

Mount Thorley Warkworth Aboriginal Heritage Management Plan 2020 Compliance Audit Inspection

Report prepared for
Yancoal Australia, Mount Thorley Warkworth



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ARROW
HERITAGE SOLUTIONS



Introduction

Yancoal Australia (Yancoal) manage the Mount Thorley Warkworth (MTW) mining complex located in the Hunter Valley, approximately 8km south-west of Singleton. Approval for the continuation & expansion of the mine was granted on 26th November 2015 under two separate project approvals: the Warkworth Continuation Project Approval (SSD-6464) & the Mount Thorley Operations Project Approval (SSD-6465).

Pursuant to Condition 43 of the Warkworth Continuation Project Approval, & Condition 28 of the Mount Thorley Operations Project Approval, Yancoal developed a MTW Aboriginal Heritage Management Plan (AHMP) to cover both mining operations, which was originally approved by the Department of Planning & Environment on 29th May 2017. This AHMP sets out the principles, processes & measures through which Aboriginal cultural heritage (ACH) will be managed within the AHMP Area. This includes a commitment (Provision 24) to conduct annual AHMP compliance inspections with members of the Aboriginal community, through the auspices of the MTW Aboriginal Cultural Heritage Working Group (CHWG), throughout the life of operations. The purpose of the compliance inspections is to afford the Aboriginal stakeholders & MTW:

- the opportunity to visit mine operations and mine areas to inspect the operational compliance with AHMP provisions & Ground Disturbance Permit procedures;
- to inspect and monitor the condition and management of various sites over time; and
- to review the effectiveness and performance of AHMP provisions in the management of cultural heritage at the mine.

These compliance inspections are conducted at least annually. Due to the number of ACH sites within the AHMP area & the time foreseen to inspect all sites, it is not feasible to inspect every site during the same field trip. Therefore, a regular, rolling program of compliance inspections has been implemented that will visit all sites at each location periodically. A record will be kept of each compliance inspection against each Aboriginal cultural heritage site, so that it can be ensured that each site is inspected regularly.



Proposed Activity and Project Brief

The compliance inspections involved the following elements:

- A number of ACH sites (39) were visited and AHMP compliance inspection proformas were completed for each noting the outcomes of the inspections including evidence of compliance and non-compliance with AHMP provisions, recommendations on modifications and improvements to management provisions, recommendations on corrective actions, and other comments associated with AHMP provisions; and
- A photographic record was completed for the inspected ACH sites.

Timing & Personnel

The 2020 MTW AHMP compliance inspection program was conducted on Tuesday and Wednesday 22/23 December 2020. The personnel involved in these inspections were:

Name	Position/Organisation
Joel Deacon	Archaeologist, Arrow Heritage Solutions
Alarna Bristow	Environment and Community Coordinator, MTW
Georgina Berry	CHWG representative
Aden Perry	CHWG representative

Arrow Heritage Solutions were engaged as independent heritage consultants to conduct the AHMP compliance inspections, and Joel Deacon acted as technical advisor and author of this report. MTW's Environment and Communities Co-ordinator Alarna Bristow arranged the compliance inspection programs and escorted the field team. Representatives of the Upper Hunter Wonnarua Council and Culturally Aware participated in the field work program.

