

29 August 2022

Mr Billy Agland
 Specialist Environment
 South32 - Illawarra Metallurgical Coal
 Cordeaux Colliery
 Picton Road, Mount Keira West NSW 2500

Via email: billy.agland@south32.net

Dear Mr Agland,

Re: Dendrobium Colliery Longwall 18 End of Panel Report – Aboriginal Cultural Heritage Assessment (Niche ref #7389)

Niche Environment and Heritage (Niche) has undertaken a site assessment and review of the predicted and observed impacts on Aboriginal cultural heritage sites and their associated values resulting from the extraction of Longwall 18 at Dendrobium Colliery. This assessment was developed for inclusion in the South32 - Illawarra Metallurgical Coal (IMC) End of Panel Report (EoP) for Longwall 18.

There are three Aboriginal cultural heritage sites located within the Longwall 18 Study Area, Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID#52-2-2248) and Dendrobium 8 (AHIMS#52-2-3068). There were no impacts observed from the extraction of Longwall 18 at Aboriginal cultural heritage sites.

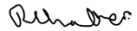
Aboriginal cultural heritage site Dendrobium 7 (AHIMS ID#52-2-2248) displayed evidence of vertical cracking, presented in Dendrobium Colliery Longwall 18 Aboriginal Cultural Heritage Management Plan (ACHMP) (Niche, 2021a), though not mentioned in Biosis baseline recording reports (2013). Photographic evidence provides confirmation that the cracking predates the extraction of Longwall 18 and other longwalls in Dendrobium Area 3B.

As a result of this assessment the following is recommended:

Recommendations	
	General
1.	A copy of this report is to be sent to the Registered Aboriginal Parties.
2.	Further monitoring to be undertaken from 17 May 2023, twelve (12) months from the completion of Longwall 18.
3.	South32 IMC should continue community consultation when required, in regard to any Aboriginal Cultural heritage sites in the impact areas of longwalls 9-18.

Please do not hesitate to contact me on 0488 744 006 or rchalker@niche-eh.com should you require any further information.

Yours sincerely,



Rebecca Chalker
Heritage Consultant
Niche Environment and Heritage

Important information about this report

Information relating to Aboriginal cultural heritage sites, including some details, images and maps showing the locations of sites, has been redacted from this report at the request of Registered Aboriginal Parties.

1. Aboriginal heritage assessment

1.1 Background and introduction

South32-Illawarra Metallurgical Coal (IMC) commissioned Niche Environment and Heritage (Niche) to conduct an End of Panel (EoP) assessment of the Aboriginal cultural heritage sites within the limit of predicted subsidence effects of Longwall 18 at their Dendrobium Colliery. This area has been defined as the 'Subject Area' and is shown in Figure 1.

This EoP Aboriginal heritage assessment report includes a summary of:

- previous monitoring (Biosis, 2007,2013; Niche, 2021a)
- the results of the Subsidence Report prepared by MSEC (2017)
- the results of a site inspection
- a discussion and,
- conclusions and recommendations.

Monitoring of Aboriginal archaeological sites at Dendrobium Colliery to-date has been carried out as recommended by Biosis Research (2007,2012), and the ACHMP (Niche, 2021a). The site monitoring results presented in this report are in line with the required actions and recommendations presented in the ACHMP. Further monitoring (Round 3) of shelters Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID# 52-2-2248), Dendrobium 8 (AHIMS ID# 52-2-3068) is to be carried out from 17 May 2023, 12 (twelve) months from the completion date of Longwall 18, as outlined in Section 9 and Section 10.1 of the ACHMP (Niche, 2021a).

Illawarra Coal Holdings Pty Ltd (ICHPL) was issued Aboriginal Heritage Impact Permit (AHIP) No: 1132005 on 18 December 2012. AHIP No: 1132005 allows for potential impacts (associated with subsidence movements from longwall mining) to Aboriginal archaeological sites within Dendrobium Area 3B.

1.2 Subsidence monitoring results summary (MSEC, 2012; MSEC, 2017)

The EoP Subsidence Report for Area 3B, Longwalls 9 - 18 has been prepared by Mine Subsidence Engineering Consultants (MSEC). This assessment includes a comprehensive report which addresses all aspects of the recorded subsidence parameters resulting from longwall extraction. For this assessment, the revised MSEC predictions (MSEC, 2017) have been referred to in order to address any potential impacts at the sites.

