

# Dendrobium Colliery Longwall 21

## Aboriginal Cultural Heritage End of Panel Assessment

FINAL REV01- PUBLIC EXHIBITION

Prepared by Regal Heritage for South 32- Illawarra Metallurgical Coal

21 November 2023

Wollongong Local Government Area

**COVER IMAGE: Removed due to cultural sensitivity**

## **ACKNOWLEDGEMENT OF COUNTRY**

Regal Heritage acknowledges the Traditional Custodians of the land on which this project was undertaken and pays respect to Elders past, present and emerging.

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### **REGAL HERITAGE PTY LTD**

PO Box W51

West Wollongong

NSW 2500

[www.regalheritage.com.au](http://www.regalheritage.com.au)

[renee@regalheritage.com.au](mailto:renee@regalheritage.com.au)

ABN 47 656 442 698

ACN 656442698

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| <b>Author(s)</b>        | Renée Regal |
| <b>Authorised by:</b>   | Renée Regal |

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# Executive Summary

Regal Heritage Pty Ltd (Regal Heritage) were engaged by South32- Illawarra Metallurgical Coal (IMC) to complete this assessment of Aboriginal cultural heritage sites that are located within the Angle of Draw and/or the 400m Study Area of Longwall 21. This assessment will be included in the IMC End of Panel (EoP) report for Longwall 21.

The following sites of high Aboriginal cultural significance were assessed:

- Browns Road Site 20 (AHIMS ID#52-2-1647)
- Dendrobium 3C Shelter 1 (AHIMS ID#52-2-4500)

No impacts were observed relating to longwall extraction at either of these sites.

This report was provided to the Registered Aboriginal Parties (RAPs) for their review and comment on the 13 November 2023, a total of 7 days were provided for this review. All comments have been included in the main body of this report with copies of their original comments being provided in Appendix A.

As a result of the assessment the following Draft recommendations have been made for this report:

- Recommendation 1- IMC should send the draft EoP report to the RAPs for review and comment.
- Recommendation 2- IMC Should continue to consult with the Aboriginal community in accordance with the Project Approval.

Please note that as previously requested by the RAPs for the Dendrobium Area 3C project a redacted copy of this report will be available online on the IMC website. An unredacted issue has been provided to the NSW Department of Planning and Environment in accordance with the Dendrobium Area 3C Conditions of Consent.

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# 1. Introduction

## 1.1. Project description and background

South32-Illawarra Metallurgical Coal (IMC) engaged Regal Heritage Pty Ltd (Regal Heritage) to complete an End of Panel (EoP) assessment of the Aboriginal cultural heritage sites within the Longwall 21 Study Area. This area has been defined as the 'Study Area' and is shown in Figure 1.

This report includes a summary of:

- the consultation process with the Registered Aboriginal Parties (RAPs);
- previous monitoring of all sites in Dendrobium Area 3;
- the results of the Subsidence Report prepared by MSEC (2018);
- the results of a site inspection;
- a discussion; and
- conclusions and draft recommendations.

Monitoring of Aboriginal archaeological sites of Longwall 21 at Dendrobium Colliery to-date has been carried out as recommended by Niche Environment and Heritage (2019), and the ACHMP (Niche Environment and Heritage 2022). The site monitoring results presented in this report are in line with the required actions and recommendations presented in the ACHMP.

## 1.2. Previous Dendrobium Area 3 subsidence monitoring program results

As a condition of consent EoP assessment reports for Aboriginal cultural Heritage have been produced from post extraction of Longwall 6 in Area 3A through to Longwall 19 in Area 3A (Comur Consulting 2011 and 2012, Biosis Research 2013, 2013, BHP Billiton 2014, Niche Environment and Heritage 2014, 2017, 2018, 2019, 2020, 2021b, 2022a, 2022b and 2023). Of the 35 previously monitored Aboriginal Cultural Heritage sites no sites within the angle of draw for Longwall 21 have been monitored prior to this assessment.

Including the two sites monitored for this assessment there have been 37 Aboriginal cultural heritage sites monitored within the Dendrobium Mine Lease Area. Of these sites there have been 7 sites impacted by mining subsidence.

The cumulative impact to Aboriginal cultural heritage sites as a result of mining subsidence is 18.92 %. One of these sites has the direct impact of cracking and water seepage through an Art Panel (DM 15 AHIMS ID#52-2-3639).

