 2005 (**Appendix I**).

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4.2.2 Other Historic Heritage Reports

In both Cultural Heritage Management Plans (2004 and 2007), it was noted that there was no potential for other European heritage sites to be impacted within the Project Site. However outside of the Project Site it was noted that the Werris Creek underground mine was worked from 1925 until 1963 and could contain implements of interest to the coal mining community (**Appendix J**).

4.2.3 Historical Heritage Investigations

Advitech Pty Limited (Advitech 2012) was engaged by WCC to undertake historical investigations for the approved LOM Project. The assessment was prepared in response to Condition 30 of PA 10_0059 which required primary historical investigations on the archaeological potential of the former Werris Creek Colliery site, remaining buildings and surrounds, as well as detailed archival recording, including photographic recording and location plans of any structures relating to the former Werris Creek Colliery (**Appendix K**).

Advitech concurred with the heritage significance assessment of the remains of the Werris Creek Colliery made in Landsape (2010). Advitech made recommendations as to the salvage and/or removal of the remaining buildings and objects which have been incorporated into this Management Plan.

4.2.4 Archival Recording in accordance with Condition 30 of PA 10_0059

Plans of all buildings were completed in 2012 (Advitech 2012). Elevation drawings were made of the deputy mine managers residence (detailed floor, elevation and site plans were prepared for the main dwelling and any out buildings). Plans were also prepared for the Coal Chute. The plans have been included in **Appendix L**.

Archival photographic records were obtained for all relevant structures, objects and/or buildings previously identified by Landsape (2010) and any additional items identified during inspection of the site.

4.2.4.1 Deputy Mine Managers Residence

The existing condition and status of the former Werris Creek Colliery's Deputy Mine Managers Residence is shown in **Figure 8**.



Figure 8: Deputy Mine Managers Residence facing North West.

After inspection of the building and surrounds, and considering the modified and general condition of the site, Advitech concur with Landskape's (2010) moderate to low (local) assessment of this residence. However, some objects may exist beneath the dwelling and within immediate surrounds. These objects would most likely be limited to lost or discarded domestic items and would be unlikely to have notable heritage value. The concrete mileage marker has some historic interest values and would be worthy of salvage.

The former dwelling location, on the eastern mid-slopes of Old Colliery Hill, has the potential to contain stumps/foundations of the former dwelling location (prior to being relocated in 1940) as well as domestic items. If existing, these remnants are likely to be highly degraded due to white ants, decomposition, fire or other agricultural or mining related disturbance and would be unlikely to have notable heritage value.

For posterity, WCC has salvaged a concrete threshold marked with the hand and footprints of the former Deputy Mine Manager's daughter at the residence. The concrete was returned to Ms Dora Koops (one of the daughters) in 2011.

4.2.4.2 Coal Loading Chute

The existing condition and status of the former coal loading chute is shown in **Figure 9**.

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Figure 9: Coal Chute detail facing north

According to Landskape (2010), the ramp was associated with an exploratory shaft that was sunk in the 1950's. Although the shaft was only in operation for a short period of time (Landskape, 2010), this location contains some of the only surviving objects relating to the former mining operations.

The location of the coal loading chute and surrounds is considered to have low research potential (criteria (e)) due to the generally poor state of preservation (Landskape 2010). However, there is potential for:

- Steel and/or abandoned machinery existing on or just below the ground surface;
- The exploratory mine shaft existed immediately east of the chute. This shaft is likely to be extensively collapsed, however, abandoned mining equipment or supporting structures may exist within the former shaft; and
- The location of the ventilation shaft is unknown, however, historical accounts suggest that the location of the ventilation shaft once contained barrels (and presumably supporting structures) (Cupper, 2012). These may remain if they were left in-situ following abandonment of the colliery.

4.2.4.3 Above Ground Works

The ruins of the above ground works of the colliery are located on the eastern slopes of Old Colliery Hill, approximately 150 metres from Werris Creek Road. According to Landskape (2010) this area originally contained the cable winch, two boiler houses, skip rail tracks, skip tumbler, coal screen, coal box, coal chute and railway branch line.

At the time of inspection, the only remaining features comprised a pile of concrete and steel rubble. The rubble represents the remains of the boiler chimney that was demolished with the consent of Council in March 2010 under DA 29/2010.

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The above-ground workings were assessed as having moderate significance, for research potential (criteria (e)) the assessment was low due to the generally poor state of preservation (Landskape 2010). However, given the extent of works that once existed at this location, it is possible that sub surface objects may exist in the proximity of this location, particularly remaining sections of the rail branch line. Other objects may also exist within the former underground workings. However, these objects would be limited to supporting structures, waste or items and structures that had no value as scrap following closure of the colliery. Archaeological potential includes:

- Concrete foundations of colliery buildings (reported to have been lost in a fire);
- Underground mine workings and associated structures, particularly the mine entrance located in the area below the adjacent sheds/stables;
- Some objects may exist at or below the surface anywhere within this area. However, these would be limited to waste or items and structures that had no value as scrap following closure of the colliery; and
- Rail tracks (in part) may exist at or below the surface near this location. The rail line, if remaining, would have comprised the connecting skip rail tracks between the colliery and the north-west railway. Surviving objects could comprise steel track, timber sleepers and steel pins.