Specifically, in relation to matters that may affect Aboriginal cultural heritage values, MSEC (2017) (Section 3.11. Aboriginal heritage sites) provides maximum predicted total conventional subsidence, tilt and curvature for the archaeological sites resulting from the extraction of the proposed longwalls (MSEC). The predictions are outlined in Table 1.

Table 1: Maximum predicted subsidence movements for Aboriginal cultural heritage sites relevant to Longwall 18

Aboriginal site name (AHIMS)	Maximum predicted total conventional subsidence (mm)	Maximum predicted total conventional tilt (mm/m)	Maximum predicted total conventional hogging curvature (km ⁻¹)	Maximum predicted total conventional sagging curvature (km ⁻¹)
Upper Avon 36 (AHIMS ID# 52-2-1772)	<20	<0.5	<0.01	<0.01
Dendrobium 7 (AHIMS ID# 52-2-2248)	200	6	0.15	0.01
Dendrobium 8 (AHIMS ID# 52-2-3068)	750	20	0.80	0.06

1.3 Site inspection and results

The three (3) Aboriginal cultural heritage sites addressed in this assessment are listed in Table 2 below and shown in Figure 1. The site inspection and results presented are in compliance with the recommended monitoring requirements of the ACHMP (Niche 2021a).

Table 2: Aboriginal cultural heritage sites addressed as part of this assessment

Site Name	AHIMS ID	Site Type	Date Surveyed
Upper Avon 36	52-2-1772	Shelter with Art	24 June 2022
Dendrobium 7	52-2-2248	Shelter with Art	24 June 2022
Dendrobium 8	52-2-3068	Shelter with Art	24 June 2022

The site inspection was carried out on the 24 June 2022 by Rebecca Chalker (Niche, Heritage Consultant), Amy Bradbury (South32) and Aboriginal community representatives, Cody Tungai (Illawarra Local Aboriginal Land Council) and Bo Field (Yurrandaali Cultural Services). A summary of the findings of the site visit are outlined in Sections 1.3.1 to 1.3.3.

A draft copy of this report was provided to Aboriginal community stakeholders on the 4 August 2022. One response was received from Illawarra Local Aboriginal Land Council, with a recommendation in regard to any future baseline recording. The recommendation is not related to this report outcome. The response received is attached as Appendix 1.

Figure 1: Map of AHIMS sites located within the Longwall 18 Subject Area (Source: South32-IMC and AHIMS)

This information has been redacted
For more information please contact GM3.

1.3.1 Upper Avon 36 (AHIMS ID#52-2-1772)

This Shelter with art and deposit site is a large cliff face orientated east southeast on the north side of the eastern tributary of Native Dog Creek (Figure 1). The sandstone overhang is 29.6 x 5.5 x 7.5m in size with a medium grey-brown sandy soil deposit approximately 10-20 cm deep and a living area of 12 x 1m. The shelter was formed by block fall and cavernous weathering. The eastern section of the floor is covered with loose rock while the western section of the floor has sandy deposit.

Art recorded within the shelter is across two panels, each 2 x 10m, and includes: 1 charcoal outline and striped infill from human figure with hands up (Plate 5), 1 charcoal outline and infill kangaroo motif, 1 charcoal infill male frontal human figure with arms down, 1 charcoal outline frontal male human figure with arms up and red ochre infill and charcoal criss-cross infill, 1 charcoal outline and infill bird motif, 1 charcoal outline and infill of a human figure with hair and tools (Plate 7). All the faces in the motifs have eyes and due to the large surfaces, the artwork is very large. Thirteen artefacts were initially recorded in the western end of the shelter with 8 being relocated during the 2013 baseline recording.

The site was previously recorded by Biosis in 2012, during baseline recording in 2013, then again by Niche for the purpose of updating baseline data and site cards relevant to the ACHMP (Biosis 2012,2013; Niche 2021a). Details are provided in Table 3 and Plate 1 to Plate 8. Previous baseline recording images are provided for comparison in Plate 2, Plate 4, Plate 6 and Plate 8. The ACHMP provides in-depth baseline records and additional photographs for Upper Avon 36 (AHIMS ID # 52-2-1772).