## 1.3. MSEC 2019 subsidence predictions for Longwall 21

Mine Subsidence Engineering (MSEC) completed the subsidence prediction report for Longwall 21 (MSEC 2019). Within Section 6.5 of this assessment subsidence predictions relating to Aboriginal cultural heritage sites are addressed. Due to the distance from mining of the two Aboriginal cultural sites being monitored, the sites are predicted to experience less than 20 mm vertical subsidence due

to the extraction of Longwall 21. The sites are also not expected to experience measurable upsidence or compressive strain due to valley closure effects as they are located on the sides of the ridgelines away from the valley bases. It was predicted that it would be unlikely that the Aboriginal heritage sites within the Study Area would experience adverse impacts due to the extraction of Longwall 21 (MSEC 2019: 67).



*Figure 1: Aboriginal Cultural Heritage Sites within the Study Area (Source: South 32- Illawarra Metallurgical Coal)*

**FIGURE REMOVED DUE TO CULTURAL SENSITIVITY**

## 2. Aboriginal community consultation

### 2.1. Consultation process to date

Consultation has been undertaken in accordance with the Aboriginal Cultural Heritage Management Plan for Dendrobium Area 3C Longwalls 21, 22 and 23 that was prepared by Niche Environment and Heritage (Niche 2022) and the Dendrobium Mine Area 3C Longwalls 20-21 Aboriginal Cultural Heritage Assessment Report (Niche 2019). The following Registered Aboriginal Parties (RAPs) were identified for consultation for this EoP Assessment:

- Gary Caines - Individual
- James Davis - Individual
- Lee Field - Barraby Cultural Services
- Glenda Chalker - Cubbitch Barta Native Title Claimants
- Aara Welz - Illawarra Local Aboriginal Land Council
- Sandy Chalmers/ Morgan Westley - South Coast People Native Title Claimants
- Kayla Williamason - Woronora Plateau Gundungurra Elders Corporation
- Arika Jalmoki - Yulay Cultural Services
- Bo Field - Yurrandaali Cultural Services

### 2.2. Notification of project and registration of interest to attend field assessment

All of the RAPs were notified on the 27 September 2023 of the proposed field Aboriginal cultural heritage monitoring program for Longwall 21 EoP.

The following representatives outlined in Table 1 expressed a desire to attend the site inspection on 5 October 2023. Due to a high wind warning the field assessment was moved to 6 October 2023.

*Table 1: List of Registered Aboriginal Parties*

| Registered Aboriginal Party                     | Representative to attend field survey |
|---|---------------------------------------|
| Individual                                      | James Davis                           |
| Illawarra Local Aboriginal Land Council         | Jamie Cochrane                        |
| Woronora Plateau Gundungurra Elders Corporation | Kayla Williamson                      |
| Yulay Cultural Services                         | Bo Field                              |

## 2.3. Draft report comments

A copy of the draft report was issued to all of the RAPs on the 13 November 2023. A total of 7 days were provided for comment. These comments and IMC's response have been outlined in Table 2.

*Table 2: Details of RAP comments on draft report*

| Registered Aboriginal Party                            | Submission   | IMC Response to Comment  | Section of report included |
|--|--|--|----------------------------|
| South Coast Peoples Native Title Claimants- Mia Bridle | <p>Thank you for providing the draft report below, sent to us on 15 November 2023.</p> <p>We note you request comments by 20 November 2023, five (5) days later.</p> <p>As the Aboriginal cultural heritage consultation requirements for proponents 2010 provide, the proponent must give registered Aboriginal parties a minimum of 28 days from sending the draft report to make submissions. The time allowed for comment on the draft report should reflect the project's size and complexity.</p> <p>We kindly request that you adjust the final date for submission of comments to reflect this requirement, i.e. 18 December 2023.</p> | <p>Many thanks for your prompt response. As the report is a short letter and not an Aboriginal Cultural Heritage Assessment report for an Aboriginal Heritage Impact Permit as the consultation guidelines are written for, and there were no impacts to Aboriginal objects a shorter time frame has been placed on this project report for review and comment.</p> <p>Please feel free to ask the representatives to give me a call to discuss feedback if required, as the End of Panel Project has a very tight turn around for submission to the Department of Planning unfortunately an extension on this review period cannot be made.</p> | Section 2.3                |

