

	TARRAWONGA COAL MINE ENVIRONMENTAL MANAGEMENT SYSTEM	Document Owner:	Environmental Superintendent
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		Last Revision Date:	May 2021
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HERITAGE MANAGEMENT PLAN

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Appendices

Appendix A	List of RAPs
Appendix B	List of Historic Stakeholders
Appendix C	Archaeological Clearance Sign Off Form
Appendix D	Scarred Tree Removal Protocol
Appendix E	Most recent list of Extant of Aboriginal Cultural Heritage sites

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ACRONYMS USED THROUGHOUT THIS DOCUMENT

AEMR Annual Environmental Management Report (now Annual Review (AR))

AHIMS Aboriginal Heritage Information Management System

AHIP Aboriginal Heritage Impact Permit

CCC Community Consultative Committee

CL Coal Lease

DPIE Department of Planning Infrastructure and Environment

MEG Regional NSW, Mining, Exploration and Geosciences

EA Environmental Assessment

EPA Environment Protection Authority

EPL Environment Protection Licence

GSC Gunnedah Shire Council

HMP Heritage Management Plan

LALC Local Aboriginal Land Council

ML Mining Lease

NSC Narrabri Shire Council

DPIE Department of Planning Infrastructure and
Environment

PA Development Consent Approval (Project Approval)

RAP Registered Aboriginal Party

TCM Tarrawonga Coal Mine

TCPL Tarrawonga Coal Pty Ltd

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1.0 INTRODUCTION

The Tarrawonga Coal Mine (TCM) is located approximately 15 km northeast of Boggabri, 10km north of the Canyon Coal Mine (formerly Whitehaven, in closure) and south of, and adjacent to, the Boggabri Coal Mine (BCM) (Figure 1). The mine site is contained within Mining Lease (ML) 1579, ML 1693, ML 1685 and ML 1749 as shown in Figure 1. The mine site is being developed by Tarrawonga Coal Ltd (TCPL), which is owned by Whitehaven Coal Mining Pty Ltd.

The mine site operates under Project Approval (PA) 11_0047 (granted 22 January 2013), and has made 8 Modifications since this date. TCPL also operates under Environment Protection Licence (EPL) 12365.

The areas of disturbance comprise of open cut mining, out-of-pit emplacement areas, a coal processing and stockpile area, administration buildings and various water management structures and roads (Figure 2).

1.1 Scope of HMP

The contents of this plan have been prepared in accordance with recommendations and commitments presented in the Tarrawonga Environmental Assessment (EA Appendix K Aboriginal Cultural Heritage Assessment (Kayandel 2011) and EA Appendix L Historical Heritage Assessment (Heritage Management Consultants 2011)), assessments associated with subsequent modifications to the project (Landskape 2010; Whincop Archaeology 2019), and Schedule 3, Condition 52 of PA 11_0047 (Table 1).

This document applies to all activities conducted at the mine site for the life of PA 11_0047, and should be read in conjunction with other environmental management plans. Cultural heritage management performance to date is available in the mine site's Annual Environmental Management Reports/Annual Reviews (AEMR/Annual Review).

This HMP covers the entirety of the Project Boundary for the Mine (Figure 2). This includes the areas within the proposed Disturbance Boundary and mine infrastructure area, as well as all areas outside the Disturbance Boundary but within the Project Boundary (ML).

1.2 Objectives of HMP

The Heritage Management Plan (HMP) has been prepared to ensure that impacts on cultural heritage (Aboriginal and historic) within the area are avoided or mitigated. The HMP has been prepared with the following objectives:

- to provide a precise set of procedures to enable the identification and conservation of cultural heritage places and objects within the mine site;
- to provide management strategies for cultural heritage sites located in those parts of the mine site not affected by mining or mining-related activities;
- to establish a protocol with the Registered Aboriginal Parties (RAP's) for involvement in management works and access to sites and salvaged cultural materials; and

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- to ensure all personnel are aware of their obligations, responsibilities and the procedures under the *National Parks and Wildlife Act 1974* and *NSW Heritage Act 1977* and their obligations under the Development Consent Approval.

Table 1: Schedule 3, Condition 52 of PA 11_0047

Detail	HMP
Heritage Management Plan <i>The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</i>	
(a) <i>be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;</i>	
(b) <i>be prepared in consultation with OEHL and local Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);</i>	
(c) <i>be submitted to the Secretary for approval prior to undertaking any activities that may impact heritage items or sites, unless the Secretary agrees otherwise;</i>	
(d) <i>include the following for the management of Aboriginal cultural heritage:</i> <ul style="list-style-type: none"> a detailed archaeological salvage program for Aboriginal sites/objects within the project disturbance area, including methodology and procedures/protocols for: <ul style="list-style-type: none"> sub-surface testing; staged salvage, based on anticipated mine planning; pre-disturbance monitoring; site assessment and reporting; research objectives to inform knowledge of Aboriginal occupation; protection, storage and management of salvaged Aboriginal objects; addressing relevant statutory requirements under the <i>National Parks and Wildlife Act 1974</i>; and, long term protection of salvaged Aboriginal objects; a description of the measures that would be implemented for: <ul style="list-style-type: none"> protecting, monitoring and managing Aboriginal sites outside the project disturbance area; maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site and in the biodiversity offset area; managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols; ongoing consultation with the local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on-site and in the biodiversity offset area; ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions; 	
(e) <i>include the following for the management of historic heritage:</i> <ul style="list-style-type: none"> 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 historic heritage items at the site, including (in the case of human remains) stop work provisions and notification protocols; and ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and ensure that suitable records of these inductions are kept. 	

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1.3 Author of Revised HMP

The revised HMP has been prepared by a suitably qualified and experienced professional, and has been prepared in consultation with DPIE and relevant stakeholders. The revised HMP has been prepared by Dr Matthew Whincop from Whincop Archaeology Pty Ltd (Director), a qualified archaeologist with more than two decades of experience in archaeological research and consultancy. Dr Whincop has authored numerous Cultural Heritage Assessments, Cultural Heritage Management Plans, Heritage Impact Assessments and Due Diligence Assessments.

1.4 HMP Review

This HMP has been developed on the basis that it will remain a "live" document. It will be reviewed internally as required; i.e. following completion of the Annual Review, and/or following a heritage related incident, audit, or modification to the conditions of approval. TCPL shall review and, if necessary, revise the HMP required under condition 5 of Schedule 5 of PA 11_0047 to the satisfaction of the Secretary. Copies of the revised and approved HMP will be made available on Whitehaven's website.



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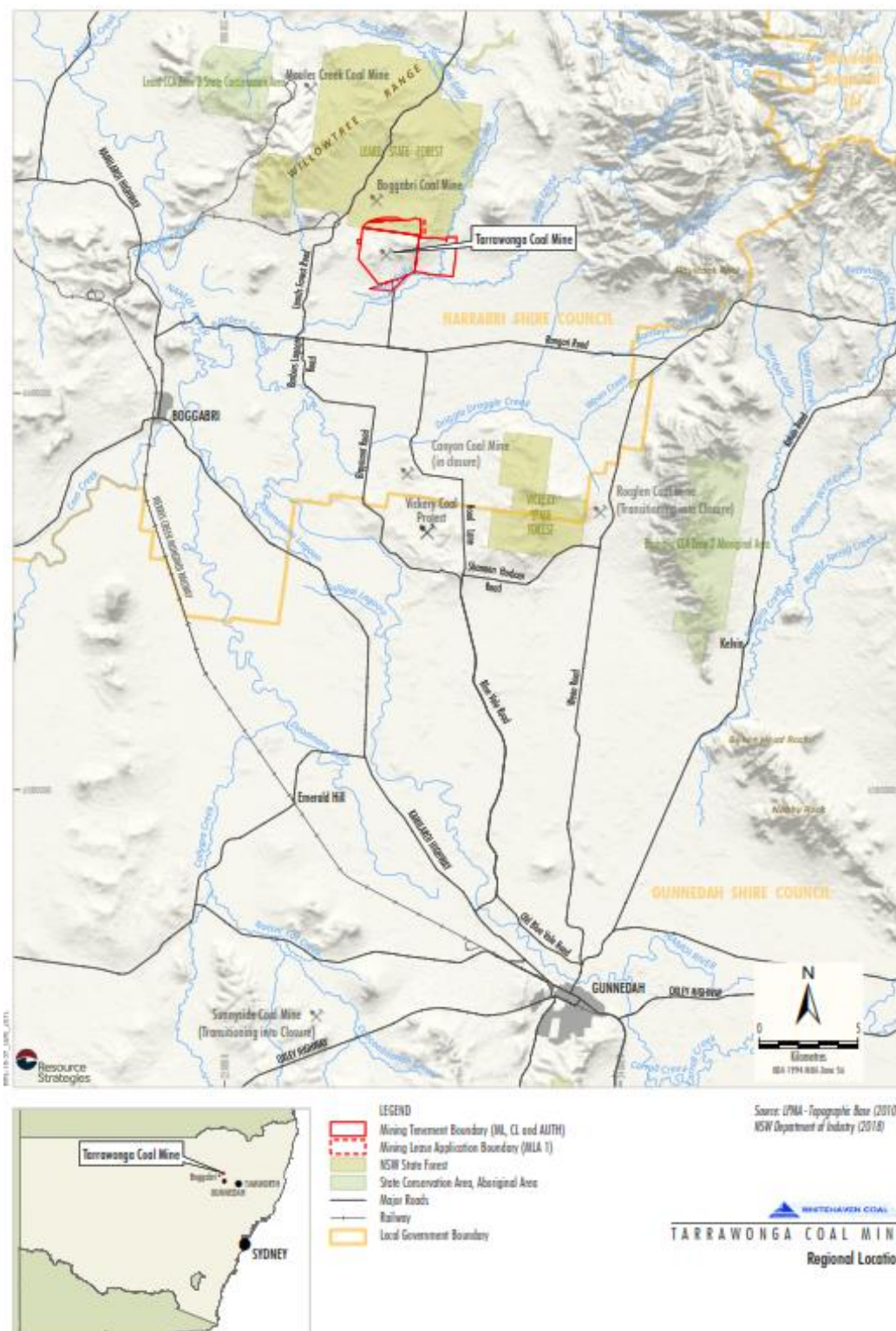