Table 3: Summary of the site visit to Upper Avon 36 (AHIMS ID # 52-2-1772)

AHIMS number	Site name	Results of inspections
52-2-1772	Upper Avon 36	<p>This Shelter with Deposit site was previously recorded during the Longwall 9 -18 baseline recording report completed by Biosis (2012, 2013), and again in 2020 for the purpose to update baseline data and site cards relevant to the ACHMP (Niche, 2021b). During the recent monitoring, no impacts related to the extraction of Longwall 18 were observed.</p> <p>The shelter had a dry interior, with granular loss, exfoliation and microvegetation observed in its interior. Four (4) of the thirteen (13) artefacts were relocated during this survey.</p> <p>Plate 1 to Plate 4 provide a comparison of the Aboriginal cultural heritage site as observed during the most recent survey on 24 June 2022 and the 2013 baseline recording undertaken by Biosis.</p>

Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013

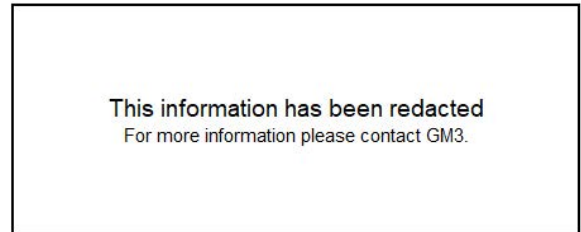
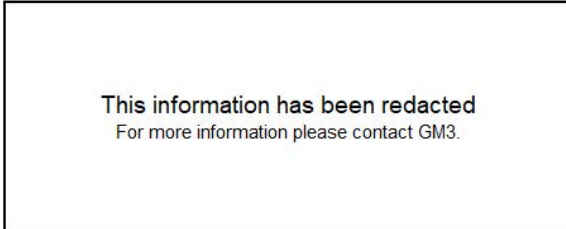


Plate 1: General photo of eastern side of shelter facing north. Photo taken 24 June 2022.

Plate 2: Comparison general photo of eastern side of shelter facing north, taken during baseline recording by Biosis (2013).

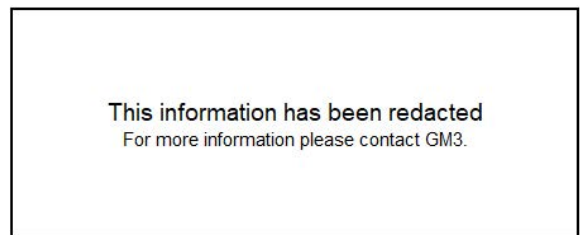
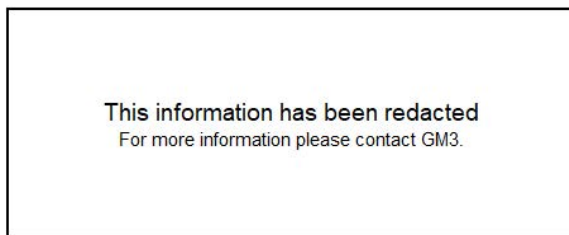


Plate 3: General photo of western end of shelter, facing north-west. Photo taken 24 June 2022.

Plate 4: Comparison general photo of western end of shelter, facing north-west. Taken during baseline recording by Biosis (2013).

Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013

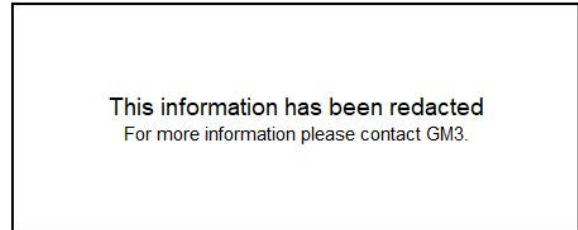
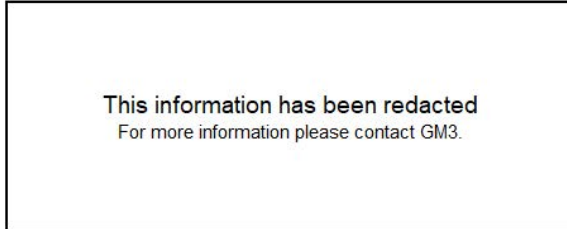


Plate 5: Photo of art panel, centre of Panel 1 showing frontal male human figure hands up, striped. Photo taken 24 June 2022.

Plate 6: Comparison photo of centre of Panel 1 showing frontal male human figure hands up, striped. Photo taken during baseline recording by Biosis (2013).