| Registered Aboriginal Party                           | Submission   | IMC Response to Comment   | Section of report included       |
|---|--|---|----------------------------------|
| Woronora Plateau Gundungara Elders- Kayla Williamson  | Woronora Plateau Gundungara Elders agree that the shelters should continue to be monitored as per ACHMP requirements.  | Thank you for your feedback Kayla this will be included in the final report.  | Section 2.3, Table 4 and Table 5 |
| Cubbitch Barta Native Title Claimants- Glenda Chalker | <p>In regards to the ACHA for longwall 21, I would like to make some comments.</p> <p>1. The flow chart provided for previous subsidence monitoring is great, but it goes no further than longwall 19.</p> <p>This ACHA is in regards to longwall 21. Is there no flow chart for longwalls 20 and 21?</p> <p>2. I am concerned that at least three sites have had considerable damage to the art panels, even water seepage.</p> <p>What has been done to protect the art work from future water damage?</p> <p>3. The two shelters in this ACHA do not appear to have any damage due to subsidence at this point, but it is disturbing to read about the others.</p> <p>4. For a long time I have asked about the cumulative impacts to the sites, and would be interested to see exactly what sites have been damaged on what longwalls over time.</p> | Many thanks for sending this through Glenda. I have forwarded through to South 32 and will send a response to you in due course.                          | Section 2.3                      |
| Illawarra Local Aboriginal Land Council- Aara Welz    | Thank you for providing ILALC with the EoP Monitoring Report for review and comment. We note that the rock shelters present within the Study Area have not at this stage been impacted by mine related subsidence. We  | Many thanks for your feedback Aara. I have forwarded your request through to South 32 and will send through a response in relation to this in due course. | Section 2.3                      |

| Registered Aboriginal Party | Submission  | IMC Response to Comment | Section of report included |
|-----------------------------|---|-------------------------|----------------------------|
|                             | <p>look forward to being involved with, and kept up to date as further monitoring of these sites are undertaken.</p> <p>To help ILALC understand the cumulative impacts of mining efforts carried out in ILALCs region by South 32, it would be appreciated if a map is provided to ILALC that shows:</p> <ul style="list-style-type: none"> <li>• South 32 mining boundary</li> <li>• All previously recorded Aboriginal sites in the boundary (colour coded by site type)</li> <li>• All sites that have been impacted to date</li> <li>• All sites that have been identified as having the potential to be impacted by mining</li> <li>• All sites that are actively being monitored for harm</li> </ul> |                         |                            |

### 3. Site inspection and results

The two Aboriginal cultural heritage sites inspected as part of this assessment are outlined in Table 3. This is the first time each of these sites have been monitored by IMC as part of a monitoring program.

*Table 3: Aboriginal Cultural Heritage sites assessed for the Longwall 21 EoP.*

| AHIMS ID  | Site Name               | Site Details           | Inspection Date |
|-----------|-------------------------|------------------------|-----------------|
| 52-2-1647 | Browns Road Site 20     | Shelter with Artefacts | 6 October 2023  |
| 52-2-4500 | Dendrobium 3C Shelter-1 | Shelter with Art       | 6 October 2023  |

The site inspection was carried out on 6 October 2023 by Renée Regal (Regal Heritage Director/Heritage Consultant), Christopher Henderson-Matuschka (South32), and Aboriginal community representatives, James Davis (Individual), Jamie Cochran (Illawarra Local Aboriginal Land Council), Kayla Williamson (Woronora Plateau Gundungarra Elders Corporation) and Bo Field (Yulay Cultural Services). A summary of the findings of the site visit are outlined in Sections 3.1 to 3.2.

#### 3.1. Browns Road Site 20 (AHIMS ID#52-2-1647)- No impacts observed.

This Shelter with Artefacts is located 250 metres south of Longwall 21 and is located within the ridgeline at the end of a point of Wongawilli Creek formed by cavernous weathering and block fall. It features a deposit of a bipolar core and several quartz artefacts. The site was registered on the Aboriginal Heritage Information Management System by D. Towne and C. Sefton of the Illawarra Prehistory Group (IPG) during a systematic survey on the 01/08/1989. The site was relocated, and baseline recorded by R. Regal and S. Ward of Niche Environment and Heritage on the 31 November 2018.

The shelter faces west, measures 15.5 x 7.5 x 4 m and is located approximately 200m from Wongawilli Creek on a continuous ridgeline.