MTW AHMP Compliance Inspection

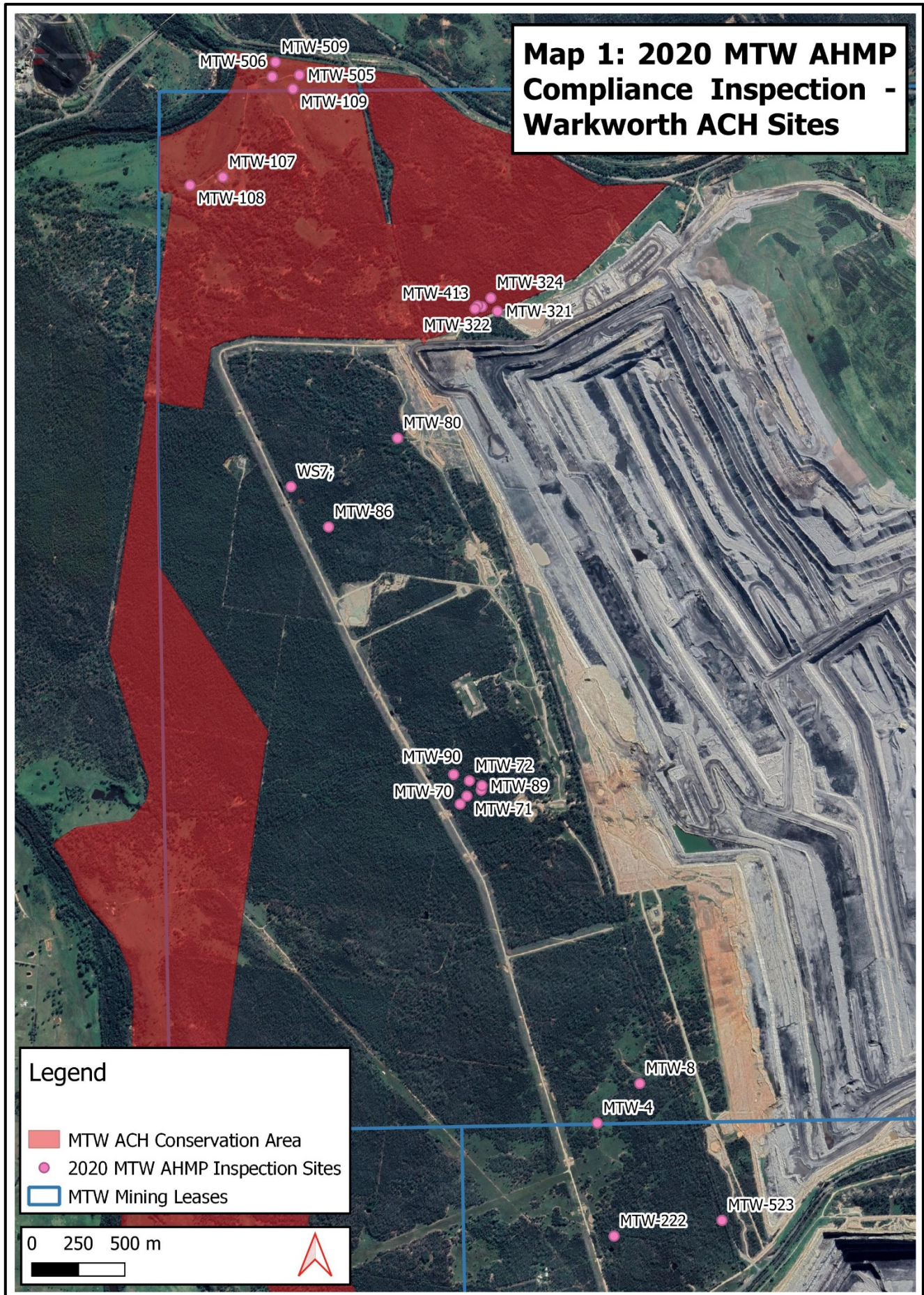
A total of 39 ACH sites were inspected across both the Warkworth and the Mount Thorley operations (see Maps 1 and 2). The area at Warkworth was selected for inspection as this is adjacent to current development areas and is being frequently accessed for a variety of activities. A sample of sites from within the Wollombi Brook ACH Conservation Area (WBACHCA) were also inspected to ensure they were being managed effectively and not subject to any natural disturbance (i.e. erosion). Sites inspected at Mount Thorley are located in the vicinity of sediment dams and a water discharge point, or in proximity to the Rail Loading



Facility. Both these areas, although not constantly actively accessed, are adjacent to development and possible ground disturbing activities.

Results

Table 1 summarises the results of the 2020 MTW compliance inspection and summarises the information recorded on the individual proforma inspection sheets. Using a mobile mapper pre-loaded with the GIS co-ordinates for each ACH site, the field team travelled to each location and attempted to re-locate each site. Sometimes this was not possible due to poor ground surface visibility, a result which in itself was not overly significant as long as it was determined that the vicinity had not been inadvertently disturbed. The presence and condition of barricading or fencing was noted, as well as the presence and nature of various potential site disturbing factors (e.g. erosion, animal, human). General observations of each site were made if necessary, and, based on information provided for all the above factors, management recommendations were discussed and agreed by the field team for each site.