Figure 1: Tarrawonga Coal Mine Location



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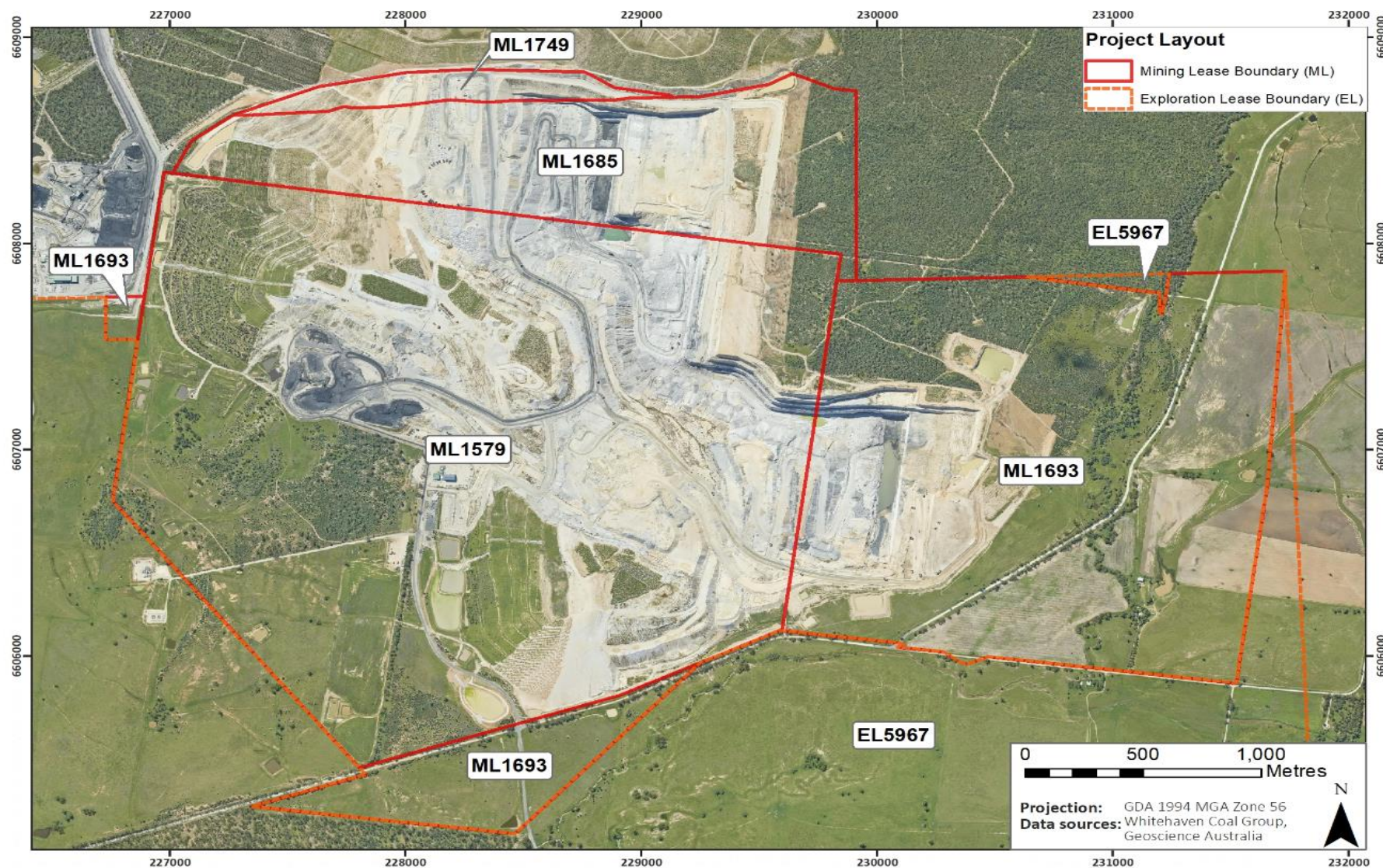
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Figure 2: Project Layout



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2.0 STATUTORY CONTEXT

This plan has been prepared with reference to relevant legislation, approvals and guidelines and is consistent with the information and commitments provided in the *Tarrawonga Coal Project Environmental Assessment* (Resource Strategies, 2011), including the *Aboriginal Cultural Heritage Assessment* (Kayandel, 2011) and *Historical Cultural Heritage Assessment* (Heritage Management Consultants Pty Ltd, 2011). This HMP has been prepared in accordance with Schedules 3 (Condition 52) and 5 (Condition 3) of PA 11_0047.

All known and unknown Aboriginal cultural heritage sites in NSW are protected by the State National Parks and Wildlife Act 1974 (NP&W Act) and the Environmental Planning and Assessment Act 1979 (EP&A Act). All historic heritage in NSW are protected by the NSW Heritage Act 1977 and the EP&A Act. These Acts prohibit the destruction or disturbance of any cultural heritage site, place or object, whether on private or public land.

The significance of heritage sites is determined through the application of principles outlined in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (also known as the Burra Charter).

The Office of Environment and Heritage (OEH now DPIE) is the NSW State Government agency that administers these Acts.

Aboriginal consultation undertaken for the mine has been in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010). Ongoing consultation will continue to follow principles outlined in this guideline document.

As the Tarrawonga Coal Mine was approved under Part 3A of the EP&A Act, an Aboriginal Heritage Impact Permit (AHIP) under the NP&W Act for impacts to Aboriginal sites is not required. Notwithstanding, statutory requirements under the NP&W Act for a Care and Control Permit under Section 85a and notification of sites under Section 89a are still required and will be undertaken accordingly.

The Part 3A 'defence' against impact is limited to the scope of PA 11_0047 and, therefore applies only to the Project Boundary for the mine. Hence, biodiversity offset areas associated with the Tarrawonga Coal Project require the implementation of due diligence protocols and, if impact is unavoidable, an Aboriginal Heritage Impact Permit.

Additionally, it is recognised that a Native Title Claim (NC11/6) is current over a section of the Leard State Forest to which this HMP relates. Generally, Whitehaven has been engaged in consultation with the Native Title Claimants (Gomeroi People), and where appropriate, is reflected in this plan.

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3.0 STAKEHOLDER INVOLVEMENT

3.1 Identification of Stakeholders

Stakeholders have a central role to play in the effective management of the heritage values within the Tarrawonga Coal Mine. Heritage provides an important link between the past and present, and is an essential component of Australia's cultural identity. Stakeholders are individuals or groups that have registered interest in the effective conservation and protection of heritage values.

The procedures for identifying Aboriginal stakeholders is outlined in *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010). Relevant stakeholders from the Aboriginal community were identified during the Tarrawonga Coal Mine Environmental Assessment using a process consistent with the above document, and also considering the *Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation* (DECCW, 2005). A list of all identified RAPs is provided in Appendix A. The nine Aboriginal stakeholders who registered an interest (Registered Aboriginal Party - RAP) in being consulted in relation to the Cultural Heritage Assessment process are listed below (in alphabetical order). All references in this HMP to Registered Aboriginal Parties (RAPs) refers to the parties listed below and in Appendix A.

- Aboriginal Native Title Consultants;
- Bigundi Biame Gunnedarr Traditional People;
- Bullen Bullen Consultants;
- Cacatua Culture Consultants;
- Giwir Heritage Consultants
- Gunida Gunyah Aboriginal Corporation;
- Min Min Aboriginal Corporation;
- Minnga Consultants; and
- Red Chief Local Aboriginal Land Council (LALC).

It is recognised that other stakeholders have registered an interest in the Tarrawonga site following the initial registration period. Details of these stakeholders have been noted and, where appropriate, information in relation to the Tarrawonga Coal Mine will be supplied to these parties by Tarrawonga Coal Pty Ltd (TCPL). For the purposes of this HMP and ongoing site works, TCPL will consult directly with the nine RAPs, who may consult with the wider Aboriginal community in relation to cultural heritage management matters related to the project.

While no formal procedure for identifying historic heritage stakeholders exists for NSW, local historical organisations and interested individuals may contribute to the effective conservation and protection of historic heritage. Potential stakeholders for historic heritage located within the Project Boundary include former owners of the properties, local historians and members of the Gunnedah and District Historical Society. A list of historic heritage stakeholders is provided in Appendix B.

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3.2 Ongoing Consultation of Aboriginal Stakeholders (RAPs)

TCPL is committed to maintaining ongoing consultation with RAPs throughout the life of the Mine. It is the responsibility of RAPs to ensure that up-to-date contact details (full name, postal address, telephone number, and where possible, email address) are provided to TCPL. These details will be updated on the register of RAPs, which will be maintained by the Mine Environmental Team over the life of the Mine. Ongoing consultation with RAPs will occur via meetings throughout the operational phases of the Mine. Meetings will be open to all RAPs relevant to the project and will provide a forum for RAPs to raise any issues they may have regarding the Project. In these meetings, TCPL will provide Mine updates.

For the life of the Mine, meetings and/or consultation with RAPs will be convened annually. Issues that may be discussed include:

- mine progress and clearing campaigns;
- approval processes i.e. modifications and amendments
- updates on Care Agreement and Keeping Place negotiations;
- fieldwork protocols, timing and arrangements;
- HMP review and revision;
- key results of any fieldwork (including the outcomes of salvage activities and post-salvage analysis and any additional training opportunities); and
- RAP input on, and facilitating access to, certain species of flora and fauna for cultural purposes.

Where possible, RAPs will be notified of upcoming meetings with a minimum of 14 days' notice. Aboriginal community members other than RAPs may attend these meetings, if agreed by TCPL prior to the meeting. Additional meetings with RAPs may be held on an as required/requested basis, when agreed by TCPL. Meeting notes (minutes) of all RAP meetings will be kept and be made available to RAPs at subsequent meetings, or upon request.

3.3 Ongoing Consultation of Historic Heritage Stakeholders

TCPL is committed to maintaining ongoing consultation with historic heritage stakeholders throughout the life of the Mine. Ongoing consultation will occur via meetings throughout the operational phases of the Mine. Meetings will be held on an as needed basis, and will be open to individuals or groups with an interest in the historic heritage of the Mine. In these meetings, TCPL will provide updates on:

- mine progress;
- HMP review; and
- key results of any fieldwork (including the outcomes of any salvage activities).