The following Cultural and scientific (archaeological) significance assessment has been replicated from Niche Environment and Heritage 2018 in Plate 1.

|                                    |  |
|------------------------------------|--|
| 52-2-1647                          | Browns Road Site 20  |
| Social or cultural values          | This site holds spiritual and cultural significance to the RAP, as in most cases, it is the first time Aboriginal people have had the opportunity to see this site in 150 years. There is a contemporary view held by the RAPs that all Aboriginal sites are important within the region due to their interconnectivity with the natural landscape and past occupation of the region.  |
| Historic values                    | None. There are no historical records relating to Aboriginal occupation or specific Aboriginal people at Browns Road Site 20, or specifically within the Subject Area.   |
| Scientific (Archaeological) Values | This site is considered to be representative of a typical class of Aboriginal sites in the local area (Shelter with Artefacts). This sandstone shelter is located within the ridgeline at the end of a point of Wongawilli Creek formed by cavernous weathering and block fall. It features a deposit of a bipolar core and several quartz artefacts.<br><br>The site is unlikely to significantly contribute to an understanding of the area and/or region and/or state's natural and cultural history beyond its current recording. As a result, it has been given a low scientific value. |
| Aesthetic value                    | Being located within the WaterNSW Metropolitan catchment area; the site has a high aesthetic value as there has been little change through disturbance to the landscape surrounding the site.  |
| Submissions                        | Cubbitch Barta Native Title Claimants representative, Glenda Chalker.  |

*Plate 1: Cultural and scientific (archaeological) significance assessment reproduced from Niche Environment and Heritage 2018: 27.*

The results of the monitoring inspection are detailed below in Table 4. Plates 2 through to 9 demonstrating the comparison photographs between baseline recording and this assessment.

*Table 4: Results of Browns Road Site 20 (AHIMS ID#52-2-1647) Monitoring*

| AHIMS ID  | Site Name           | Monitoring details  |
|-----------|---------------------|---|
| 52-2-1647 | Browns Road Site 20 | <p>This shelter is in the same condition as previously assessed for the baseline recording assessment. Natural weathering processes such as chemical weathering and honeycombing are continuing in the shelter as demonstrated in the plates below.</p> <p><b>RAP comments made during the site inspection in relation to this site:</b><br/>The shelter should continue to be monitored as per the ACHMP and Approval requirements.</p> <p><b>RAP comments made in relation to this site through review of the draft report:</b> This shelter should continue to be monitored in accordance with the Project Approval.</p> |

**Baseline recording Browns Road Site 20 (AHIMS ID#52-2-1647)**

**Monitoring Images Browns Road Site 20 (AHIMS ID#52-2-1647)**



Plate 2: Baseline recording general view of shelter facing east. Photograph reproduced from Niche Environment and Heritage 2019.



Plate 3:: General photograph of the shelter facing east inline with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone ## e. ##n. ##2 on 6 October 2023.



Plate 4:: Baseline recording general view of artefacts located within the drip line of Browns Road 20. Photograph reproduced from Niche Environment and Heritage 2019.



Plate 5:: General photograph of artefacts located within the shelter dripline inline with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone ## e. ## n. ## on 6 October 2023.



Baseline recording Browns Road Site 20 (AHIMS ID#52-2-1647)

Monitoring Images Browns Road Site 20 (AHIMS ID#52-2-1647)

IMAGE REMOVED DUE TO CULTURAL SENSITIVITY

Plate 6:: Baseline recording of honeycomb weathering and ceiling overhang. Photograph reproduced from Niche Environment and Heritage 2019.

IMAGE REMOVED DUE TO CULTURAL SENSITIVITY

Plate 8:: Baseline recording of the shelter block fall. Photograph reproduced from Niche Environment and Heritage 2019.

IMAGE REMOVED DUE TO CULTURAL SENSITIVITY

Plate 7:: General photograph of the honeycombing within the shelter ceiling inline with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone ## e. ## n. ## on 6 October 2023.

IMAGE REMOVED DUE TO CULTURAL SENSITIVITY

Plate 9:: General photograph of the shelter inline with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone 56 e. 0290991 n. 6193854 on 6 October 2023.

### 3.2. Dendrobium 3C Shelter-1 (AHIMS ID52-2-4500)- No impacts observed.

This sandstone shelter is located 360 m south of Longwall 21, on a top ridge line in proximity to Wongawilli Creek formed by cavernous weathering. The site has a small sandy deposit with no artefacts, and orange ochre indeterminate art motif.