4.2.4.4 Underground Workings

The underground workings are not identifiable from the surface and could not be inspected. However, previous investigations indicate that underground workings exist north of the current mine area, extending up to the dwelling and sheds/stables that exist on the eastern slopes of Old Colliery Hill, directly north of the site of the former above ground works.

The entrance to the underground workings is thought to exist below the rural shed/stables (pers com, N. Gardiner), however, the tunnels and shafts associated with the underground workings are likely to be flooded and extensively collapsed (Cupper, 2012).

The entrance to the western exploratory shaft could not be located during an inspection of the coal loading chute.

The research potential (criteria (e)) for the underground mine workings was assessed by Landskape as low, due to the poor state of preservation (Landskape, 2010). While the machinery and any structures are reported to have been dismantled and sold for scrap, it is possible that some sub surface objects may remain within the former underground workings. These items may include:

- Steel rail cart tracks, sleepers and associated works;
- Discarded machinery, tools and equipment that were not removed and/or sold for scrap;
- Domestic, rural or mining waste deposited during and following closure of the mine; and
- Supporting structures.



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5 HERITAGE IMPACTS

The Cultural Heritage Assessment of the LOM Project (Landskape 2010) assessed the potential Aboriginal cultural and historical heritage impacts associated with the WCC LOM Project (**Appendix H**).

The WCC mine site has been subject to a number of detailed Aboriginal archaeological surveys as outlined in **Figure 10**. No additional Aboriginal archaeological sites were identified within the project site (Landskape, 2010) during the 2010 Aboriginal archaeological survey. This is attributable to the degree of land surface modification that has taken place since European settlement. Past disturbance associated with pastoralism, agriculture, gravel quarrying and coal mining may have obliterated any archaeological sites, had they occurred previously. The Aboriginal archaeological site encountered at WCC was the Narrawolga Axe Grinding Grooves which was relocated and temporarily stored in 2007 as previously discussed in **Sections 4.1.3 and 4.1.4**.

Table 6 summarises the significance assessment for historic heritage items identified during the Cultural Heritage Assessment of the LOM Project (Landskape, 2010). The location of the extension of the LOM open cut area is within its optimum design location and is relatively inflexible, offering limited opportunity to avoid the historical cultural heritage sites within this area. Landskape (2010) concluded that the former Werris Creek Colliery Underground Workings, Above-ground Ruins, Deputy Mine Manager's Residence and coal loading chute are not of high historical significance and the ongoing management of these items are discussed in **Sections 8.6 to 8.11**.

Table 6: Assessment of Significance for the former Werris Creek Colliery (Landskape, 2010)

Site Name	Significance						
	Criterion (a)	Criterion (b)	Criterion (c)	Criterion (d)	Criterion (e)	Criterion (f)	Criterion (g)
Former Werris Creek Colliery Underground Workings	Local (Moderate)	Local (Moderate)	na	Local (Moderate)	Local (Low)	Local (Moderate)	Local (Moderate)
Former Werris Creek Colliery Above-ground Ruins	Local (Moderate)	Local (Moderate)	na	Local (Moderate)	Local (Low)	Local (Moderate)	Local (Moderate)
Former Werris Creek Colliery Deputy Mine Manager's Residence	Local (Moderate)	Local (Moderate)	Local (Moderate)	Local (Moderate)	Local (Moderate)	Local (Low)	Local (Low)
Former Werris Creek Colliery Coal Loading Chute	Local (Low)	Local (Low)	Local (Low)	Local (Low)	Local (Low)	Local (Moderate)	Local (Moderate)

Criterion (a) – an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

Criterion (b) – an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area).

Criterion (c) – an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

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Criterion (d) – an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

Criterion (e) – an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

Criterion (f) – an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

Criterion (g) – an item is important in demonstrating the principal characteristics of a class of NSW's:

- i. Cultural or natural places; or
- ii. Cultural or natural environments (or a class of the local area's: cultural or natural places; or cultural or natural environments).