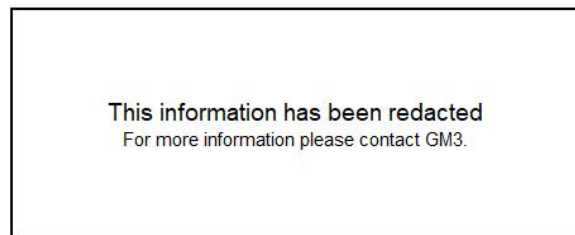
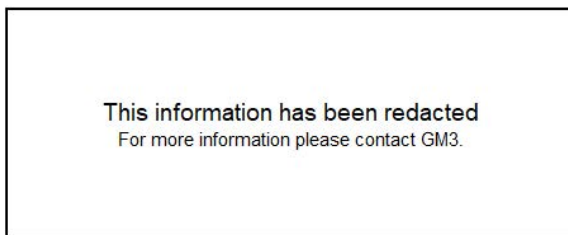


Plate 7: Photo of eastern end art panel 2 showing frontal human figure with hair and tools. Photo taken 24 June 2022.

Plate 8: Comparison photo of eastern end of art panel 2 showing frontal human figure with hair and tools. Photo taken during baseline recording by Biosis (2013).

1.3.2 Dendrobium 7 (AHIMS ID#52-2-2248)

This Shelter with Art is situated approximately 19m south of Longwall 17 and 35m north of Longwall 18. (Figure 1). Formed by block fall and cavernous weathering it is located on the mid to lower ridgeline, the shelter comprises a long, narrow sandstone overhang measuring 13 x 2 x 2.1m (Biosis 2012). Art recorded in the shelter comprises of a charcoal indeterminate of 0.40 x 0.20m located on the back central wall. Details are provided in Table 4.

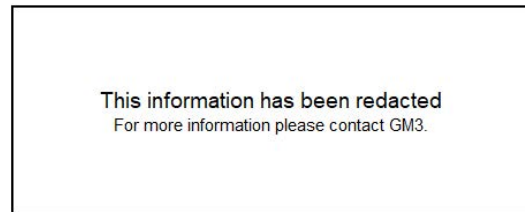
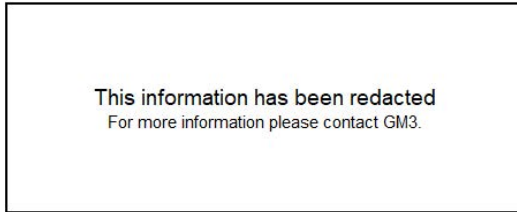
The site was previously recorded by Biosis in 2012 then again by Biosis during baseline recording in 2013, then again by Niche for the purpose of updating baseline data and site cards relevant to the ACHMP (Biosis 2012,2013; Niche 2021a). Details are provided in Table 4 and Plate 9 to Plate 21. Previous baseline recording images are provided for comparison in Plate 10, Plate 12, Plate 14, Plate 16 and Plate 21. The ACHMP provides in-depth baseline records and additional photographs for Dendrobium 7 (AHIMS ID# 52-2-2248).

Table 4: Summary of the site visit to Dendrobium 7 (AHIMS ID# 52-2-2248)

AHIMS number	Site name	Results of inspections
52-2-2248	Dendrobium 7	<p>This Shelter with Art was previously recorded during the Longwall 9 -18 baseline report completed by Biosis (2012), and again in 2020 for the purpose to update baseline data and site cards relevant to the ACHMP (Niche, 2021b). During the recent monitoring on 24 June 2022, it was noted that three (3) vertical cracks are visible on the back centre wall, at 11.5m (crack#1), 12.13m (crack#2) and 12.98m (crack#3) with measurements taken from the eastern end of the shelter. No written confirmation of the cracks is outlined in Biosis Baseline recording, though evidence is included in Niche baseline recording data presented in the ACHMP. Plate 46 in the Biosis baseline report provides evidence of crack #2 (2013, p.49) (Plate 12 and Plate 16 in this report). Plate 14 also provides evidence of cracking prior to Longwall 18 extraction (photo provided by IMC).</p> <p>The shelter had a dry interior, with granular loss, caused by chemical weathering, exfoliation and microvegetation observed in its interior, Plate 19 and Plate 20 display evidence of these observations eroding the art panel. Plate 1 to Plate 4 provide a comparison of the Aboriginal cultural heritage site as observed during the most recent survey on 24 June 2022 and the 2013 baseline recording undertaken by Biosis.</p> <p>During the recent monitoring, no impacts related to the extraction of Longwall 18 were observed.</p>