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3.4 Heritage Stakeholder Engagement Policy

TCPL is committed to maintaining ongoing consultation and, where relevant, engagement of heritage stakeholders for the implementation of management measures within this HMP. Where commitments within this HMP include the engagement of heritage stakeholders, engagement will be undertaken in accordance with the below Heritage Stakeholder Engagement Policy, which maintains:

- that access to the Mine will be via approved Site or Visitor induction only (there will be no unauthorised access to the Mine);
- that all Heritage Stakeholders comply with Whitehaven's 'Safe Haven Rules' and safety policies and procedures whilst on site, including all task-specific Personal Protective Equipment (PPE) requirements and necessary competencies;
- that all proposed heritage work at the Mine will be assessed and documented prior to commencement of the task in order to identify potential hazards and any controls implemented;
- that all Heritage Stakeholders comply with all management measures within this HMP;
- that all Heritage Stakeholders be Fit for Work, which includes fatigue management and being free from the influence of alcohol and drugs;
- that all Heritage Stakeholders while on site maintain appropriate behaviour in accordance with the guiding principle of mutual respect for all people;
- that all Heritage Stakeholders engaged for heritage fieldwork hold current, relevant business insurance; and
- zero tolerance for non-compliance of the *Heritage Stakeholder Engagement Policy*.

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3.5 Roles and Responsibilities

To ensure satisfactory implementation of the requirements of this HMP, the roles and responsibilities of TCPL personnel are defined in Table 2.

Table 2: Roles and Responsibilities in this HMP

Role	Responsibility
General Manager - Open Cut Operations	<ul style="list-style-type: none"> Provide required resources and support to implement this plan. Understand the requirements of this plan
Operations Manager - Tarrawonga	<ul style="list-style-type: none"> Ensure personnel are aware of their obligations under this plan, and provide support to the site Environmental Officer in implementing the requirements of the plan. Follow relevant procedures in relation to site salvage and identification of artefacts during operational activities. Report any incidents to the Environmental Officer for immediate action and resolution.
Environmental Superintendent	<ul style="list-style-type: none"> Authorise the HMP and any reviews/updates Ensure inductions and training is relevant to the requirements of this HMP Consult with relevant agencies and stakeholders on the development and implementation of the HMP Report any incidents to the relevant agencies
Environmental Officer	<ul style="list-style-type: none"> Undertake the on-ground implementation of this HMP Coordinate activities in this plan with operational personnel and the RAP's Coordinate archaeologists and arborists in the active completion of works required in this plan Assess the ongoing effectiveness of this plan and provide feedback to the Group Environment Manager for any revision requirements Provide operations with relevant advice and information pertinent to management of cultural heritage issues, including provision of toolbox talks on heritage matters Undertake review of site disturbance requirements and coordinate site disturbance approval processes, including review of known heritage sites against areas proposed for disturbance Provide input to the AEMR/Annual Review in relation to performance against the requirements of the HMP and any developments relating to heritage management during the review period. Coordinate RAP's for site monitoring purposes Coordinate with the RAP's any required site monitoring for soil stripping activities Respond to any events impacting on cultural heritage in accordance with the procedures in this management plan.
All personnel	<ul style="list-style-type: none"> Understand site obligations in relation to this HMP. Report any incident of harm or potential harm to cultural heritage material immediately to your supervisor.

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3.6 Heritage Inductions

Site familiarization/ induction for personnel working on the Mine will include a component on the Aboriginal and historic heritage sites within the Project Boundary. It will generally be discussed: obligations and potential fines under the relevant legislation.

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4.0 CULTURAL HERITAGE OF THE MINE SITE

4.1 Existing Aboriginal Cultural Heritage Sites

Aboriginal archaeological and cultural heritage sites covered by this HMP are listed in Table 3. Listed sites are those identified within the Tarrawonga Project Boundary that are yet to be salvaged. The corpus of Aboriginal cultural heritage sites is based on the results of previous assessments (Archaeological Surveys & Reports 2005; Landskape 2010; Kayandel 2011; Whincop Archaeology 2019), supplemented by subsequent investigations associated with ongoing HMP commitments. Many Aboriginal cultural heritage sites have been salvaged since development of the original Tarrawonga HMP; these salvaged sites have not been included in this revised HMP and do not appear in Table 3. The results of an ~~recent~~ exhaustive search (SearchID#588313) of AHIMS (undertaken ? May 2021) indicate that AHIMS contains a total of 108 entries within the Tarrawonga Project Boundary:

- 33 salvaged sites (which no longer exist);
- 6 entries listed as 'Not a Site';
- 60 extant, valid Aboriginal cultural heritage sites; and
- 9 scarred trees (these sites have been re-assessed and are in the process of being updated on AHIMS to 'Not a Site' - they are not considered further within this HMP).

The Project Boundary contains 60 extant Aboriginal archaeological sites (Figure 3), including:

- 35 artefacts scatters;
- 23 isolated artefacts;
- 1 grinding groove site;
- 1 restricted site (information must be requested from AHIMS directly).

Summary descriptions of the 60 extant Aboriginal cultural heritage sites identified are contained in Table 3.



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Table 3: Extant Aboriginal Cultural Heritage Sites

AHIMS ID	Site Name	Easting MGA 1994	Northing MGA 1994	Site Type
20-4-0114	BC-20	227531	6608729	Isolated artefact
20-4-0157	GGOS1	228604	6605280	Artefact Scatter
20-4-0158	GGOS2	228450	6604477	Artefact Scatter
20-4-0159	GGOS 3	228402	6604442	Artefact Scatter
20-4-0160	GGOS4	228440	6604352	Artefact Scatter
20-4-0198	Restriction applied.			
20-4-0199	BCD 2	225900	6606697	Artefact Scatter
20-4-0200	BCD 3	226322	6606222	Isolated artefact
20-4-0297	TCEP-IF-016	230909	6607039	Artefact Scatter
20-4-0305	TCEP-IF-004	227590	6605116	Isolated artefact
20-4-0307	TCEP-IF-006	227063	6605159	Isolated artefact
20-4-0310	TCEP-IF-009	231339	6607583	Isolated artefact
20-4-0312	TCEP-IF-011	230894	6607193	Artefact Scatter
20-4-0314	TCEP-IF-020	230950	6606068	Artefact Scatter
20-4-0317	TCEP-IF-023	229205	6605789	Isolated artefact
20-4-0318	TCEP-IF-024	231021	6606355	Isolated artefact
20-4-0319	TCEP-IF-025	228896	6605473	Isolated artefact
20-4-0320	TCEP-IF-026	228277	6604964	Isolated artefact
20-4-0321	TCEP-IF-027	227652	6605232	Isolated artefact
20-4-0328	TCEP-OS-007	231309	6607856	Artefact Scatter
20-4-0329	TCEP-OS-008	231199	6607594	Artefact Scatter
20-4-0330	TCEP-OS-009	231084	6607415	Artefact Scatter
20-4-0331	TCEP-OS-010	231239	6607304	Artefact Scatter
20-4-0332	TCEP-OS-011	230827	6607211	Artefact Scatter
20-4-0333	TCEP-OS-012	231039	6607183	Artefact Scatter
20-4-0334	TCEP-OS-013	231170	6607115	Artefact Scatter
20-4-0336	TCEP-OS-015	230902	6606931	Artefact Scatter
20-4-0337	TCEP-OS-016	230314	6605906	Artefact Scatter
20-4-0338	TCEP-OS-017	229714	6606080	Artefact Scatter
20-4-0339	TCEP-OS-018	229384	6605975	Artefact Scatter
20-4-0340	TCEP-OS-019	228763	6605354	Artefact Scatter
20-4-0425	T9/1	231291	6606581	Artefact Scatter
20-4-0433	T9/5	231537	6606001	Artefact Scatter
20-4-0434	T9/6	231751	6607129	Artefact Scatter
20-4-0436	T9/3	231648	6606698	Isolated artefact
20-4-0437	T9/4	231594	6606326	Artefact Scatter



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20-4-0438	T9/7	231747	6607214	Artefact Scatter
20-4-0465	T15/1	231375	6607678	Artefact Scatter
20-4-0466	T15/4	230983	6607659	Isolated artefact
20-4-0604	VEP IA 16	225058	6606658	Isolated artefact
20-4-0605	VEP IA 15	227837	6604109	Isolated artefact
20-4-0606	VEP IA 14	227663	6604101	Isolated artefact
20-4-0662	VEP IA 13	227923	6603602	Isolated artefact
20-4-0669	VEP AS 11	227519	6604187	Artefact Scatter
20-4-0670	VEP AS 12	227745	6604187	Artefact Scatter
20-4-0675	VEP AS 09	228454	6602961	Artefact Scatter
20-4-0682	VEP AS 10	227467	6603959	Artefact Scatter
20-4-0826	TCEP-OS-021	231292	6607423	Artefact Scatter
20-4-0873	Tarrawonga GG1	227811	6607058	Grinding Grooves
20-4-0874	Tarrawonga LOM IA2	228476	6604606	Isolated artefact
20-4-0875	Tarrawonga LOM IA1	228534	6604919	Isolated artefact
20-4-0876	Tarrawonga LOM AS1	228544	6605273	Artefact Scatter
20-4-0883	Tarrawonga IA4	230838	6607002	Isolated artefact
20-4-0884	Tarrawonga IA5	227845	6603690	Isolated artefact
20-4-0885	Bollol Creek IA1	230924	6606201	Isolated artefact
20-4-0886	Bollol Creek AS1	231457	6606845	Artefact Scatter
20-4-0887	Bollol Creek AS2	231110	6606723	Artefact Scatter
20-4-0968	Tarrawonga AS5	230986	6606986	Artefact Scatter
20-4-0971	Bollol Creek IA2	230895	6606571	Isolated artefact
20-4-0972	Tarrawonga IA8	231055	6606927	Isolated artefact

Note: errors regarding the location of some sites were included in the original HMP and have since been corrected.

4.2 Aboriginal Archaeological Heritage Values

The Aboriginal cultural heritage values of the Tarrawonga Project Boundary are commonly associated with archaeological evidence and its cultural significance for RAPs. All identified Aboriginal archaeological sites within the Tarrawonga Project Boundary have been identified by RAPs as being, in their opinion, culturally significant. These archaeological sites have the potential to provide a link between the past and the present, and RAPs have identified the need for them to be cared for appropriately.

Aboriginal archaeological heritage values identified within the Tarrawonga Project Boundary include:

- Pre-contact Aboriginal activity associated with the presence of stone artefacts on and sometimes within the topsoil in close association with creeks and some nearby slopes.
- Occasional evidence of Aboriginal grinding practices.

The Aboriginal archaeological sites within the Tarrawonga Project Boundary were all assessed

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within the EA as being of low overall archaeological significance rating (local), with the exception of TCEP-ST-009 (AHIMS 20-4-0349), which is considered to be of moderate scientific significance.