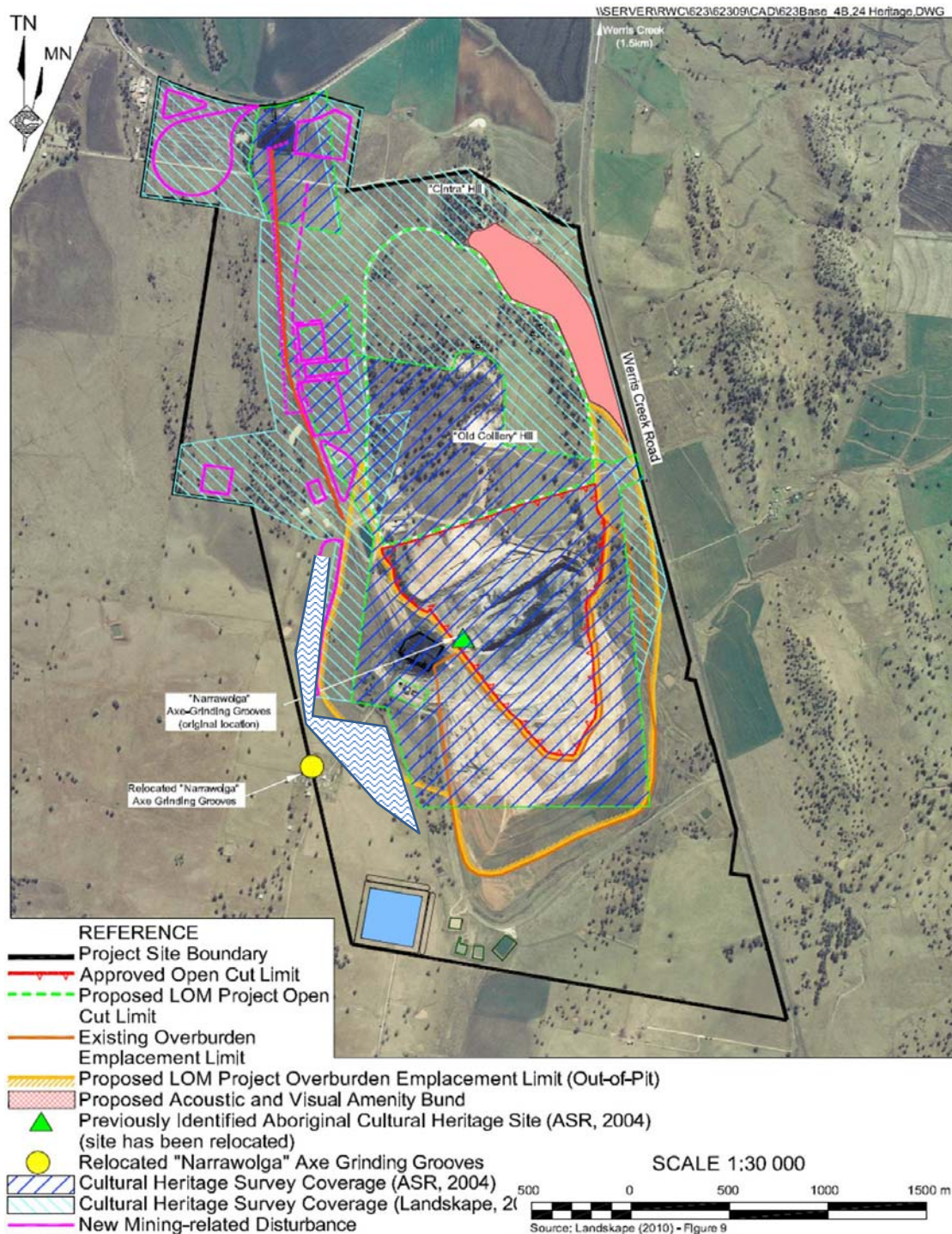


Figure 10: Location of Axe Grinding Grooves (modified from R.W. Corkery & Co, 2010)



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6 RISK ASSESSMENT

The heritage risk assessment was updated for this revision of the HMP including cultural heritage hazard identification, risk (consequence and likelihood) and management controls to mitigate risks to cultural heritage (**Appendix N**).

A summary of the heritage risk assessment is outlined in **Table 7**.

Table 7: Heritage Risk Summary

Hazard	Current Management Control	Risk	Additional Management Action
Damage to known Aboriginal heritage site	No known artefacts found onsite; ▪ Approved Heritage Management Plan & Training.	L	Relocate Narrawolga Axe Grinding Groove Offsite to Willow Tree Visitor Information Centre and remove WCC responsibility
Damage to unknown Aboriginal heritage site	No known artefacts found onsite; ▪ Approved Heritage Management Plan & Training.	L	None
Damage to old colliery infrastructure	No known heritage items found onsite; ▪ Approved Heritage Management Plan & Training.	L	None

7 OBJECTIVES AND TARGETS

In this section, WCC will outline the relevant heritage criteria for the LOM Project and develop heritage related objectives and targets as part of the Environmental Management System (EMS) that will guide the ongoing management of the heritage risks identified in **Section 6**.

7.1 Heritage Criteria

While there is no strict quantitative measure to determine the criteria for heritage items, the relevant legislation outline the definition of Aboriginal cultural and historical heritage items.