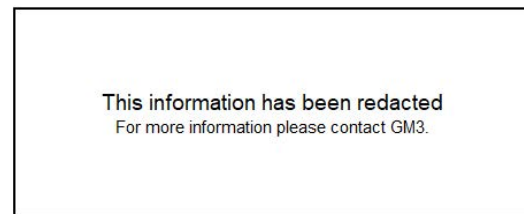
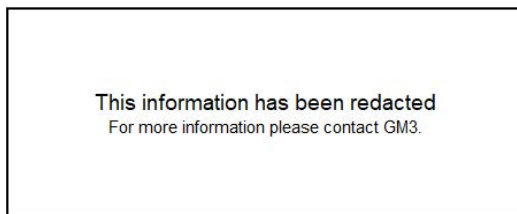
Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013



**Plate 9: General photo of shelter facing south-east.
Photo taken on 24 June 2022.**

**Plate 10: Comparison photo of shelter facing southeast,
Photo taken during baseline recording by Biosis (2013).**



**Plate 11: General photo of shelter facing west. Photo
taken on 24 June 2022.**

**Plate 12: Comparison photo of shelter facing west. Photo
taken during baseline recording by Biosis (2013).**

Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013

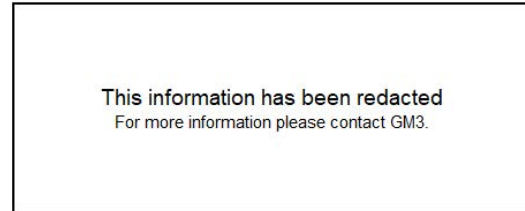
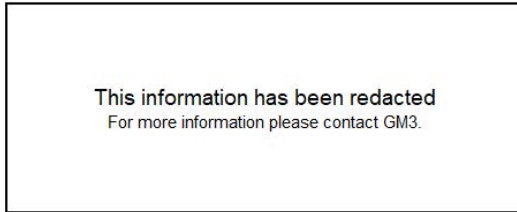


Plate 13: Close up of vertical crack #1, location at 11.5m. Taken on 24 June 2022.

Plate 14: Comparison photo of vertical crack #1. Photo taken during baseline recording by Biosis and provided by IMC.

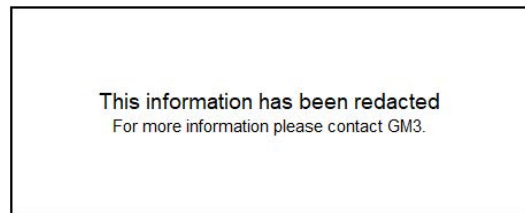
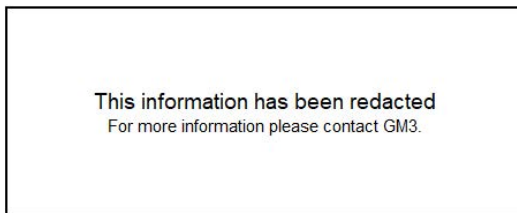


Plate 15: Close up of vertical crack #2, location at 12.13m (General view displayed in Plate 11 and Plate 16 as comparison photos). Taken on 24 June 2022.

Plate 16: Cropped comparison photo of Plate 12 taken by Biosis during baseline monitoring (2103). Red circle highlights evidence of cracking (crack#2) prior to Longwall 18 extraction.

Plate 17: General view of vertical crack #3, location at 12.98m. Taken on 24 June 2022.

Plate 18: Close up of vertical crack #3. Taken on 24 June 2022.

Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013

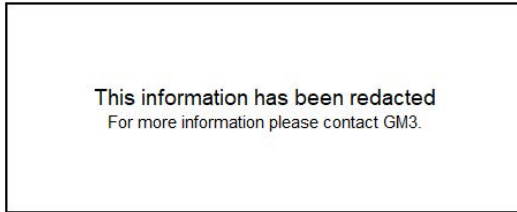


Plate 19: Photo of art panel with charcoal indeterminate. Evidence of granular loss caused by chemical weathering and macrovegetables. Photo taken 14 June 2022.