4.3 Aboriginal Cultural Heritage Sites Database

A comprehensive Aboriginal Cultural Heritage Sites Database for the Project Boundary has been established by TCPL . The database contains the name, type, size, MGA coordinates, and status of all Aboriginal cultural heritage sites within the Project Boundary. This information is saved in GIS format and will be made available to all TCPL staff and contractors to ensure that any proposed disturbance work considers the location of known sites; this process is managed through the application of the Land Disturbance Permit protocol (Section 6.1). Maps showing boundaries of identified sites will be included with specific works documents and plans.

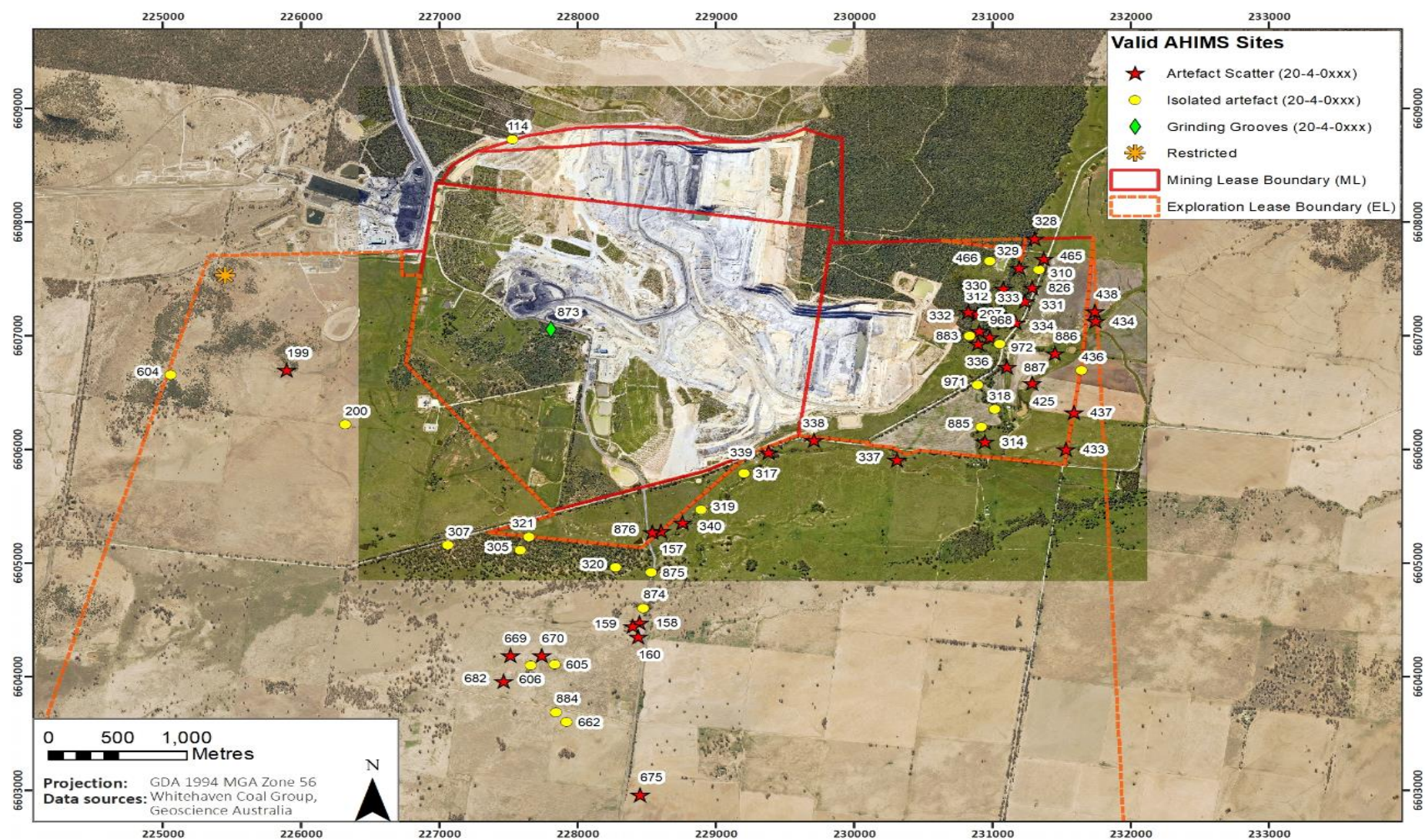
Documentation will be held by the relevant onsite manager responsible at all times. The database will, at a minimum, be reviewed on an annual basis to confirm that site impact details or newly identified sites have been updated. Printed site lists are to be made available to RAPs upon request.



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Figure 3: Extant Aboriginal Cultural Heritage Sites within the Tarrawonga Project Boundary



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4.4 Historic Heritage Sites

Heritage Management Consultants Pty Ltd completed a non-aboriginal historical heritage study of the mine for the Tarrawonga Coal Project Environmental Assessment (2011). The survey did not identify any places or objects of historical cultural heritage significance. Notwithstanding this, the heritage study did identify various items within a rubbish dump site "H2" which contained a collection of car and truck bodies and various other agricultural implements that may be of interest to historical stakeholders.

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5.0 MANAGEMENT AND SALVAGE

The proposed development. impacts will be limited to the Project's approved disturbance boundary within the Tarrawonga Project Boundary. All sites outside the disturbance boundary will not be impacted. This HMP assumes that all sites within the disturbance boundary will be impacted, with the exception of the grinding groove site Tarrawonga GG1 (AHIMS 20-4-0).

At the time of the current revised HMP, 6 Aboriginal cultural heritage sites are remaining within the Tarrawonga Mine are scheduled to be impacted by the mine. This total includes 3 isolated artefacts and 3 artefact scatters (Table 5). The archaeological salvage of these 6 sites will be undertaken, when required, according to procedures outlined in this HMP (Section 5.2). The remaining Aboriginal cultural heritage sites not scheduled to be impacted by mining activities (Table 4) will be managed according to principles and measures outlined in this HMP (Section 5.1).

TCPL recognises the importance of Aboriginal cultural heritage to the Aboriginal community and its obligations under the NP&W Act and the EP&A Act, and the provisions of PA 11_0047, and endeavours to undertake all activities in a manner that conserves the cultural heritage values within the Project Boundary. Ongoing stakeholder consultation is a key principle in the effective conservation of the local heritage values (Sections 3.2 and 3.3).

5.1 Management of Non-Impacted Aboriginal Cultural Heritage Sites

Fifty-four (34) Aboriginal cultural heritage sites within the Project Boundary are not scheduled to be impact by mining activities; i.e. these sites are located outside areas scheduled for disturbance (Figure 4; Table 5). Non-impacted sites will be protected in situ and conserved in accordance with procedures outlined in this HMP.

Aboriginal cultural heritage sites will be protected throughout the life of the Project via the implementation of non-impact management measures listed in this HMP, namely:

- installation of Protective Fencing and Signage at sites (Section 5.1.1);
- annual Cultural Heritage Fencing Audit of all extant sites (Section 5.1.2);
- Heritage Inductions for all construction staff and contractors (Section 5.1.5); and
- compilation and dissemination of the Aboriginal cultural heritage sites database (Section 4.3).



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Table 4: Aboriginal Cultural Heritage Sites Outside Beyond Proposed Impacts

AHIMS ID	Site Name	Easting MGA 1994	Northing MGA 1994	Site Type
20-4-0157	GGOS1	228604	6605280	Artefact Scatter
20-4-0158	GGOS2	228450	6604477	Artefact Scatter
20-4-0159	GGOS 3	228402	6604442	Artefact Scatter
20-4-0160	GGOS4	228440	6604352	Artefact Scatter
20-4-0198	Restriction Applied			
20-4-0199	BCD 2	225900	6606697	Artefact Scatter
20-4-0200	BCD 3	226322	6606222	Isolated artefact
20-4-0297	TCEP-IF-016	230909	6607039	Isolated artefact
20-4-0305	TCEP-IF-004	227590	6605116	Isolated artefact
20-4-0307	TCEP-IF-006	227063	6605159	Isolated artefact
20-4-0310	TCEP-IF-009	231339	6607583	Isolated artefact
20-4-0314	TCEP-IF-020	230950	6606068	Artefact Scatter
20-4-0317	TCEP-IF-023	229205	6605789	Isolated artefact
20-4-0318	TCEP-IF-024	231021	6606355	Isolated artefact
20-4-0319	TCEP-IF-025	228896	6605473	Isolated artefact
20-4-0320	TCEP-IF-026	228277	6604964	Isolated artefact
20-4-0321	TCEP-IF-027	227652	6605232	Isolated artefact
20-4-0328	TCEP-OS-007	231309	6607856	Artefact Scatter
20-4-0329	TCEP-OS-008	231199	6607594	Artefact Scatter
20-4-0330	TCEP-OS-009	231084	6607415	Artefact Scatter
20-4-0331	TCEP-OS-010	231239	6607304	Artefact Scatter
20-4-0333	TCEP-OS-012	231039	6607183	Artefact Scatter
20-4-0334	TCEP-OS-013	231170	6607115	Artefact Scatter
20-4-0336	TCEP-OS-015	230902	6606931	Artefact Scatter
20-4-0337	TCEP-OS-016	230314	6605906	Artefact Scatter
20-4-0338	TCEP-OS-017	229714	6606080	Artefact Scatter
20-4-0339	TCEP-OS-018	229384	6605975	Artefact Scatter
20-4-0340	TCEP-OS-019	228763	6605354	Artefact Scatter
20-4-0425	T9/1	231291	6606581	Artefact Scatter
20-4-0433	T9/5	231537	6606001	Artefact Scatter
20-4-0434	T9/6	231751	6607129	Artefact Scatter
20-4-0436	T9/3	231648	6606698	Isolated artefact
20-4-0437	T9/4	231594	6606326	Artefact Scatter
20-4-0438	T9/7	231747	6607214	Artefact Scatter
20-4-0465	T15/1	231375	6607678	Artefact Scatter
20-4-0604	VEP IA 16	225058	6606658	Isolated artefact
20-4-0605	VEP IA 15	227837	6604109	Isolated artefact