Map 2: 2020 MTW AHMP Compliance Inspection - Mt Thorley ACH Sites



Legend

- MTW ACH Conservation Area
- 2020 MTW AHMP Inspection Sites
- MTW Mining Leases

0 250 500 m



Site Name	Date	Mine	Site re-identified?	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
AG-PAD-2	22/12/20	MTO	Yes	Yes	No	-	No	No	No	No	Lots of weeds	Recorded as a PAD so no artefacts to see on surface	
MTW-107	22/12/20	WML	No	Yes	Yes	No	No	No	No	No	No	Within WBACHCA	Consider rebarricading if ground disturbance activities are planned in this area in the future.
MTW-108	22/12/20	WML	Yes	Yes	Yes	No	No	No	No	No	No	Track through site has been re-routed and site is revegetating	Rebarricade site
MTW-109	22/12/20	WML	Yes	Yes	Yes	No	No	No	No	No	No	Site has been delineated with pickets only	Consider barricading if ground disturbance activities are planned in this area in the future.
MTW-222	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	Near old track	No	No	-	
MTW-321	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Tree in good health	
MTW-322	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Within WBACHCA	
MTW-323	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Within WBACHCA	
MTW-324	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Within WBACHCA	
MTW-4	23/12/20	WML	No	Yes	Yes	Yes	No	No	No	No	No	Very low visibility	Spray with herbicide and salvage
MTW-413	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Within WBACHCA	
MTW-505	22/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Within WBACHCA	
MTW-506	22/12/20	WML	Yes	Yes	Yes	No	Yes	No	No	No	No	Within WBACHCA	Rebarricade site
MTW-509	22/12/20	WML	Yes	Yes	No	-	Sheet wash	No	Old borrow area	No	No	Within WBACHCA, near track to Springwood	Barricade site
MTW-523	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Fallen scarred tree in very deteriorated state	Relocation to be attempted in consultation with CHWG
MTW-524	22/12/20	MTO	Yes	Yes	No	-	Sheet wash	No	No	No	No	-	
MTW-535	22/12/20	MTO	Yes	Yes	Yes	Yes	No	No	No	No	No	-	
MTW-538	22/12/20	MTO	Yes	Yes	Yes	Yes	Some	No	No	No	No	Additional artefact located at 321876e6385400n	Rebarricade to include additional artefact
MTW-539	22/12/20	MTO	Yes	Yes	Yes	Yes	No	No	No	No	No		
MTW-545	22/12/20	MTO	Yes	Yes	No	-	No	No	No	No	No	Heavy leaf litter	



Site Name	Date	Mine	Site re-identified?	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
MTW-546	22/12/20	MTO	Yes	Yes	No	-	No	No	No	No	No	Heavy leaf litter	
MTW-547	22/12/20	MTO	Yes	Yes	No	-	Quite severe	No	No	No	No	AHIP is in place over area	Consider salvaging site to prevent loss through erosion
MTW-548	22/12/20	MTO	No	Yes	No	-	Sheet wash	No	Dam construction	No	No	AHIP is in place over area. Site was recorded after dam construction	Consider salvaging site to prevent loss through erosion
MTW-550	22/12/20	MTO	Yes	Yes	No	-	No	No	No	No	No	-	
MTW-663	22/12/20	MTO	No	Yes	No	-	Some	No	Likely disturbance during powerline maintenance	No	No	In powerline easement	Barricade site to prevent disturbance during powerline maintenance
MTW-664	22/12/20	MTO	No	Yes	No	-	Some	No	Likely disturbance during powerline maintenance	No	No	In powerline easement	Barricade site to prevent disturbance during powerline maintenance
MTW-69	23/12/20	WML	No	Yes	Yes	Yes	No	No	No	No	No	-	Salvage when required
MTW-70	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	-	Have arborist assess for removal options
MTW-71	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	-	Salvage when required
MTW-72	23/12/20	WML	No	Yes	Yes	Yes	No	No	Yes – on old track	No	No	On disused track	Salvage when required
MTW-8	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Scarred tree in very deteriorated state. Track has been diverted as avoidance buffer	Relocation to be attempted in consultation with CHWG
MTW-80	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	No	No	No	Tree in good health	Relocate in consultation with CHWG
MTW-86	23/12/20	WML	No	Yes	Yes	No	No	No	No	No	No	Very poor GSV	Re-barricade and salvage when required
MTW-89	23/12/20	WML	Yes	Yes	Yes	Yes	No	No	Yes – on old track	No	No	-	Salvage when required
MTW-90	23/12/20	WML	No	Yes	Yes	Yes	No	No	Yes – on old track	No	No	-	Salvage when required
Short 2 (Bulga)	22/12/20	MTO	No	Yes	No	-	No	No	No	No	No	Poor visibility	