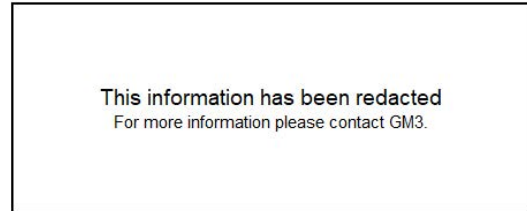


Plate 20: Comparison photo of art panel with charcoal indeterminate. Photo taken during baseline recording by Biosis (2013).

1.3.3 Dendrobium 8 (AHIMS ID#52-2-3068)

This Shelter with Art is situated approximately 4m south of Longwall 17 and 50m north of Longwall 18 (Figure 1). The shelter was formed by blockfall and cavernous weathering. It is located on the mid to lower ridge line, and comprises a long, narrow sandstone overhang, measuring 10 x 3.5 x 1.5m (Biosis 2012), with an adjoining shelter to the south. The art within the shelter comprises one indeterminate charcoal with infill motif measuring 0.50 x 0.20m (Biosis 2012).

The site was previously recorded by Biosis in 2012 then again by Biosis during baseline recording in 2013, then again by Niche for the purpose of updating baseline data and site cards relevant to the ACHMP (Biosis 2012,2013; Niche 2021a). Details are provided in Table 5 and Plate 21 to Plate 26. Previous baseline recording images are provided for comparison in Plate 22, Plate 24 and Plate 26. The ACHMP provides in-depth baseline records and additional photographs for Dendrobium 8 (AHIMS ID# 52-2-3068).

Table 5: Summary of the site visit to Dendrobium 8 (AHIMS ID# 52-2-3068)

AHIMS number	Site name	Results of inspections
52-2-3068	Dendrobium 8	This Shelter with Art was previously recorded during the Longwall 9 -18 baseline recording report completed by Biosis (2013), and again in 2020 for the purpose to update baseline data and site cards relevant to the ACHMP (Niche, 2021b). During the recent monitoring, no impacts related to the extraction of Longwall 18 were observed. The shelter had a damp interior, with granular loss, exfoliation and microvegetation observed in its interior. Evidence of water seepage on the charcoal motif is displayed in Plate 25. Plate 1 to Plate 4 provide a comparison of the Aboriginal cultural heritage site as observed during the most recent survey on 24 June and the 2013 baseline recording undertaken by Biosis.

Longwall 18 EoP Monitoring Images

Previous Image from Biosis Baseline recording 2013

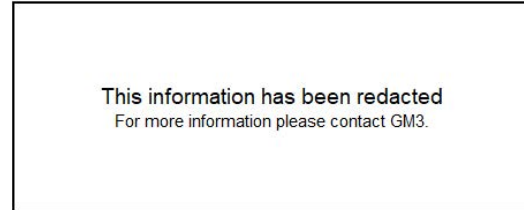
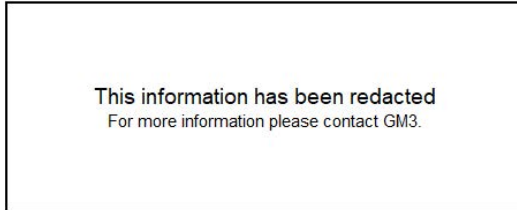


Plate 21: General photo of shelter facing south. Photo taken on 24 June 2022.

Plate 22: Comparison photo of shelter facing south. Photo taken during baseline recording by Biosis (2013).

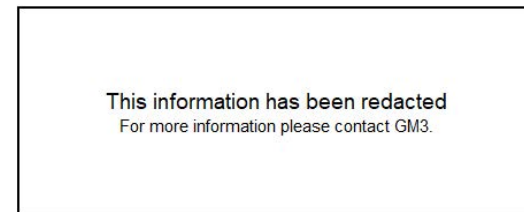
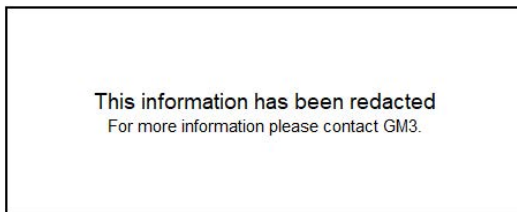


Plate 23: General photo of shelter facing east. Photo taken on 24 June 2022.

Plate 24: Comparison photo of shelter facing east. Photo taken during baseline recording by Biosis (2013).