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20-4-0606	VEP IA 14	227663	6604101	Isolated artefact
20-4-0662	VEP IA 13	227923	6603602	Isolated artefact
20-4-0669	VEP AS 11	227519	6604187	Artefact Scatter
20-4-0670	VEP AS 12	227745	6604187	Artefact Scatter
20-4-0675	VEP AS 09	228454	6602961	Artefact Scatter
20-4-0682	VEP AS 10	227467	6603959	Artefact Scatter
20-4-0826	TCEP-OS-021	231292	6607423	Artefact Scatter
20-4-0873	Tarrawonga GG1	227811	6607058	Grinding Grooves
20-4-0874	Tarrawonga LOM IA2	228476	6604606	Isolated artefact
20-4-0875	Tarrawonga LOM IA1	228534	6604919	Isolated artefact
20-4-0884	Tarrawonga IA5	227845	6603690	Isolated artefact
20-4-0885	Bollol Creek IA1	230924	6606201	Isolated artefact
20-4-0886	Bollol Creek AS1	231457	6606845	Artefact Scatter
20-4-0887	Bollol Creek AS2	231110	6606723	Artefact Scatter
20-4-0968	Tarrawonga AS5	230986	6606986	Artefact Scatter
20-4-0971	Bollol Creek IA2	230895	6606571	Isolated artefact
20-4-0972	Tarrawonga IA8	231055	6606927	Isolated artefact

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5.1.1 Protective Fencing and Signage

All identified Aboriginal cultural heritage sites within Table 4 (including any additional non-impacted sites identified in future) will be fenced and appropriately signed for the life of the Mine. Signs attached to fencing will include the following or similar:

**ARCHAEOLOGICAL SITE
NO UNAUTHORISED ENTRY/DO NOT DISTURB
CONTACT TARRAWONGA ENVIRONMENT TEAM**

Cultural heritage fencing will be installed as soon as practicable following approval of this HMP and/or identification of any new sites. As a minimum, fencing will comprise star pickets and high visibility fencing (or similar suitable materials), unless alternative fencing arrangements are determined in consultation with RAPs.

Cultural heritage fencing will fully enclose each site extent, and incorporate the following buffers to avoid inadvertent impacts during fence erection and the operational phase of the Mine. These buffers will also serve to protect potential sub-surface archaeological deposits from harm.

- Artefact Scatters and Isolated Artefacts – site extent plus 10 metre buffer.
- Scarred Trees – tree drip-line plus 5 metre buffer.
- Grinding Grooves – site extent plus 5 metre buffer.

Any existing tracks that traverse a fenced Aboriginal cultural heritage site can continue to be used by 'soft' wheel vehicles (i.e. rubber tyres) and can be maintained accordingly. These portions of track, however, cannot be graded or be subject to ground disturbance activities without a due diligence assessment determining no Aboriginal cultural heritage objects will be harmed. Traffic and/or upgrading of roads will be managed or limited within these areas to reduce additional impacts. An alternative track location is the preferred option.

All fencing and signage will be removed from Aboriginal cultural heritage sites following closure of the Mine.

All heritage fencing will be inspected annually during the operational phase of the Mine to ensure integrity of the fencing and assess the condition of the fenced sites (Section 5.1.2).

5.1.2 Cultural Heritage Fencing Audit

Inspection of cultural heritage fencing will be undertaken for the life of the Mine as part of a compliance auditing program. The fencing audit will be undertaken annually during operations. An archaeologist and RAP(s) are to be engaged by TCPL to conduct the cultural heritage fencing audit. Inspections of these sites will consider any potential impacts associated with drainage lines and erosive processes and any options to mitigate impacts. At a minimum, the inspection of each site will involve recording the following:

- condition assessment of site;
- condition assessment of fencing;
- photographic recording of each site from noted location; and

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- evidence of any nearby disturbance.

A report will be prepared following completion of the cultural heritage fencing audit. The findings of the report will be presented in the Annual Review

5.1.3 Potential Impacts from Weed and Feral Animal Management

Measures to control weeds and feral animals within the Project Boundary will avoid ground disturbance activities within all known Aboriginal cultural heritage sites, unless deemed necessary to the success of the weed and feral animal program.

5.1.4 Exemptions for Emergency Vegetation Management

Should an emergency situation arise that requires vegetation clearance (e.g. firefighting, hazardous materials spill) in the vicinity of protected Aboriginal cultural heritage sites, vegetation clearance will be undertaken with minimum possible disturbance to the topsoil.

Under Section 87A of the NP&W Act, the concept of 'Harming or desecrating' Aboriginal objects or places does not apply during:

- any emergency fire-fighting act or bush fire hazard reduction work within the meaning of the Rural Fires Act 1997 that is authorised or required to be carried out under that Act; and
- anything authorised by or under the State Emergency and Rescue Management Act 1989 in relation to an emergency (within the meaning of that Act) and that was reasonably necessary in order to avoid an actual or imminent threat to life or property.

Activities relating to maintenance, construction, or operational activities do not comprise emergency situations.

5.1.6 Aboriginal Community Access

Aboriginal community members may, throughout the life of the Mine, wish to access sites and/or areas within the Project Boundary and/or the Biodiversity Offset Areas for cultural purposes (e.g. education, ceremony). TCPL is committed to facilitating such access wherever possible. Aboriginal community members wishing to access sites should contact the Tarrawonga Environment Team in writing or register a verbal request at a RAP meeting. Requests for access will be assessed by Whitehaven, in consultation with RAPs and DPIE, on the basis of merit. Where granted, access would be subject to relevant operational and safety considerations. Access to some areas may be restricted during periods of clearance or mining, and cannot be guaranteed. There will be no unauthorised access to the active mining area and any access will need a designated escort.

5.1.7 Potential Indirect Impacts - Blasting

To ensure it will not be indirectly impacted by blasting vibration, the Tarrawonga GG1 grinding



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grooves (AHIMS 20-4-0873) will be subject to blast monitoring for all blasts scheduled within 500 metres of the site. The acceptable vibration limit will be determined by an appropriately qualified expert. Any future identified grinding groove sites within 500 metres of blasting activities will also need to be subject to blast monitoring. In the event that potential blasting impacts are observed, the Procedure for Suspected Damage to Known Aboriginal Cultural Heritage Sites will be implemented (Section 6.4).



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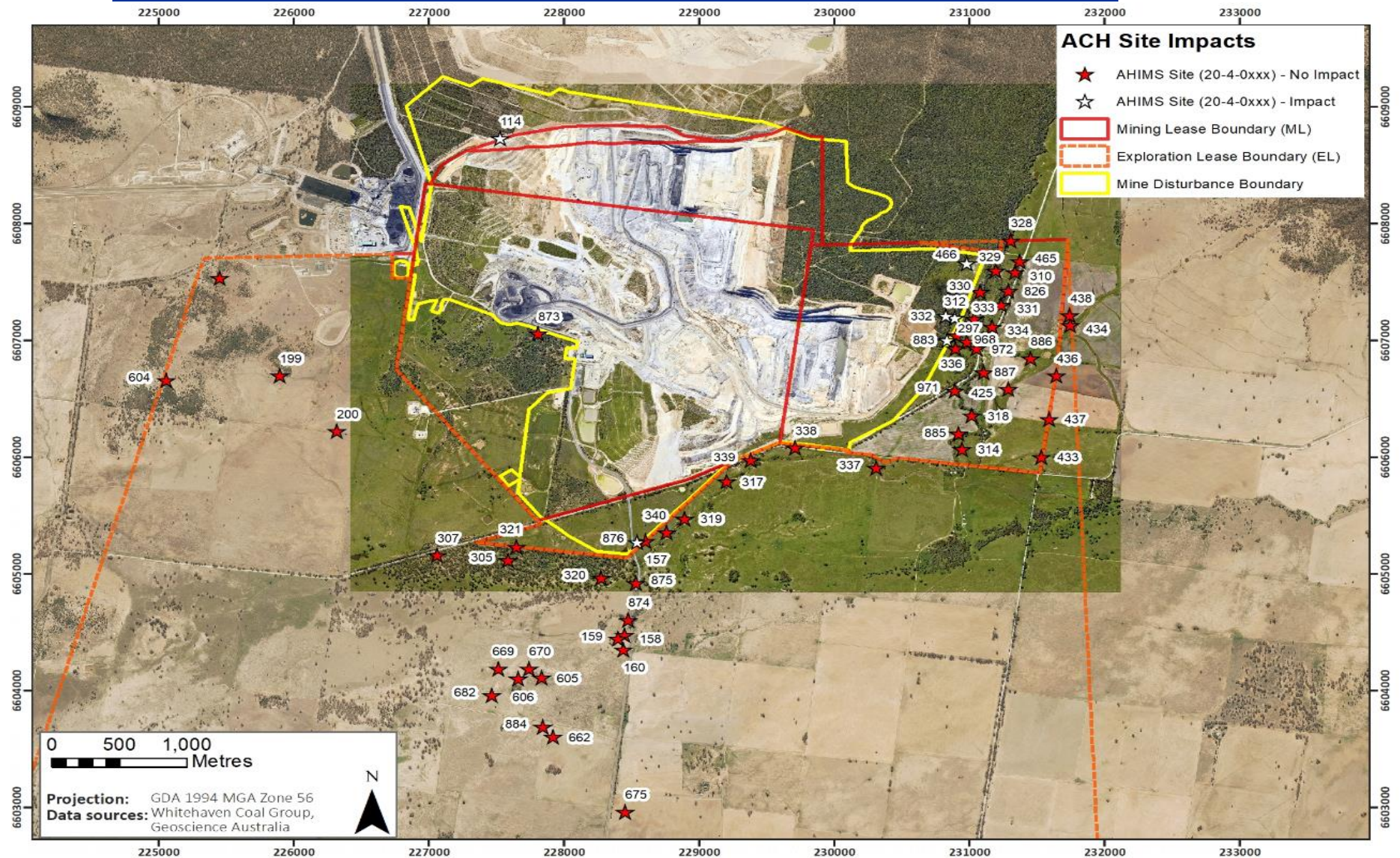


Figure 4: Non-impacted Aboriginal Cultural Heritage Sites within the Tarrawonga Project Boundary



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5.2 Management of Impacted Aboriginal Cultural Heritage Sites

A comprehensive archaeological salvage and monitoring program will be undertaken within the Project Boundary to mitigate scheduled impacts to known sites (Table 5), and to identify previously unrecorded sites within areas scheduled for impact. All archaeological salvage work will be undertaken by, or under the supervision of a qualified archaeologist and RAP(s). The below salvage program for impacted sites relates only to artefact sites. No other site types (e.g. scarred trees or grinding grooves) are scheduled to be impacted by the Project and therefore requiring salvage. If, however, additional site types are identified in proposed impact areas, this HMP will be revised to include site-specific salvage procedures.