7.1.1 Aboriginal Heritage Definitions from the National Parks and Wildlife Act 1974

Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Aboriginal place means any place declared to be an Aboriginal place under section 84. Section 84 states: The Minister may, by order published in the Gazette, declare any place specified or described in the order, being a place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture, to be an Aboriginal place for the purposes of this Act.

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7.1.2 Historic Heritage Definitions from the Heritage Act 1977

item means a place, building, work, relic, moveable object or precinct.

relic means any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.

State heritage significance, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

Local heritage significance, in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

7.2 Heritage Objectives and Targets

As part of the planning process in the EMS, objectives and targets are set to drive organisations towards continuous improvement in environmental performance. WCC will establish specific objectives and targets for the heritage hazards that were assigned the highest risks in **Section 6**. These risks include impacts on known and unknown aboriginal sites/objects or impacts on historical items associated with the former underground colliery. The heritage objectives and targets will be incorporated into the WCC EMS. The objectives and targets (**Table 8**) will be reviewed monthly and revised annually based on the overall years' performance. The objectives and targets proposed for the future years are only indicative and will be subject to the results of the HMP Performance Annual Review (**Section 12.2**).

Table 8: Heritage Objectives and Targets

Objective		Performance Indicator	2013-2014 Performance	Target			
Activity	Environmental Hazard			2014-2015	2015-2016	2016-2017	Assumption
Mining Operations	Heritage Non-Compliance	Number of exceedances reported to DoP/OEH	0	0	0	0	Expectation that there will be no non-compliances



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8 MANAGEMENT STRATEGIES AND MEASURES

In order to mitigate any potential Aboriginal and historic heritage impacts from the WCC LOM project, a number of management controls will be implemented throughout the life of the operation as detailed in **Table 9** and discussed further in relevant parts of **Section 8** below.

Table 9: Heritage Management Actions

Section	Item	Responsibility	Timing
8.1	Relocation of the Narrawolga Axe Grinding Grooves Rocks to the Willow Tree Visitor Information Centre	EO	2014
8.2	Discovery of a Potential Aboriginal Site or Artefact	OCE	As required
8.3	Consultation with Aboriginal Groups and Community	EO	Part of MP
8.4	Discovery of Human Remains	OCE	As required
8.5	Disturbance of Unknown Former Werris Creek Colliery Historic Heritage Items	OCE	As required
8.6	Coal Loading Chute and Surrounds	EO	Prior to works
8.7	Mileage Marker	EO	Prior to works
8.8	Former Werris Creek Colliery Foundations	EO/OCE	As required
8.9	Former Werris Creek Colliery Deputy Mine Managers Residence	EO/OCE	As required
8.10	Former Werris Creek Colliery Boiler Chimney	EO/OCE	As required
8.11	Former Werris Creek Colliery Underground Workings	EO/OCE	As required
8.12	Consultation with local Historical Societies	EO	Prior to works
8.13	Changes to Mine Disturbance Footprint	OM/EO	As required

EO – Environmental Officer; OM – Operations Manager; OCE – Open Cut Examiner

8.1 Relocation of the Narrawolga Axe Grinding Grooves Rocks to the Willow Tree Visitor Information Centre

The original commitment from the LOM Project Environmental Assessment for the long term management of the Narrawolga Axe Grinding Groove site was to relocate to within the vicinity of the original site on the rehabilitated post mining landform. In correspondence dated 6th March 2014 (**Appendix A**) from the Nungaroo Local Aboriginal Land Council (NLALC) and the Liverpool Plains Shire Council (LPSC) requested of the Narrawolga Axe Grinding Groove rocks could be instead relocated to the Willow Tree Visitor Information Centre; which would make the site more accessible for the public as well as the Aboriginal community.

NSW DoP was consulted regarding the relocation of the Narrawolga Axe Grinding Groove rocks and indicated in correspondence dated 12th March 2014 (**Appendix A**) that the commitment to relocate the rocks could be modified pending the HMP be updated (Revision I, this document); the aboriginal community consulted and any agreements/approvals required under the NPW Act obtained. ,



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A meeting was held at Quirindi on 20th May 2014 involving the Aboriginal stakeholders, representatives of the LPSC and Advitech (**Table 11**). The participants inspected the proposed storage location at the Willow Tree Visitor Information Centre as well as the temporary Narrawolga Axe Grinding Groove rocks storage place at WCC. At the meeting the relocation of the rocks was discussed and an opportunity for all stakeholders to provide feedback on the relocation methodology.

Table 11: Participants of the field inspection and stake holder meeting

Name	Organisation
Balazs Hansel	Advitech Environmental
Belinda Eyekamp	LPSC
Carmel Brickell	Wiradjuri Elder, NLALC
Gordon Hugh Nean	Gomeri Elder, Executive of NLALC
Louise Moore	NLALC
Mary Roberts	LPSC
Neil McGarry	LPSC

PA 10_0059 was granted on 25th October 2011 in accordance with the Part 3A process. Under section 75U of the EP&A Act 1979, a number of other approvals have been integrated into the Part 3A approval process and are not required to be separately obtained for the project. These include heritage-related approvals under the Heritage Act 1977 and National Parks and Wildlife Act 1974. While an AHIP was required for the original removal, an AHIP will not be required for the final relocation of the Narrawolga Axe Grinding Grooves.