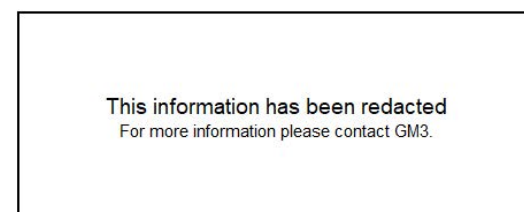
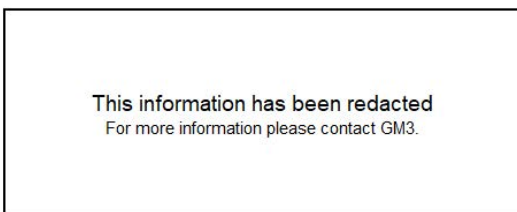


Plate 25: General view of charcoal indeterminate art panel. Taken on 24 June 2022.

Plate 26: : General view of charcoal indeterminate art panel. Photo taken during baseline recording by Biosis (2013).

1.4 Discussion and conclusion

Three (3) Aboriginal cultural heritage sites were visited on 24 June 2022 site inspection including Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID#52-2-2248) and Dendrobium 8 (AHIMS#52-2-3068). No impacts from the extraction of Longwall 18 were observed at Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID#52-2-2248) and Dendrobium 8 (AHIMS#52-2-3068).

Aboriginal cultural heritage site Dendrobium 7 (AHIMS ID#52-2-2248) displayed evidence of vertical cracking, presented in Dendrobium Colliery Longwall 18 ACHMP (Niche, 2021a), though not mentioned in Biosis baseline recording reports (2013). Photographic evidence provides confirmation that the cracking predates the extraction of Longwall 18 and other longwalls in Dendrobium Area 3B.

The Trigger Action Response Plan (TARP) (Table 6) contains the Performance Measures along with the proposed Corrective Management Actions (CMA) for Aboriginal cultural heritage sites, as outlined in the Dendrobium Area 3B Subsidence Management Plan (SMP) and the ACHMP. As per the TARP performance measures, Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID#52-2-2248) and Dendrobium 8 (AHIMS#52-2-3068) do not trigger CMAs.

Table 6: Dendrobium Approval Performance Measures Table - Trigger Action Response Plan (TARP)

Feature	Performance Measures	Observations	Actions as a result of performance measure rating
Upper Avon 36 (AHIMS ID#52-2-1772) Dendrobium 7 (AHIMS ID#52-2-2248) Dendrobium 8 (AHIMS ID#52-2-3068)	Observational and photographic monitoring in consultation with stakeholders (completed by this assessment).	Any changes attributable to natural weathering such as macro vegetation growth, and exfoliation, granular loss caused by chemical weathering.	None.
<i>None identified</i>	<u>Level 1</u> Change in shelter conditions not attributable to natural weathering or preservation- mineral growth of micro-organism growth (as observed by comparing pre-mining photographs with post-subsidence/ mining photographs). Changes external to the shelter that affect the site context (e.g. ground cracking, boulder slumping, rock and/or tree falls).	N/A.	N/A.
<i>None identified</i>	<u>Level 2</u> Change in shelter conditions not attributable to natural weathering or preservation- change in drip line or seepage, cracking or exfoliation of	N/A.	N/A.

Feature	Performance Measures	Observations	Actions as a result of performance measure rating
	overhang or shelter, movement or opening of existing planes and joins in panel, block fall within shelter or overhang, shelter or overhang collapse.		
<i>None identified</i>	<p>Level 3</p> <p>Level 2 impacts at greater frequency than predicted.</p> <p>Level 2 impacts attributable to mining remote from the mining area.</p>	N/A.	N/A.

As a result of this assessment, the recommendations are outlined in Table 7.

Table 7: Recommendations for Aboriginal sites within the Subject Area.

Recommendations	
	General
1.	A copy of this report is to be sent to the Registered Aboriginal Parties.
2.	Further monitoring to be undertaken from 17 May 2023, twelve (12) months from the completion of Longwall 18.
3.	South32 IMC should continue community consultation when required, in regard to any Aboriginal Cultural heritage sites in the impact areas of longwalls 9-18.

References

BHP Billiton Illawarra Coal (2007), *Dendrobium Area 3B: Subsidence Management Plan*. An unpublished report for DPI.

Biosis Research (2007), *Dendrobium Area 3 Archaeological and Cultural Heritage Assessment*. An unpublished report for BHP Billiton Illawarra Coal.