Table 5: Aboriginal Cultural Heritage Sites Scheduled to be Impacted

AHIMS	Site Name	Easting MGA 1994	Northing MGA 1994	Site Type	Scientific Significance
20-4-0114	BC-20	227531	6608729	Isolated artefact	Low
20-4-0312	TCEP-IF-011	230894	6607193	Artefact Scatter	Low
20-4-0332	TCEP-OS-011	230827	6607211	Artefact Scatter	Low
20-4-0466	T15/4	230983	6607659	Isolated artefact	Low
20-4-0876	Tarrawonga LOM AS1	228544	6605273	Artefact Scatter	Low
20-4-0883	Tarrawonga IA4	230838	6607002	Isolated artefact	Low

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5.2.1 Impacts to Known Aboriginal Cultural Heritage Sites

Six (6) of the 60 (60) existing Aboriginal cultural heritage sites covered by this *HMP* are scheduled to be impacted by the ongoing expansion of the mine (i.e. they are located within areas scheduled for disturbance). The remaining fifty-four (54) Aboriginal cultural heritage sites will be protected *in situ* throughout the life of the Project (Section 5.1). Impacts to the ongoing expansion of the mining footprint will be mitigated through the implementation of an archaeological salvage program, including surface collection of artefact sites prior to disturbance.

5.2.2 Surface Collection Methodology

Surface collection will be undertaken at six (6) sites (Table 5) by a combined team of archaeologist(s) and RAPs. The objective of surface collection is to systematically record and recover a suitable sample of visible surface artefacts within open artefact sites. Should a previously recorded site not be able to be relocated after a reasonable search (to be determined by the qualified archaeologist in consultation with the attending RAP(s)) an Archaeological Clearance Sign Off Form (Appendix C) can be completed. Surface collection will involve:

- the flagging of all visible artefacts within each site;
- the recording of individual artefact locations using a Differential GPS;
- compilation of a site photographic archive; and
- individual bagging of identified artefacts with a Unique Reference Number (URN).

All collected surface artefacts will be assigned a Unique Reference Number (URN) for accessioning and data analysis purposes. Analysis of surface artefacts will be conducted off site upon completion of each stage of the salvage program.

5.2.3 Archaeological Salvage Signoff

An *Archaeological Clearance Works Sign Off Form* is included as part of the *Land Disturbance Permit* (LDP) protocol (Section 6.1). The LDP is required to be completed and issued to the contractor conducting land clearances. The attending archaeologist will complete the *Archaeological Clearance Sign Off Form* (Appendix C) for sites where archaeological salvage has been completed and ground disturbing works can commence. Archaeological clearance will be provided to Whitehaven on a progressive and timely basis as sites are salvaged.

5.2.4 Post-Salvage Analyses

The primary objectives of the salvage program are to systematically record and recover archaeological data from impacted sites and, where artefact assemblages are of sufficient size, conduct artefact analysis that provides insight into pre- and post-contact Aboriginal life in the area. The salvage program and subsequent analyses will seek to provide insight into past Aboriginal life within the Project Boundary, including landscape use and methods of tool manufacture. Specifically, it will seek to answer questions such as:

- what spatial patterning is evident in the distribution of artefact class or raw material?



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- does artefact distribution vary in relation to landscape features?
- how long have Aboriginal people utilised the sites within the Project Boundary?
- do the sites represent 'persistent places' (i.e. sustained, repeated occupation)?
- what activity or combination of activities occurred at these sites?
- What was the source of the lithic raw materials used on these sites?
- what knapping techniques or strategies were used?
- what types of tools were produced?
- what function(s) did these tools serve?

An appropriate sample of artefacts will be subject to detailed analysis undertaken by a suitably qualified archaeologist. Analysis will record and consider a variety of artefact attributes to address the above research questions, including: raw material; type of termination and/or platform, degree of reduction, presence of retouch, completeness, tool type, and dimensions.

Training in the undertaking of archaeological salvage may be provided to RAP participants, as desired. Opportunities for RAPs to analyse salvaged materials will be provided throughout the archaeological salvage program.

5.2.5 Salvage Reporting

TCPL will commission an archaeologist to produce reports detailing the results of the investigation programs. These reports will include:

- the aims and methodology of the investigation program;
- the location and characteristics of sites;
- the cultural values associated with the artefacts and the specific area from which the artefacts were salvaged;
- the number of Aboriginal objects collected from each site;
- the nature of the cataloguing system used;
- the lithic technology and reduction strategies adopted;
- an analysis of the regional and local contexts of the artefacts; and,
- a summary of consultation undertaken with the RAPs.

These reports will form part of the Annual Environmental Management Report/Annual Review (AEMR/Annual Review). They will be provided to the MEG and DPIE within 12 months of the completion of each investigation program. The reports will also be provided to RAPs upon request at the conclusion of each salvage event.

Following completion of the salvage event, the archaeologist will provide relevant notification to the DPIE to enable updating of the AHIMs records.

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5.2.6 Pre-Disturbance Archaeological Clearance

Although the Project Boundary has been subject to archaeological survey during the EA process, there remains potential for previously unrecorded Aboriginal cultural heritage sites to exist within the Project Boundary. For this reason, areas scheduled to be impacted during mine development and expansion will be subject to archaeological clearance prior to ground disturbance. This process will involve the surface inspection of expansion areas by a qualified archaeologist and RAP(s). Aboriginal cultural heritage objects identified during pre-disturbance archaeological clearance will be subject to the *Procedure for Previously Unidentified Aboriginal Cultural Heritage Objects* (Section 6.3).

5.2.7 Aboriginal Site Impact Record Forms

An *Aboriginal Site Impact Recording Form* (ASIRF) will be completed for all AHIMS sites salvaged as part of the Project, and forwarded to the AHIMS Registrar for update of the database.

5.2.8 Artefact Curation and Aboriginal Keeping Place

Ultimately, artefacts will be stored in an Aboriginal Keeping Place managed by the local Aboriginal community. RAPs will be consulted in order to identify a culturally appropriate Keeping Place for all salvaged material. Once the consultation process is complete, a Care Agreement, as required under the NP&W Act, is to be completed which sets out the obligations of the caretaker for the long-term safe keeping of transferred Aboriginal objects. (<http://www.environment.nsw.gov.au/licences/CareAgreements.htm>).

Until the Keeping Place and Care Agreement are established, all Aboriginal cultural heritage objects recovered during the salvage program will be stored in an Interim Keeping Place in a suitable secure building and/or container, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW2010b), located at the Tarrawonga Mine. . A chain of custody will be prepared for any artefacts that leave site for specialist analysis.

Three cultural heritage sites within the Project Boundary were collected under Aboriginal Heritage Impact Permits 2312 [NAS01 and NIS01] and 1123843 [NAS02]. These are currently stored at the Cumbo Gunerah Keeping Place at the Red Chief LALC office in Gunnedah.

Following the completion of rehabilitation activities or during the rehabilitation program at a time when works within the specific area do not pose a threat, the salvaged Aboriginal objects will be replaced in a location as close as possible to their original location in consultation with OEH and the RAPs. Aboriginal object replacement will be conducted by a suitably qualified archaeologist, with the RAPs invited to observe and participate in repatriation works.



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5.2.9 Subsurface Test Excavations

Subsurface archaeological investigation is proposed to establish the presence, extent and significance of archaeological deposits that may occur in the vicinity of Goonbri Creek. Subsurface investigations of Goonbri Creek sites will occur prior to ground disturbance activities in this area, which may still be some years distant.

Subsurface investigation will occur in two phases:

- **Test excavation:** to determine the extent and nature of subsurface deposits, test excavation will consist of a series of one or more linear transects, or grid pattern, of shovel test pits spaced no more than 20 metres apart. Areas of grossly modified terrain (e.g. dams) will be excluded from the sample. Shovel test pits measuring 40 cm x 40 cm will be excavated in 10 cm spits until a sterile layer or bedrock or 1.2 metres depth is reached. All excavated material will be sieved through a 5 mm aperture mesh.
- **Open area excavation** will be applied to key areas identified through test excavation. Open area excavation will commence at relevant sites, if warranted, following the results of the test excavation regime. The aim of open area excavation is to recover stone artefact assemblages of a size sufficient for a meaningful analysis of the relationship between assemblage composition and past Aboriginal behaviour at and between sites. Excavation squares will be dug by hand to a culturally sterile layer or a depth of 1.5 m, whichever is reached first. In the unlikely event that cultural deposits extend beyond a depth of 1.5 m, discussions will be held with TCPL and RAPs regarding the continuation of the excavation and the management of safety issues associated with deep excavation. Should an archaeological deposit of high integrity/research potential be identified, Whitehaven will be notified immediately and an extension of the excavation area will be negotiated. The open area excavation methodology is:
 - all excavation will be carried out manually using trowels, shovels or mattocks (as appropriate);
 - open area excavation will proceed in 1x1 m units;
 - all excavation units will be assigned an alpha-numeric identifier;
 - excavation will proceed in arbitrary 5 cm spits or stratigraphic layers (as appropriate);
 - excavation will cease at sterile units or bedrock in all instances;
 - photographic and scale-drawn records of exposed soil profiles (i.e. sections) will be made;
 - if specific archaeological features (e.g. hearths) are identified, the entire feature will be excavated and recorded prior to the continuation of excavation;
 - where encountered, charcoal deemed suitable for radiocarbon dating will be collected;
 - all excavated soils will be sieved through 5 mm aperture mesh;
 - artefacts recovered from sieving will be retained in plastic zip-lock bags and labelled with appropriate provenance data;
 - a standard recording form will be used for each 1x1 m excavation unit and will include



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(as a minimum): site name, date, recorder, square identifier, number of spits, and number of artefacts;

- upon completion of excavations, the location of all excavation units will be mapped and incorporated into a topographic survey plan for the site; and
- upon conclusion of excavations at each site all excavation units will be backfilled. No excavation will be left open unless approved by TCPL.

If the initial program of shovel test pits determines that the site does not warrant further investigation (e.g. significant disturbance, few subsurface artefacts), then open area excavation will not be undertaken.