OEH requested the following documents be developed for the relocation of the Narrawolga Axe Grinding Groove rocks to the Willow Tree Visitor Information Centre in consultation with all stakeholders:

- Application for the transfer of Aboriginal objects for safekeeping (Section 85A 1(c) of the NPWS Act) (**Appendix U**);
- Methodology for the relocation process (**Appendix V**); and
- Complete a Site Recording Form and a Narrawolga Axe Grinding Grooves Relocation Report (to be developed after relocation completed and included in a later revision of the HMP).

Pending approval of the HMP (Revision H, this document) and OEH approval; the relocation of the Narrawolga Axe Grinding Grooves rocks to Willow Tree Visitor Information Centre will relinquish WCC's responsibility for ongoing management of this heritage relic and transferred to the NLALC in perpetuity.

8.2 **Discovery of a Potential Aboriginal Site or Artefact**

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.

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3. The person discovering the artefact will notify their supervisor and/or OCE who will ensure that work has ceased and the area or areas are cordoned off.
4. The supervisor and/or OCE will notify the Environmental Officer and Operations Manager.
5. The Environmental Officer will:
 - a) Request a qualified archaeologist to attend the site and advise on its archaeological significance;
 - b) Request the Site Monitor for Nungaroo LALC, 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 OEH Western Regional Archaeologist (Dubbo Office), with the advice from the archaeologist and Nungaroo LALC for determination of further procedures.
6. WCC will implement the procedures agreed between LALC and OEH.

Robert Taylor (Manager – OEH Dubbo)

(02) 68835354

robert.taylor@environment.nsw.gov.au

8.3 **Consultation with Aboriginal Groups and Community**

WCC will continue to consult with the relevant Aboriginal Groups and families in particular, Nungaroo LALC. Any consultation will be undertaken as required; in an open and honest manner between WCC management and the Nungaroo LALC. Examples of when consultation will be undertaken includes arranging access to and the relocation of the Narrawolga Axe Grinding Grooves site as previously discussed above. A draft copy of this management plan was sent to Nungaroo LALC for their input into the proposed management of Aboriginal heritage values and no comments were received back.

Nungaroo Local Aboriginal Land Council

C/- Hoholt Property Services

PO Box 3630, Tamworth NSW 2340

2 Station Street, Quirindi NSW 2341

8.4 **Discovery of Human Remains**

It is unlikely that human remains will be discovered within the LOM Project (Landskape, 2010). If human skeletal remains are encountered during the course of the LOM Project, all work in that area will cease. The remains will not be handled or disturbed, except to prevent further disturbance. The Police and the State Coroner's Office will be notified. If the Police believe that the skeletal remains are more than 100 years old and Aboriginal, WCC will contact the OEH Western Regional Archaeologist (Dubbo Office – as above) for advice. In the unlikely event that an Aboriginal burial is encountered, strategies for its management will be devised at the time with the involvement of the local Aboriginal community.

Robert Taylor (Manager – OEH Dubbo)

(02) 68835354

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robert.taylor@environment.nsw.gov.au

8.5 **Disturbance of Unknown Former Werris Creek Colliery Historic Heritage Items**

If previously undocumented items are revealed during the mining process, WCC will consult with a heritage professional regarding the heritage significance and what further actions are required, if any. Blasting will substantially fragment the ground and collapse the old workings, it is not expected that any items from the former colliery will survive the mining process. For example uncovering destroyed/damaged timber or metal fragments does not constitute material of heritage significance. Consultation with the Heritage Council of NSW and Liverpool Plains Shire Council's Heritage Advisor may be required.

Katrina Stankowski (Heritage Council of NSW)

(02) 98738569

katrina.stankowski@heritage.nsw.gov.au

Ray Christison (LPSC Heritage Advisor)

0419438609

highground@swiftdsl.com.au

8.6 **Coal Loading Chute and Surrounds**

Archival images, elevations of the Coal Loading Chute and a plan of the area have been submitted to the Heritage Council of NSW (Advitech, 2012) (**Appendix L**). Consistent with the recommendations made in the primary historical investigation into the former Werris Creek Colliery, WCC contacted LPSC, Quirindi Historical Society, Quirindi Rural Heritage Village and Australian Railway Monument and Rail Journeys Museum regarding salvage of objects from the Coal Loading Chute site. LPSC, Quirindi Historical Society and Australian Railway Monument and Rail Journeys Museum did not express any interest in the Chute. The Quirindi Rural Heritage Village did express interest and WCC organised for the transport and the chute was delivered to the Heritage Village in September 2012.