The following Cultural and scientific (archaeological) significance assessment has been replicated from Niche Environment and Heritage 2018 in Plate 10.

| 52-2-4500                          | Dendrobium 3C Shelter 1  |
|------------------------------------|--|
| Social or cultural values          | This site holds spiritual and cultural significance to the RAP, as in most cases, it is the first time Aboriginal people have had the opportunity to see this site in 150 years. There is a contemporary view held by the RAPs that all Aboriginal sites are important within the region due to their interconnectivity with the natural landscape and past occupation of the region.  |
| Historic values                    | None. There are no historical records relating to Aboriginal occupation or specific Aboriginal people at Dendrobium 3C Shelter 1, or specifically within the Subject Area.   |
| Scientific (Archaeological) Values | This site is considered to be representative of a typical class of Aboriginal site in the local area (Shelter with Art). This sandstone shelter is located on a top ridge line in proximity to Wongawilli Creek formed by cavernous weathering. The site has a small sandy deposit with no artefacts, and an orange ochre art motif. The site is not under threat.<br><br>As a result, it has been given a low scientific value. |
| Aesthetic value                    | Being located within the WaterNSW Metropolitan catchment area; the site has a high aesthetic value as there has been little change through disturbance to the landscape surrounding the site.  |
| Submissions                        | Cubbitch Barta Native Title Claimants representative, Glenda Chalker.  |

*Plate 10: Cultural and scientific (archaeological) significance assessment reproduced from Niche Environment and Heritage 2018: 28-29.*

The results of the monitoring inspection are detailed below in Table 5. Plates 11 through to 14 demonstrating the comparison photographs between baseline recording and this assessment.

*Table 5: Results of Dendrobium 3C Shelter-1 (AHIMS ID#52-2-4500) Monitoring*

| AHIMS ID  | Site Name               | Monitoring details  |
|-----------|-------------------------|---|
| 52-2-4500 | Dendrobium 3C Shelter-1 | This shelter is in the same condition as previously assessed for the baseline recording assessment. Natural weathering processes such as micro flora growth over the art panel is increasing in the shelter as demonstrated in the plates below.<br><br><b>RAP comments made in relation to this site through review of the draft report:</b> This shelter should continue to be monitored in accordance with the Project Approval. |

**Baseline recording Dendrobium 3C Shelter-1 (AHIMS ID #52-2-4500)**

**Monitoring Images Dendrobium 3C Shelter-1 (AHIMS ID# 52-2-4500)**

**IMAGE REMOVED DUE TO CULTURAL SENSITIVITY**

Plate 11:: Baseline recording of Shelter. Photograph reproduced from Niche Environment and Heritage 2019.

**IMAGE REMOVED DUE TO CULTURAL SENSITIVITY**

Plate 12:: General photograph of the shelter in line with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone ## e. ## n. ## on 6 October 2023.

**IMAGE REMOVED DUE TO CULTURAL SENSITIVITY**

Plate 13:: Baseline recording of art. Photograph reproduced from Niche Environment and Heritage 2019.

**IMAGE REMOVED DUE TO CULTURAL SENSITIVITY**

Plate 14:: General photograph of indeterminate inline with the original baseline recording location. Photographer location taken with a hand-held differential GPS at Zone ## e. ## n. ## 5 on 6 October 2023.

## 4. Discussion and conclusion

Two Aboriginal cultural heritage sites were inspected on the 6 October 2023:

- Browns Road 20 (AHIMS ID#52-2-1647) and;
- Dendrobium 3C Shelter-1 (AHIMS ID# 52-2-4500).

Neither of these sites demonstrated any impacts from the extraction of Longwall 21.

## 5. Recommendations

The recommendations resulting from this assessment are outlined below:

- Recommendation 1- IMC should send the draft EoP report to the RAPs for review and comment.
- Recommendation 2- IMC Should continue to consult with the Aboriginal community in accordance with the Project Approval.