The potential for future excavation of newly identified sites in the Project Boundary is contingent on the identification of sites of moderate or high scientific significance. In order for an Aboriginal archaeological site to be considered significant, it would need to display evidence of good spatial integrity, in situ stratigraphic deposits, and low levels of disturbance. Alternatively, a site type unique to the wider area may be considered significant.

5.3 Biodiversity Offset Area

The biodiversity offset area ("Willeroi") established for the Tarrawonga extension project was not subject to a cultural heritage assessment, and as such is not covered by the provisions of the Part 3A Project Approval relating to cultural heritage. On this basis, the provisions of the NP&W Act apply in full at the "Willeroi" property in relation to the protection of items of cultural heritage. The biodiversity offset area is being set aside for conservation purposes, in perpetuity, and is unlikely to be subject to any surface disturbance activity other than those works associated with general land management and enhancement of vegetation communities. As a consequence, any disturbance activities within the "Willeroi" property will be subject to the *Due Diligence Code of Practice for the Protection of Aboriginal objects in NSW*.

The completion of the Aboriginal Cultural Heritage Strategy, as required under the Project Approval, will include additional consideration to the Aboriginal heritage values associated with the area, and the potential opportunities to enhance and conserve Aboriginal heritage within the biodiversity offset site.

5.3.1 Aboriginal Heritage Conservation Strategy

Recognising the cumulative impact of proposed mining activities within the wider Leard State Forest area, PA 11_0047 required the development of an Aboriginal Heritage Conservation Strategy (AHCS) for the Boggabri-Tarrawonga-Maules Creek complex. The aim of the AHCS is to enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) of the region and provide for their long-term management. The now approved AHCS (UQCHU, 2017) was developed in accordance with PA 11_0047 and maintains a series of commitments for managing, conserving and enhancing heritage values of Willeroi and other related Biodiversity Offset Areas.

6.0 CONTINGENCIES AND PROTOCOLS

6.1 Land Disturbance Permits

Whitehaven's ongoing risk management approach to minimising impacts on heritage sites during operations will involve implementing the Land Disturbance Permits (LDP) protocol. The LDP will apply to all land disturbance activities within the Project Boundary, including tree clearing. The objective of the LDP is to assess whether there is potential for proposed works to impact known, or previously unidentified Aboriginal or historic heritage sites as well as to manage other environmental impacts. The LDP will include completion of a standardised checklist form that determines the necessary pre-disturbance responsibilities of Project staff and contractors. Staff (including contractors) will be made aware of their responsibilities concerning heritage.

Before commencement of any ground disturbance works, Project staff and contractors must complete the LDP form and undertake necessary measures to manage identified risks to known and potential heritage sites. Works will not commence until all management measures have been completed, and the LDP is approved by the Tarrawonga Environmental Superintendent or representative. The LDP checklist will identify known or potential heritage sites, as well as relevant restrictions in the proposed work area.

The LDP will include provision for ecologists and/or archaeologists to check trees for scars of potential Aboriginal origin during vegetation clearance surveys. Should a tree with a potential scar be identified the *Procedure for Previously Unidentified Aboriginal Sites and Artefacts* will apply (Section 6.3).

6.2 Procedure for the Discovery of Human Remains

In the event that suspected human remains (skeletal material) are discovered, the following procedure is to be followed:

- 1 All work must cease immediately in the near vicinity of the find location.
- 2 Notification of the potential human remains must be made immediately to the Tarrawonga Environmental Superintendent.
- 3 The Tarrawonga Environmental Team is to notify the police immediately.
- 4 The Tarrawonga Environmental Team is to contact the DPIE environment line on 131 555 to report the find and advise that police have been notified. DPIE will provide details on the current processes for dealing with archaeological skeletal remains (whether Aboriginal or historic).
- 5 Under instruction of the Police, a suitable area is to be cordoned off by temporary fencing around the suspected human remains site - work can continue outside this area as long as there is no risk of interference to the human remains or the assessment of human remains.
- 6 If the remains are determined to be of Aboriginal origin, then under the advice of DPIE, RAPs will be consulted regarding appropriate treatment and/or repatriation of the individual(s).
- 7 Do not recommence work at the location until all legal requirements and the reasonable



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requirements of DPIE and the RAPs have been adequately addressed.

6.3 Procedure for the Discovery of Aboriginal Archaeological Objects

It is possible that further Aboriginal sites or artefacts will be uncovered during the development and or expansion of the Mine. Likely site types include artefact scatters, grinding grooves and isolated stone artefacts. In the event that previously unidentified Aboriginal objects are discovered throughout the life of the Project, the following procedure (in consideration of the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW [OEH, 2011]) is to be adopted:

- 1 All works must cease immediately in the vicinity of the find location to prevent any further impacts to the object(s).
- 2 Notification of the potential Aboriginal object must be made immediately to the Tarrawonga Environmental Team.
- 3 A qualified archaeologist will be engaged to determine the nature, extent and scientific significance of the object(s).
- 4 If the object is determined to be an Aboriginal cultural heritage object:
 - a. an AHIMS site card will be completed and submitted to DPIE in compliance with s.89A of the *NPW Act 1974* - site cards will be lodged within 21 days and a copy provided to RAPs upon request;
 - b. the Tarrawonga *Aboriginal Cultural Heritage Sites Database* will be updated with the relevant information (Section 4.8); and
 - c. the *HMP* is to be reviewed, and if a revision is necessary, the updated *HMP* will be provided to DPIE and DPIE for approval.

Failure to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the relevant Acts.

6.4 Procedure for Suspected Damage to Known Aboriginal Cultural Heritage Sites

Where suspected damage to a known Aboriginal cultural heritage site is identified, the following procedure applies:

- 1 All works will cease immediately in the area to prevent any further impacts to the site/objects;
- 2 The Tarrawonga Environmental Team is to be notified immediately;
- 3 The Tarrawonga Environmental Team will prepare an incident report that will outline the nature of the event, and the controls to be implemented to ensure the event is not repeated. The incident will then be reported to DPIE as a compliance issue;
- 4 in consultation with RAPs, a management strategy will be developed to ensure the site and/or objects are secured and any potential for further impact eliminated. Where a management strategy cannot be agreed by TCPL and RAPs, a qualified archaeologist will be consulted to advise archaeological best practice. Should agreement still not be



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determined, DPIE will be consulted;

- 5 once DPIE feedback is addressed and agreement by all parties to the management strategy is reached, work can proceed; and
- 6 the procedure undertaken will be documented in an incident report.

Failure to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the relevant Acts.

6.5 Procedure for Previously Unidentified Historic Heritage Sites

In the event that a previously unidentified historic site and/or relic is discovered throughout the different phases of the Mine, the following procedure is to be adopted:

1. all works will cease immediately in the area to prevent any further impacts to the site/relics;
2. the Tarrawonga Environmental Team is to be notified immediately;
3. a qualified archaeologist will be engaged to determine the nature, extent, and significance of the site/relics; and
4. the *HMP* is to be reviewed, and if a revision is necessary, the updated *HMP* will be provided to DPIE and DPIE, as soon as practicable.

Failure to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the relevant Acts.

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7.0 MANAGEMENT OF INCIDENTS, COMPLAINTS AND NON-COMPLIANCES

7.1 Compliance and Incident Management

For the purposes of this HMP, an incident is defined as any activity or action that results in the damage to, or destruction of heritage sites within the Tarrawonga project boundary.

. Incident reporting will be conducted in accordance with the requirements of Condition 8 of Schedule 5 of PA 11_0047, requiring notification after being made aware of incident that has caused or threatens to cause material harm to the environment, or other breach or incident associated with the Project to the Secretary and any other relevant agency. Within 7 days of an incident or after becoming aware of a non-compliance, TCM will provide the Secretary with a written notification via Major Projects website. Within 30 days of the date on which the incident occurred or as otherwise agreed by the Secretary, TCM must provide a detailed report on the incident in accordance with Appendix 9 of PA11_0047

A discussion of any incidents will also be provided in the AEMR/Annual Review.

7.2 Complaints

A complaints management protocol has been developed to ensure an appropriate and consistent level of reporting, response and follow-up is adopted by TCPL. A complaint is verbal or written advice from any party in response to activities undertaken at the Tarrawonga Mine. The following complaints management protocol will be followed on all complaints received relating to Aboriginal cultural heritage:



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- A publicly advertised telephone complaints line will be in place to receive complaints during operating hours and record complaints at other times.
- Each complaint received will be recorded on a Complaints Register, which will include the following details:
 - The date and time of complaint.
 - Any personal details the complainant wishes to provide or if no such details are provided a note to that effect.
 - The nature of the incident that led to the complaint.
 - The action taken by TCPL in relation to the complaint, including any follow- up contact with the complainant.
 - If no action was taken by TCPL, the reason why no action was taken.
- The Environment Team will be responsible for ensuring that an initial response is in general provided within 24 hours of receipt of a complaint (except in the event of complaints recorded when the mine is not operational).
- Additional measures will be undertaken as required to address the complaint. This may include visiting the complainant, or inviting the complainant to the mine site.
- Once the identified measures are undertaken, the Environment Team will update the Complaints Register.
- If necessary, follow-up monitoring will take place to confirm the source of the complaint is adequately mitigated.
- A copy of the Complaints Register will be kept by TCPL and made available to the Tarrawonga Coal Mine Community Consultative Committee (CCC) and the complainant (on request). Complaints are also listed on the Whitehaven website (and a summary of complaints received every 12 months will be provided to DPIE, NSC, GSC, DPIE/EPA, MEG and the CCC through the AEMR/Annual Review.

Based on the nature of individual complaints, specific contingency measures may be implemented to the (reasonable) satisfaction of the complainant. The Group Environment Manager retains ultimate responsibility to ensure that complaints received are properly recorded and addressed appropriately.

7.3 Dispute Resolution Process

For the purposes of this management plan, a dispute is a disagreement between Tarrawonga Coal, an individual or group of RAPs, or consulting Archaeologist in relation to the measures required to implement this management plan.

In the event of a dispute arising between TCPL and the RAP's in relation to implementation of this management plan, the following protocol will be followed:

1. The TCM Environmental representative will generally discuss the issue with the disputer within 2 weeks (10 business days) or as soon as practicable after becoming aware of the dispute. TCPL may engage a Heritage Advisor to assist in this process.

2. If a resolution is not reached from the above discussions, a meeting will be convened at site between TCPL, the RAP's and the Heritage Advisor to discuss the issue and reach consensus. This meeting is to be convened within 1 month of the discussion identified in 1 above.
3. If a resolution is still not achieved, the matter will be referred to the Secretary for a decision within 2 weeks (10 working days) of the meeting identified in 2 above.