Following salvage of the Coal Loading Chute, the area will be cleared and blasted in accordance with the Blast Management Plan (WCC, 2013). To ensure the area is minable and for safety working in areas above the former underground mine, blasting will substantially fragment the ground and collapse the old workings. In the event that any underground workings or items associated with the old Werris Creek Colliery survive then **Section 8.5** will be followed.



Figure 11: Former Coal Loading Chute prior to relocation

8.7 Mileage Marker

The mileage marker (**Figure 12**) was located at the former Deputy Mine Managers residence. Consistent with the recommendations made in the primary historical investigation into the former Werris Creek Colliery (Advitech 2012), WCC contacted LPSC, Quirindi & District Historical Society Cottage & Museum, Quirindi Rural Heritage Village and Australian Railway Monument and Rail Journeys Museum regarding salvage of the mileage marker. LPSC and Australian Railway Monument and Rail Journeys Museum did not express any interest in the mileage marker. The Quirindi Historical Society Cottage & Museum and Quirindi Rural Heritage Village did express interest. WCC delivered the mileage marker to the Quirindi Historical Society Cottage & Museum on 28th September 2012 (**Appendix A**) and discovered the relic is in fact a topographic marker with north, east, south and west labelled on the four sides of the object. Given that the former Deputy Mine Managers residence is located on the crest of the “Old Colliery Hill”, the description as a topographic marker would fit with the geographic context of the site.



Figure 12: Mileage Marker located at the former Deputy Mine Managers Residence

8.8 Former Werris Creek Colliery Foundations

The former Werris Creek Colliery foundations of the bathhouse and other infrastructure were located on the eastern slopes of the “Old Colliery Hill” (**Figure 13**), now located within the LOM Project footprint.

The area will be cleared and blasted in accordance with the Blast Management Plan (WCC, 2012). To ensure the area is minable and for safety working in areas above the former underground mine, blasting will substantially fragment the ground and collapse the old workings. In the event that any underground workings or items associated with the old Werris Creek Colliery survive then **Section 8.3** will be followed.



Figure 13: Concrete chimney and former above ground structures circa 1970 (Source: McEvilly *et al*, 2004 in Landscape, 2010)

8.9 Former Werris Creek Colliery Deputy Mine Managers Residence

The former Werris Creek Colliery Deputy Mine Managers residence is located on the crest of the “Old Colliery Hill”, and was home to the Thomas family from the 1930s to 1990s (**Figure 14**).



Figure 14: Dora and Elizabeth Thomas at the former Deputy Mine Managers residence in the early 1950’s (photo courtesy of Elizabeth Thomas, reproduced from Landscape, 2010)

Archival images, as well as plans and elevations of the Deputy Mine Managers residence, have been submitted to the Heritage Council of NSW (Advitech, 2012 and **Appendix L**). The area will be cleared and blasted in accordance with the Blast Management Plan (WCC, 2012). To ensure

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the area is minable and for safety working in areas above the former underground mine, blasting will substantially fragment the ground and collapse the old workings. In the event that any underground workings or items associated with the old Werris Creek Colliery survive then **Section 8.5** will be followed.

8.10 Former Werris Creek Colliery Boiler Chimney

The former Werris Creek Colliery Boiler Chimney was located on the eastern slopes of the “Old Colliery Hill” (**Figure 15**) associated with the other infrastructure related to the former colliery activities.



Figure 15: Boiler Chimney location and condition in 2010 (Photo courtesy of Horizon Surveying Pty Ltd)

The only remaining features of the Boiler Chimney comprise of a pile of concrete and steel rubble (**Figure 16**). The rubble represents the remains of the boiler chimney that was demolished with the consent of Council in March 2010 under DA 29/2010.

In the event that any underground workings or items associated with the old Werris Creek Colliery survive then **Section 8.5** will be followed.

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Figure 16: Boiler chimney rubble located at the site of the former above ground workings, looking south.

8.11 Former Werris Creek Colliery Underground Workings

As the former Colliery workings are within the E Seam of the current WCC mine open cut, the LOM Project will extract the entire coal resource including the area previously mined. To ensure the area is minable and for safety working in areas above the former underground mine, blasting will substantially fragment the ground and collapse the old workings. In the event that any underground workings or items associated with the old Werris Creek Colliery survive then **Section 8.5** will be followed. The location of underground workings will be documented by a surveyor.

8.12 Consultation with Local Historical Societies

WCC recognises that the development of the LOM Project will result in removing the last remaining physical evidence of the former Werris Creek Colliery and has therefore actively consulted with local historical societies and groups regarding the available information on the historical heritage of the site. WCC has provided:

- The Quirindi Historical Society Cottage & Museum on the 18th June 2012 (**Appendix A**), a copy of the Cultural Heritage Assessment (Landskape, 2010) and site photographs as a record of the remnant features at the time of removal;
- 200 copies of the booklet, *A History of Coal Mining at Werris Creek* (Cupper 2012) were provided to the Australian Railway Monument and Rail Journeys Museum at Werris Creek on 26th June 2012 and 100 copies provided to the Quirindi Historical Society Cottage & Museum on the 28th September 2012.
- The coal chute will be offered to Quirindi Rural Heritage Village (**Section 8.6**).
- The mileage marker was given to the Quirindi Historical Society Cottage & Museum on the 28th September 2012 (**Section 8.7**).