Site Name	Date	Mine	Site re-identified?	Site intact?	Site fenced/barricaded?	Fencing/barricading intact?	Natural erosion	Livestock damage	Human disturbance	Animal disturbance	Pests & weeds	General observations	Management recommendations
Site 2	22/12/20	MTO	Yes	Yes	Yes	No	Sheet wash	No	No	No	No	In rail loop	Rebarricade site
Site 3	22/12/20	MTO	Yes	Yes	Yes	No	No	No	No	No	No	In rail loop	Rebarricade site
WS7	23/12/20	WML	No	Yes	Yes	Yes	No	No	No	No	No	-	Salvage when required

Table 1: Results of 2020 MTW AHMP Compliance Inspection



Aboriginal Site Management Recommendations

All ACH site locations visited during the AHMP compliance inspection were found to be intact with no recent damage or unauthorised disturbance noted. Not all ACH sites were able to be re-identified, however, in all cases this was due to thick vegetation cover obscuring the ground surface rather than due to inadvertent destruction.

Management recommendations were provided for the majority of the ACH sites visited during the 2020 compliance inspection. The nature of these recommendations are described below.

Install or reinstall/repair barricade, wire and/or signage

Sites: MTW-86, 108, 506, 509, 538, 663, 664, Site 2 and Site 3

As a general observation, most of the barricading, where installed at ACH sites, was in a good state of repair. Some new barricading has been recommended as a protective measure for sites located in proximity to access or activity areas. Barricading should consist of hi-vis string line and signage delineating the area as an ACH site to be avoided.



Example of dilapidated barricading (at MTW-506)



Consider rebarricading if activity increases in the area

Sites: MTW-107 and 109

These sites are located within the WBACHCA where access and disturbance activity is limited. These sites have previously been delineated, however, this barricading has now deteriorated, although the star pickets remain in place. As these areas are already afforded a high degree of protection by virtue of them being inside the WBACHCA, rebarricading is not necessary at this point in time. However, it is recommended that the star pickets remain in place so that barricading could be reinstalled if activities increase in the area in the future.

Salvage in consultation with CHWG

Sites: MTW-4, 69, 71, 72, 86, 89, 90, 547, 548 and WS7

There are a number of sites that are located within future planned disturbance areas or are already in close proximity to work areas. These sites should be salvaged prior to works in the area to prevent inadvertent disturbance. There were no objections raised to this recommendation by the RAPs in the field, and further planning and salvage should be done in conjunction with the CHWG.

The two sites located at Mount Thorley (MTW-547 and 548) are located on the banks of Loders Creek and are at risk of being washed away by sheet wash and erosion. Their condition should be discussed with the CHWG with a view to salvaging them prior to them being lost to erosion.



Sheet wash erosion at MTW-548

Remove and relocate scarred trees

Sites: MTW-8; 70; 80; 523

Four scarred trees are located within the approved future mining area at MTW. With the exception of MTW-70, these trees have been assessed by an arborist regarding the best method of removal and relocation. MTW-70 should also be assessed for removal and relocation. These scarred trees have been visited by RAPs during this compliance inspection and during other inspections and assessments. Their removal and the arborist's plans should be discussed with the CHWG, as well as the location to where they will be relocated – the WBACHCA has been suggested. The three dead trees (MTW-8, 70 and 523) are in a poor condition however and may not be able to be successfully relocated.



Scarred tree MTW-8



Scarred tree MTW-70



Scarred tree MTW-80



Scarred tree MTW-523

Conclusions and Recommendations

The 2020 AHMP compliance inspection has been conducted as per the procedures outlined in the AHMP. No unauthorised site disturbances or AHMP non-compliances were observed during the inspection, and no issues were raised by the CHWG representatives present. A number of recommendations have been made to enhance or assist with the management of ACH at MTW:

- 1. Install or reinstall/repair barricade, wire and/or signage at sites MTW-86, 108, 506, 509, 538, 663, 664, Site 2 and Site 3;**
- 2. Consider rebarricading if activity increases in the area at sites MTW-107 and 109;**
- 3. Discuss and plan the salvage with CHWG of sites MTW-4, 69, 71, 72, 86, 89, 90, 547, 548 and WS7; and**
- 4. In consultation with the CHWG and an arborist, remove and relocate scarred trees MTW-8; 70; 80; and 523, considering the Wollombi Brook ACH Conservation Area as a relocation destination.**