# References

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# Appendix A Aboriginal community consultation documents

**SECTION REMOVED DUE TO CULTURAL SENSITIVITY**



# Appendix B Previous Subsidence Monitoring in Dendrobium Area 3

It should be noted that all sites within this table regardless of scientific (archaeological) significance have a high cultural significance to the Aboriginal community.

| Dendrobium Mining Area | AHIMS ID  | Site Name                      | Site Type        | Relevant longwall EoP report | Observed Impacts  | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|--------------------------------|------------------|------------------------------|---|--|-----------------------|
| 3A                     | 52-2-0458 | Browns Road Site 33            | Shelter with Art | 6                            | No impacts observed   | -  | -                     |
| 3A                     | 52-2-1646 | Browns Road Site 32            | Shelter with Art | 6                            | No impacts observed   | -  | -                     |
| 3A                     | 52-2-0274 | Sandy Creek Road 22            | Shelter with Art | 6 and 7                      | No impacts observed   | -  | -                     |
| 3A                     | 52-2-0277 | Sandy Creek Road 25            | Shelter with Art | 6 and 7                      | Joins expanding post extraction of longwall 6<br>Closure of previous expanded joints. | Low                                      | 6                     |
| 3A                     | 52-2-0278 | Sandy Creek Road 26            | Shelter with Art | 6 and 7                      | No impacts observed   | -  | -                     |
| 3A                     | 52-2-3052 | SCA Special Area Fire Trail 6C | Open Camp Site   | 6                            | No impacts observed   | -  | -                     |

| Dendrobium Mining Area | AHIMS ID  | Site Name                  | Site Type            | Relevant longwall EoP report | Observed Impacts   | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|----------------------------|----------------------|------------------------------|--|--|-----------------------|
| 3A                     | 52-2-0056 | DM 13                      | Shelter with Deposit | 7 and 8                      | No impacts observed  | -  | -                     |
| 3A                     | 52-2-3651 | DM 23                      | Shelter with Deposit | 7                            | No impacts observed  | -  | -                     |
| 3A                     | 52-2-3644 | DM 20                      | Shelter with Art     | 8                            | No impacts observed  | -  | -                     |
| 3B                     | 52-2-1562 | Donald Castle Creek Site 1 | Shelter with Art     | 9                            | No impacts observed  | -  | -                     |
| 3B                     | 52-2-1628 | Browns Road Site 13        | Shelter with Art     | 9                            | No impacts observed  | -  | -                     |
| 3B                     | 52-2-2208 | Dendrobium 1               | Shelter with Deposit | 9 and 10                     | Post extraction of longwall 9 expansion of pre-existing vertical cracking adjoining the horizontal bedding plane as well as the extension of this cracking horizontally. There were no further impacts post the extraction of longwall 10. | Low                                      | 9                     |
| 3B                     | 52-2-3878 | DM 2                       | Shelter with Deposit | 9 and 10                     | No impacts observed  | -  | -                     |
| 3B                     | 52-2-1627 | Browns Road Site 12        | Shelter with Art     | 11,12 and 13                 | No impacts observed  | -  | -                     |

| Dendrobium Mining Area | AHIMS ID  | Site Name           | Site Type                    | Relevant longwall EoP report | Observed Impacts  | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|---------------------|------------------------------|------------------------------|---|--|-----------------------|
| 3B                     | 52-2-2209 | Dendrobium 2        | Shelter with Art             | 11 and 12                    | No impacts observed   | -  | 12                    |
| 3B                     | 52-2-1775 | Upper Avon 39       | Shelter with Deposit         | 12                           | No impacts observed   | -  | -                     |
| 3B                     | 52-2-1776 | Upper Avon 40       | Shelter with Art and Deposit | 12                           | No impacts observed   | -  | -                     |
| 3B                     | 52-2-1778 | Upper Avon 41       | Shelter with Deposit         | 12                           | No impacts observed   | -  | -                     |
| 3B                     | 52-2-1626 | Browns Road Site 11 | Shelter with Art             | 13,14 and 15                 | No impacts observed post extraction of longwall 13. Diagonal and vertical cracking with possible block fall and exfoliation expediated by subsidence observed post extraction of longwall 14. Post extraction of longwall 15 diagonal and vertical cracking with minor block fall was observed. | -  | 14                    |
| 3B                     | 52-2-2229 | Site 1-DB1          | Shelter with Art             | 13, 14 and 15                | There were no observable impacts post extraction of longwalls 13 or 15. During the EoP for longwall 14  | Low                                      | 14                    |