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Quirindi Rural Heritage Village Inc

Cedric Grayson

(02) 6746 2992 or 0427461785

Lot 8796/15 Borambil Rd Quirindi NSW 2343

cedgrayson@optusnet.com.au

Quirindi Historical Society Cottage & Museum
Inc

Audrey Armstrong

(02) 67463273 or 67609634

PO Box 279/44 Station Street Quirindi NSW
2343

Australian Rail Monument (ARM) Management Inc (trading as Rail Journeys Museum

Chris Holley

(02) 67687929

PO Box 43 Werris Creek NSW 2341

railjny@nsw.chariot.met.au

The Werris Creek Coal Community Consultative Committee (supported by Whitehaven Coal), engaged an archaeologist to prepare *A History of Coal Mining at Werris Creek* (Cupper 2012). This document provides an extensive account of the history of the Werris Creek Colliery and provides a useful historical reference to the archaeological potential of the former Werris Creek Colliery and surrounds.

8.13 Changes to Mine Disturbance Footprint

In the event the LOM Project Site disturbance footprint changes, the Environmental Officer will review the coverage of previous survey work (**Section 5** and **Figure 4**) and, if required, inspect the proposed site of disturbance. If the inspection determines that further consultation and field survey is required, then this will be undertaken to confirm no sites or objects of Aboriginal heritage significance are impacted.

9 MONITORING AND INSPECTIONS

As part of the EMS, inspection systems are integral to environmental management by identifying issues and observing the effectiveness of control measures. WCC have inspection systems to identify and manage cultural heritage impacts.

9.1 Pre-Clearing Inspections

In accordance with the Biodiversity and Offset Management Plan Pre-Clearing Inspections, the Environmental Officer will look for evidence of heritage items within the proposed clearing area prior to vegetation clearing and soil stripping operations.

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10 **TRAINING**

Effective implementation and maintenance of this plan requires communication and training to all levels of operational and management staff at WCC. Prior to any person undertaking work at WCC, that person will undergo a Whitehaven general induction programme which will incorporate environmental aspects including archaeological and cultural heritage management, procedures and obligations.

A copy of the general induction documentation with respect to Aboriginal heritage is attached in **Appendix Q**. This includes the procedures to be adopted in the event of the discovery of a potential site or artefact. In addition to training during the induction process, posters identifying the types of Aboriginal heritage material that may be located on the site during mining operations as well as basic actions and responses to be taken are displayed in the employee lunch rooms (**Appendix R**).

The Environmental Officer will conduct heritage awareness tool box talks to ensure that WCC employees and contractors maintain their awareness for the potential heritage onsite, The tool box will outline if any known heritage items could be in the vicinity of their work area as well as the basic actions and responses to be taken if previously undocumented heritage items are identified.



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11 REPORTING

Reporting of management information is an integral component of an EMS. **Table 10** outlines the types of reports that include cultural heritage information; the reporting frequency, requirements, distribution and timing. Any reporting processes that are linked to approval conditions are *italicised*.

Table 10: Reporting Schedules for Aboriginal and Historical Heritage Management

Report	Frequency	Requirements	Distribution	Timing
Discovery of a potential historical heritage site or artefact	As required	As per Section 8.5 , if required to be documented then a heritage consultant will prepare a report and archival recording.	Whitehaven LPSC	Immediate
Discovery of a potential aboriginal site or artefact	As required	As per Section 8.2 , if required to be documented then a heritage consultant will prepare a report in consultation with Nungaroo LALC and OEH.	Whitehaven OEH	Immediate
Cultural Heritage Complaints	As required	Complete Whitehaven Coal/WCC Complaints Form including complainant, complaint reported date & time, date & time of compliant event, complaint method, complainant details, complaint nature, actions taken and follow up contact. <i>Meet Condition M5 of EPL 12290.</i>	WCC Complainant OEH (if requested)	As soon as practicable
	Monthly	Update Complaints Register with a summary of complaints received. <i>Meet PA 10_0059 Schedule 5 Condition 10 Dot Point 5.</i>	Website	Within 14 days of month end
End Of Month Report	Monthly	Summary of any cultural heritage issues and complaints received collated into site report for Whitehaven Coal management.	WCC	As soon as practicable
Environmental Monitoring Report	Quarterly	Summary of any cultural heritage issues for inclusion in environmental monitoring report for discussion at CCC (Community Consultative Committee) meetings. <i>Meet PA 10_0059 Schedule 5 Condition 10 Dot Point 4.</i>	CCC WCC Website	2 weeks prior to CCC meeting
AEMR	Annually	Summarise operational and environmental activities for the previous year including annual review requirements, review of compliance with HMP, PA10_0059 and other approvals plus a description on the status of the Narrawolga axe grinding grooves. <i>Meet PA 10_0059 Schedule 5 Condition 3 and ML 1563/1671/1672 Condition 4.</i>	DoP DRE WCC Website	Due by 31 st May each year

Further details on WCC incident and community complaint processes is provided in the WCC EMS in accordance with Whitehaven Coal incident reporting standard and relevant procedure.