Biosis Research (2012), *Dendrobium Area 3B Longwalls 9 to 18: Aboriginal Cultural Heritage Assessment Report*. An unpublished report for BHP Billiton Illawarra Coal.

Biosis. (2013). *Baseline Recording of Aboriginal Sites in Dendrobium Area Longwalls 9-18*. Wollongong: BHP Billiton Illawarra Coal.

MSEC (2012). *Dendrobium Area 3B – Longwalls 9 to 18 –Subsidence Predictions and Impact Assessments for Natural Features and Surface Infrastructure in Support of the SMP Application*.

MSEC. (2017). *South32 Illawarra Coal: Dendrobium Mine- Area 3B The effects of the Proposed Modified Commencing Ends of Longwalls 15 to 18 in Area 3B at Dendrobium Mine on the Subsidence Predictions and Impact Assessments. Revision A*. Mine Subsidence Engineering Consultants.

Niche Environment and Heritage (2020), *Dendrobium Colliery Longwall 15 End of Panel Report - Aboriginal Heritage Assessment*. South 32 Illawarra Metallurgical Coal.

Niche Environment and Heritage (2021a), *Aboriginal Cultural Heritage Management Plan Dendrobium Colliery Longwall 18*. Prepared for South 32- Illawarra Metallurgical Coal Pty Ltd.

Niche Environment and Heritage (2021b), *Dendrobium Colliery Longwall 16 End of Panel Report - Aboriginal Heritage Assessment*. South 32 Illawarra Metallurgical Coal.

Appendix 1

22 August 2022

Rebecca Chalker
2 Rixon Avenue
Bulli, NSW 2516
E| rchalker@niche-eh.com
P|0488 774 006

Dear Rebecca,

RE: Dendrobium Colliery Longwall 18 End of Panel Report – Aboriginal Cultural Heritage Assessment.

Thank you for providing a draft copy of the Dendrobium Colliery Longwall 18 End of Panel Report for Illawarra Local Aboriginal Land Councils review and comment.

Illawarra LALC understands that there are three Aboriginal cultural heritage sites located within the Longwall 18 Study Area: Upper Avon 36 (Upper Avon 36 (AHIMS ID# 52-2-1772), Dendrobium 7 (AHIMS ID # 52-2-2248) and Dendrobium 8 (AHIMS ID# 52-2-3068)). Niche has been engaged by South-32 – Illawarra Metallurgical Coal to conduct an End of Panel assessment of the Aboriginal cultural heritage sites within the limit of predicted subsidence effects of Longwall 18 at their Dendrobium Colliery.

Baseline recording of the three sites was undertaken by Biosis (2013) prior to any mining activities in the area. Additionally Niche provided additional baseline data in 2021 (Niche 2021a). Niche has determined that there are ‘no impacts related to the extraction of Longwall 18 were observed’.

Dendrobium 7 is located 19 m south of Longwall 17 and 35 m north of Longwall 18. Unfortunately, Dendrobium 7 was not surveyed for the Longwall 17 End of Panel Report due to ‘safety reasons – site situated in Longwall 18 active mining area’.

Dendrobium was surveyed for the Longwall 18 End of Panel Report. At this time, Niche observed that Dendrobium 7 (AHIMS ID #52-2-2248) ‘displayed evidence of vertical cracking’. Illawarra LALC is concerned that the baseline study, undertaken in 2013 (Biosis 2013), either did not observe or did not mention or photograph the three cracks before mining either Longwall 17 or 18. Niche suggests that these were visible in the Dendrobium Colliery Longwall ACHMP (Niche 2021a). Several photographs were gathered to confirm that these were present before mining; however, the lack of documentation in 2013 is alarming.



In order to ensure that there is transparency in the monitoring of Aboriginal cultural heritage relevant to subsistence activities, ILALC proposed that all future baseline studies undertaken to monitor subsidence impacts should include photogrammetry in addition to individual high-quality photographs. This will provide confidence in the results of the monitoring program.

Please contact me at (02) 4226 3338 or 0477 777 232 if you would like further clarification in regards to these comments.

Yours sincerely

Aara Welz

Culture & Heritage Manager
Archaeologist/Anthropologist
Illawarra Local Aboriginal Land Council
Level 2, 38 Young Street
Wollongong NSW 2500
Telephone: 0477 777 232