| Dendrobium Mining Area | AHIMS ID  | Site Name          | Site Type                    | Relevant longwall EoP report | Observed Impacts  | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|--------------------|------------------------------|------------------------------|---|--|-----------------------|
|                        |           |                    |                              |                              | diagonal and vertical cracking with possible block fall and exfoliation expediated by subsidence was observed.  |  |                       |
| 3B                     | 52-2-3640 | DM 16              | Shelter with Art             | 13                           | No impacts observed   | -  | -                     |
| 3B                     | 52-2-3645 | DM 21              | Shelter with Art and Deposit | 14, 15 and 16                | There were no observable impact post extraction of longwall 14 and 16. Diagonal and vertical cracking at the northern extension of the shelter was observed during the assessment post extraction of longwall 15. | Low                                      | -                     |
| 3B                     | 52-2-3646 | DM 22              | Shelter with Art             | 14                           | No observable impacts   | -  | -                     |
| 3B                     | 52-2-1773 | Upper Avon 37      | Shelter with Art             | 14                           | No impacts observed   | -  | -                     |
| 3B                     | 52-2-1623 | Browns Road Site 8 | Shelter with Deposit         | 15, 16 and 17                | No impacts observed   | -  | -                     |
| 3B                     | 52-2-1771 | Upper Avon 35      | Shelter with Deposit         | 15, 16 and 17                | No impacts observed   | -  | -                     |
| 3B                     | 52-2-2246 | Dendrobium 6       | Isolated Find                | 15, 16 and 17                | Not inspected as it was an isolated find on a road  | -  | 16                    |

| Dendrobium Mining Area | AHIMS ID  | Site Name           | Site Type                                 | Relevant longwall EoP report | Observed Impacts   | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|---------------------|---|------------------------------|--|--|-----------------------|
|                        |           |                     |   |                              | and would not be able to be located.   |  |                       |
| 3B                     | 52-2-2248 | Dendrobium 7        | Shelter with Art                          | 16, 17 and 18                | No inspected due to safety reasons post extraction of longwalls 16 and 17.<br>There were no observable impacts post the extraction of longwall 18. | -  | -                     |
| 3B                     | 52-2-3068 | Dendrobium 8        | Shelter with Art and Axe Grinding Grooves | 16,17 and 18                 | No inspected due to safety reasons post extraction of longwalls 16 and 17.<br>There were no observable impacts post the extraction of longwall 18. | -  | -                     |
| 3B                     | 52-2-1772 | Upper Avon 36       | Shelter with Art                          | Longwall 18                  | No observed impacts  | -  | -                     |
| 3A                     | 52-2-1645 | Browns Road Site 31 | Shelter with Art                          | 19                           | No observed impacts  | Low                                      | -                     |
| 3A                     | 52-2-3639 | DM 15               | Shelter with art                          | 19                           | Has vertical cracking between 1-2mm in width which partially runs through Art Panel 1 and Motif 1. An area of fresh spauling and exfoliation       | Low                                      | -                     |

| Dendrobium Mining Area | AHIMS ID  | Site Name           | Site Type                    | Relevant longwall EoP report | Observed Impacts  | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|---------------------|------------------------------|------------------------------|---|--|-----------------------|
|                        |           |                     |                              |                              | was identified approximately 1 m above the same Panel and Motif. Separation of an existing join below the art panel and minor new block fall from the western lip of the shelter overhang (associated with the upper termination of the vertical cracking) This minor block fall has not impacted the art or the structural integrity of the shelter. There was also previously unrecorded water seepage (included across the art panel) which may affect future preservation of the art motif. |  |                       |
| 3A                     | 52-2-0273 | Sandy Creek Road 21 | Shelter with Art and Deposit | 19                           | Separation of the pre-existing horizontal bedding planes and fissures along the inner lower lip and lower back wall of the shelter measuring 10 m in length   | Moderate                                 | -                     |

| Dendrobium Mining Area | AHIMS ID  | Site Name | Site Type            | Relevant longwall EoP report | Observed Impacts   | Scientific (Archaeological) Significance | Located over longwall |
|------------------------|-----------|-----------|----------------------|------------------------------|--|--|-----------------------|
|                        |           |           |                      |                              | and between 1 and 20 mm in width, stretching from the southern end of the shelter and terminating 30 cm below Art Panel 2. No direct impacts to the Art Panels or Motifs were noted. An area of fresh spauling was observed associated with the northern end of the horizontal plane separation described above. |  |                       |
| 3A                     | 48-2-0056 | DM 13     | Shelter with Deposit | 19                           | No observable impacts  | Low                                      | -                     |
| 3A                     | 52-2-3641 | DM 17     | Shelter with Deposit | 19                           | No observable impacts  | Low                                      | -                     |