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12 REVIEW

A key component of this HMP (as part of WCC EMS) is that WCC be able to review the effectiveness and performance of heritage management onsite. WCC will implement a number of review processes to ensure that there is continuous improvement of heritage management including:

- Heritage Management Plan Review;
- Heritage Performance Annual Review; and
- Independent Environmental Audits.

Any of these review mechanisms may trigger a revision of the HMP in **Section 12.4** below.

12.1 Heritage Management Plan Review

A protocol for the HMP Review is provided in **Appendix S**. WCC will annually complete the HMP review protocol prior to writing the annual review section of the AEMR. HMP review protocol will outline the management measures implemented for the previous year, track progress against the objectives and targets, changes to risks associated with impacting cultural heritage areas, demonstrate whether accountabilities been followed, and that inspections and reporting process have been completed. The outcomes from the HMP review will be incorporated into the annual review section of the AEMR.

12.2 Heritage Performance Annual Review

WCC will annually review its heritage performance and management as a part of writing the AEMR in accordance with PA 10_0059 (Schedule 5 Condition 3). The Heritage Performance Annual Review will include a comprehensive review of the heritage management measures and any complaints regarding heritage over the period 1st April to 31st March and make comparison of these results against the:

- Heritage objectives and targets;
- Any discovery of an Aboriginal or European site or artefact;
- Address any recommendations made in the independent environmental audit;
- Outline management measures to be implemented over the next year; and
- Outline whether a revision to the HMP is required.

12.3 Independent Environmental Audit

WCC is required to undertake an Independent Environmental Audit (IEA) every three years in accordance with the PA 10_0059 (Schedule 5 Condition 8). The first IEA will be undertaken prior to June 2014 and every three years after. The IEA will:

- Be conducted by a suitably qualified, experienced and independent team of experts whose appointment will be endorsed by DoP;
- Include consultation with the relevant agencies;

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- Assess the environmental performance of the project;
- Assess whether WCC is complying with the requirements of PA 10_0059, EPL 12290, ML 1563, ML 1671, ML 1672 and including any assessment, plan or program required under these approvals; and
- Recommend appropriate measures or actions to improve environmental performance and rehabilitation at WCC.

12.4 **Revision of the Heritage Management Plan**

The HMP is planned to be revised after three years in 2015. However, in accordance with PA 10_0059 (Schedule 5 Condition 4), WCC will revise the HMP following:

- The discovery of an artefact, site or place;
- The discovery of any heritage item;
- IEA recommending a revision of the HMP;
- Modification of PA 10_0059 recommending a revision of the HMP.

WCC would be required to submit the revised HMP in consultation with the OEH for DoP's approval within 3 months of any triggering event listed above.



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13 CONTINGENCY PLAN

WCC is required to implement a contingency plan to manage any unpredicted impacts and their consequences. In regards to contingency plans for heritage management, WCC have a number of management strategies that would identify unpredicted heritage impacts and management measures to mitigate or ameliorate those impacts.

The need to implement heritage contingency plans will be identified by WCC using the reporting processes in **Table 11**.

Table 11: Identification of Cultural Heritage Contingency Plan Triggers

Reporting Process	Frequency	Method	HMP Section
Pre Clearing Inspection or Clearing Works	As required	Identification of heritage item by Environmental Officer prior or by employee /contractor undertaking clearing works	9
Community Complaint	As required	Complaint investigation identifies cultural heritage impact outside predicted impact	11
Environmental End Of Month Report	Monthly	If required, discussion on discovery of unknown Aboriginal or European site or artefact.	11
Environmental Monitoring Report	Quarterly	If required, discussion on discovery of unknown Aboriginal or European site or artefact.	11
Annual Environmental Management Report	Annual	If required, discussion on discovery of unknown Aboriginal or European site or artefact.	11

A number of management measures and actions already discussed in the HMP can be implemented as heritage contingency plans are outlined in **Table 12**.

Table 12: Cultural Heritage Contingency Plans

Contingency Plan	Method	HMP Section
Burial Site Discovery	Follow procedure outlined in management plan	8.4
Potential Site or Artefact Discovery	Follow procedure outlined in management plan	8.2 or 8.5
Community Complaint	Response to community complaint outlining contingency plan actions to be implemented to the satisfaction of the complainant and DoP/OEH/DRE if involved	11

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