Where a dispute is technical in nature (i.e. relates to methodology or interpretive issues) for implementation of the management plan, the same process will be followed, however if a consensus is not reached, TCPL may refer the matter to an independent third party for review. As TCPL will have the right of engagement of an independent third party, the costs associated with engagement of an independent third party will be borne by TCPL. The independent third party will be identified by writing to one of the following:

Australian Archaeological Association

<http://www.australianarchaeology.com/>

Michael Slack*

c/- Scarp Archaeology

PO Box 191

Terrey Hills NSW 2084

Australian Association of Consulting Archaeologists Inc.

<http://www.aacai.com.au>

The President*

AACAI

c/o Cindy Shadiack

Box 196, 585 Little Collins Street

Melbourne VIC 3000

* The President of AAA and AACAI change on a semi-regular basis. Up-to-date contact details are available from the relevant website.

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Legislation

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APPENDIX A LIST OF RAPS

- Aboriginal Native Title Consultants;
- Bigundi Biame Gunnedarr Traditional People;
- Bullen Bullen Consultants;
- Cacatua Culture Consultants;
- Giwir Heritage Consultants
- Gunida Gunyah Aboriginal Corporation;
- Min Min Aboriginal Corporation;
- Minnga Consultants; and
- Red Chief Local Aboriginal Land Council (LALC).

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APPENDIX B LIST OF HISTORIC STAKEHOLDERS

- Gunnedah and District Historical Society
- Gunnedah Rural Museum
- Narrabri Shire Council (NSC)
- Gunnedah Shire Council (GSC)

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APPENDIX C EXAMPLE OF ARCHAEOLOGICAL CLEARANCE SIGN OFF FORM

APPENDIX D SCARRED TREE REMOVAL PROTOCOL

The removal of a scarred tree, if required in the future, will follow the below four step procedure:

1. pre-removal preparation;
2. removal/relocation;
3. storage; and
4. management/preservation.

Pre-removal Preparation

A qualified arborist will be engaged to plan, conduct and direct the tree removal works. The arborist is responsible for assessing the most appropriate method of removing each tree based on specific factors such as species, condition and location.

A qualified archaeologist will be engaged to attend the removal in order to address potential archaeological issues such as exposure of artefacts during topsoil disturbances.

A pre-removal planning meeting will be held onsite that includes TCPL representatives, the arborist, two RAPs and the qualified archaeologist. This allows all parties to discuss the works program and any logistical issues. The pre-removal planning meeting may be held on the day of the tree removal or before.

The following equipment may be required:

- backhoe;
- large front-end loader;
- excavator;
- 25 tonne all-terrain crane;
- 50 tonne crane;
- tipper (for hay bales for bedding);
- elevated work platform;
- 20 tonne soft slings;
- water truck;
- wool bags or similar for bedding;
- concrete blocks for plinths;
- chain saws;
- carpet or similar for wrapping scar and bole of tree; and/or
- hazard cones, bunting signage, or similar.

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Removal/Relocation

The following steps provide a guide for the tree removal. This process will be subject to modification based on the arborist's recommendations.

1. prepare access and safe work area, including a barricaded exclusion zone.
2. wrap carpet or similar around scar for protection.
3. erect an elevated platform in order to remove overhanging branches and limbs (if required).
4. attach lift swing.
5. use backhoe to trench around the tree in order to expose the base of the bole (trunk) above the roots.
6. once the trench has been excavated and the base of the bole cut, the crane can begin removing the tree from the trench.
7. load the tree on the truck for transportation and relocate the tree to a keeping place or storage area.
8. tree can then be cleaned and cared for including application of pest control.

Storage

This section describes the process for storage of the trees. This process will be subject to modification based on the arborist's recommendations.

Trees will be placed on non-timber-based sleepers such as high strength concrete block or plinths. The storage facility must be of sufficient size to adequately store and maintain the number and sizes of all removed trees. The facility must be suitable for enabling cleaning and maintenance of the trees. A tag, identifying the tree, including AHIMS ID will be placed on the tree.

In addition, a barrier layer of acrylic resin at the base or other suitable area of the tree and an indelible pigment-based pen will be used to apply the registration number of the scarred tree. All marking of the tree will avoid the cultural scar(s).

Preservation - Cleaning

This section describes the process for preservation (including cleaning) of the trees. This process will be subject to modification based on the arborist's recommendations.

Many trees suffer from termite activity and rotting, which subsequently hollows the tree's trunk. An attempt will be made to clear all termite detritus from the inside of the trunk and the outer surface, as far as practical without damaging the scar for which the tree has been salvaged. Termite detritus will be removed using brushes, probes, and a vacuum cleaner. Insects recovered during this process will be identified to determine an appropriate eradication procedure. Insect traps, such as glue pads, will be placed throughout the storage container or shed as required.

Preservation – Seasoning

The process for preservation (including seasoning) of the trees will be subject to modification based on the arborist's recommendations.

Should the scarred tree that is to be removed be a living or 'green' tree it must be stored indoors until the moisture content is below 20%. Trees with moisture content less than 20% are unlikely to support decay fungi degradation and will also be relatively physically stable. In dry conditions, the trees will age and season readily.

Once seasoned, high temperatures are less likely to affect the trees, however 'green' humidity may obstruct the drying process. Humidity indicators and moisture detection strips may be used as a guide to ventilation requirements. Such requirement may be as simple as opening the container or shed doors on a dry day. The scarred trees will be monitored regularly (monthly) during the initial stages of their storage.

APPENDIX E MOST RECENT LIST OF EXTANT ABORIGINAL CULTURAL HERITAGE SITES

AHIMS ID	Site Name	Easting MGA 1994	Northing MGA 1994	Site Type
20-4-0114	BC-20	227531	6608729	Isolated artefact
20-4-0157	GGOS1	228604	6605280	Artefact Scatter
20-4-0158	GGOS2	228450	6604477	Artefact Scatter
20-4-0159	GGOS 3	228402	6604442	Artefact Scatter
20-4-0160	GGOS4	228440	6604352	Artefact Scatter
20-4-0198	Restriction applied.			
20-4-0199	BCD 2	225900	6606697	Artefact Scatter
20-4-0200	BCD 3	226322	6606222	Isolated artefact
20-4-0297	TCEP-IF-016	230909	6607039	Artefact Scatter
20-4-0305	TCEP-IF-004	227590	6605116	Isolated artefact
20-4-0307	TCEP-IF-006	227063	6605159	Isolated artefact
20-4-0310	TCEP-IF-009	231339	6607583	Isolated artefact
20-4-0312	TCEP-IF-011	230894	6607193	Artefact Scatter
20-4-0314	TCEP-IF-020	230950	6606068	Artefact Scatter
20-4-0317	TCEP-IF-023	229205	6605789	Isolated artefact
20-4-0318	TCEP-IF-024	231021	6606355	Isolated artefact
20-4-0319	TCEP-IF-025	228896	6605473	Isolated artefact
20-4-0320	TCEP-IF-026	228277	6604964	Isolated artefact
20-4-0321	TCEP-IF-027	227652	6605232	Isolated artefact
20-4-0328	TCEP-OS-007	231309	6607856	Artefact Scatter
20-4-0329	TCEP-OS-008	231199	6607594	Artefact Scatter
20-4-0330	TCEP-OS-009	231084	6607415	Artefact Scatter
20-4-0331	TCEP-OS-010	231239	6607304	Artefact Scatter
20-4-0332	TCEP-OS-011	230827	6607211	Artefact Scatter
20-4-0333	TCEP-OS-012	231039	6607183	Artefact Scatter
20-4-0334	TCEP-OS-013	231170	6607115	Artefact Scatter
20-4-0336	TCEP-OS-015	230902	6606931	Artefact Scatter
20-4-0337	TCEP-OS-016	230314	6605906	Artefact Scatter
20-4-0338	TCEP-OS-017	229714	6606080	Artefact Scatter
20-4-0339	TCEP-OS-018	229384	6605975	Artefact Scatter
20-4-0340	TCEP-OS-019	228763	6605354	Artefact Scatter
20-4-0425	T9/1	231291	6606581	Artefact Scatter
20-4-0433	T9/5	231537	6606001	Artefact Scatter
20-4-0434	T9/6	231751	6607129	Artefact Scatter



TARRAWONGA COAL MINE ENVIRONMENTAL MANAGEMENT SYSTEM

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20-4-0436	T9/3	231648	6606698	Isolated artefact
20-4-0437	T9/4	231594	6606326	Artefact Scatter
20-4-0438	T9/7	231747	6607214	Artefact Scatter
20-4-0465	T15/1	231375	6607678	Artefact Scatter
20-4-0466	T15/4	230983	6607659	Isolated artefact
20-4-0604	VEP IA 16	225058	6606658	Isolated artefact
20-4-0605	VEP IA 15	227837	6604109	Isolated artefact
20-4-0606	VEP IA 14	227663	6604101	Isolated artefact
20-4-0662	VEP IA 13	227923	6603602	Isolated artefact
20-4-0669	VEP AS 11	227519	6604187	Artefact Scatter
20-4-0670	VEP AS 12	227745	6604187	Artefact Scatter
20-4-0675	VEP AS 09	228454	6602961	Artefact Scatter
20-4-0682	VEP AS 10	227467	6603959	Artefact Scatter
20-4-0826	TCEP-OS-021	231292	6607423	Artefact Scatter
20-4-0873	Tarrawonga GG1	227811	6607058	Grinding Grooves
20-4-0874	Tarrawonga LOM IA2	228476	6604606	Isolated artefact
20-4-0875	Tarrawonga LOM IA1	228534	6604919	Isolated artefact
20-4-0876	Tarrawonga LOM AS1	228544	6605273	Artefact Scatter
20-4-0883	Tarrawonga IA4	230838	6607002	Isolated artefact
20-4-0884	Tarrawonga IA5	227845	6603690	Isolated artefact
20-4-0885	Bollol Creek IA1	230924	6606201	Isolated artefact
20-4-0886	Bollol Creek AS1	231457	6606845	Artefact Scatter
20-4-0887	Bollol Creek AS2	231110	6606723	Artefact Scatter
20-4-0968	Tarrawonga AS5	230986	6606986	Artefact Scatter
20-4-0971	Bollol Creek IA2	230895	6606571	Isolated artefact
20-4-0972	Tarrawonga IA8	231055	6606927	Isolated artefact