

APPENDIX K

Addendum Aboriginal cultural heritage assessment



Lake Cowal CGO Open Cut Expansion Project

ACHA Addendum

Prepared for Evolution Mining (Cowal) Pty Ltd

January 2024

Lake Cowal CGO Open Cut Expansion Project

ACHA Addendum

Evolution Mining (Cowal) Pty Ltd

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Executive Summary

Evolution Mining (Cowal) Pty Limited (Evolution) is the owner and operator of Cowal Gold Operations (CGO), an existing open pit and underground gold mine approximately 38 kilometres (km) north-east of West Wyalong, in the central west region of New South Wales (NSW). CGO was first approved in 1999, and open pit mining operations commenced in 2005. Evolution is seeking approval for further open pit mining operations at CGO through the Open Pit Continuation Project (the Project). The Project primarily seeks to continue the open pit operations by approximately 10 years to 2036 and extend the total mine life by approximately two years to 2042.

As part of the EIS public exhibition process for the Project, Heritage NSW reviewed and provided advice on the finalised Aboriginal cultural heritage assessment (ACHA). Based on this review Heritage NSW indicated broad agreement with the findings and recommendations of the report. However, it was noted that several issues required further clarification and information. This report has been prepared to supplement the ACHA and to address Heritage NSW's comments. The report includes both additional field investigations to resolve tentative site classifications and refines or clarifies findings and contents of the ACHA.

The addendum undertook a review of existing heritage permits and approvals, and concluded that:

- there are three existing Aboriginal heritage impact permits (AHIP) currently applicable to the majority of the Project area: Consent 1467/Permit 1468 (no expiry), Consent 1680/Permit 1681 (no expiry), and AHIP C0004570 (expires in 2033)
- there are a total of 119 Aboriginal objects and/or sites currently registered in the Project area. Of these, 76 are encompassed within the curtilage of Consent 1467/Permit 1468, three within Consent 1680/Permit 1681, 24 within AHIP C0004570, and two are within multiple permits. Some 14 of the identified sites – many of them identified as part of EMM (2023) – are not encompassed within the existing permits. Some 49 of these have been previously destroyed (41.2%). Those sites destroyed have typically been archaeologically mitigated and recovered as part of established management by the Evolution
- neither Consent 1467/Permit 1468 nor Consent 1680/Permit 1681 identified any no-harm or conservation zones within or near the project. AHIP C0004570 identified one site that was not permissible for harm, namely a culturally modified tree (#39-4-0311). This site was previously and remains encompassed as permissible for removal in Permit 1468/Consent 1467. The careful removal and recovery ex situ of this site type has been regularly undertaken across the Project area for 20 years with the involvement of the Aboriginal participants. It is considered that comparable mitigation measures could be applied for this #39-4-0311 (Section 5)
- a comparison of the existing management and mitigation approaches within the Project area under these existing consents compared with the proposed actions in EMM (2023) has been undertaken. This results in a shift from the existing approach of broad ongoing surface artefact collection and grader scraping to targeted manual excavation of key sites of value.

Additional investigations and a review of previous investigations with specific reference to Heritage NSW's comments was undertaken, and concluded that:

- additional field investigations were undertaken to resolve 'tentative' classifications within the identified cultural assemblage. Investigations of 15 potential hearths was undertaken, and revealed that seven had been previously destroyed by natural or anthropogenic processes. An additional hearth was also encountered. Further, these hearths were all characterised as scattered surface burnt clay fragments, which limits any cultural deposit and associated research potential

- the additional field investigation has resulted in a refinement of the cultural assemblage, and reveals some 20 discrete Aboriginal sites and objects (a reduction from 28) are within the Project area. These are encompassed within a complex landscape of surface and buried stone artefacts documented as CGO LEZ (#43-4-0189) and CGO BS1 (#43-4-0191)
- a review of the significance of the cultural assemblage is undertaken and includes a review of classifications by previous investigations compared with EMM (2023). While the earliest studies do not provide formal significance assessment, they highlight the importance of several sites along the lake's edge (e.g. LC 2 [#43-3-0022]) and this landform itself, both of which are captured in the latest assessments. Many of the other sites have received consistent classifications ranging from low – moderate values over the last decade
- an update of the potential impacts by the Project has been undertaken, and shows a reduction in adverse harm. Specifically, some 12 Aboriginal objects and/or sites (a reduction from 19) would now be impacted by the Project, as well portions of CGO LEZ (#43-4-0189) and CGO BS1 (#43-4-0191). All of these objects and sites are currently within existing permits and approvals for their recovery and mitigation. Lake Cowal 2017-021 (#39-4-0311) is captured within an early consent, but has been encompassed within a no-harm area in a more recent permit.

The addendum includes a final section providing further direction and content for any subsequent management plans and/or archaeological mitigation should the Project be approved.

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1 Introduction

1.1 Background and purpose of the report

Evolution Mining (Cowal) Pty Limited (Evolution) is the owner and operator of Cowal Gold Operations (CGO), an existing open pit and underground gold mine approximately 38 kilometres (km) north-east of West Wyalong, in the central west region of New South Wales (NSW) (Figure 1.1 and Figure 1.2). CGO is located on the traditional lands of the Wiradjuri People and is immediately adjacent to the western foreshore of Lake Cowal, which is an ephemeral waterbody.

CGO was first approved in 1999, and open pit mining operations commenced in 2005. Underground mining operations were approved in 2021 and development works to enable underground mining are underway. Evolution is seeking approval for further open pit mining operations at CGO through the Open Pit Continuation Project (the Project). The Project primarily seeks to continue the open pit operations by approximately 10 years to 2036 and extend the total mine life by approximately two years to 2042.

As part of the Environmental Impact Statement (EIS) public exhibition process for the Project, Heritage NSW reviewed and provided advice on the finalised Aboriginal cultural heritage assessment (ACHA) (Attachment A). Based on this review Heritage NSW indicated broad agreement with the findings and recommendations of the report. However, it was noted that several issues require further clarification and information. This report has been prepared to supplement the ACHA and to address Heritage NSW's comments. These queries included (Table 1.1):

- management provisions under existing permits / consents and where they intersect with the Project
- whether significance ratings for any valid sites in the Project area have changed from earlier assessments or as a result of cumulative loss
- the locations and extents of all sites (both valid and destroyed) in the Project area
- ACHA recommendations relating to potential future findings in the CGO lake edge zone (LEZ) (AHIMS #43-4-0189) and CGO BS1 (AHIMS #43-4-0191)
- ACHA recommendations for the development of an Aboriginal cultural heritage management plan (ACHMP), with further details around the scope and quantum of activity.

It was also considered by EMM that a refinement of the archaeological resource through further investigation of potential hearth sites in the proposed development footprint would contribute to the understanding of cumulative Project impacts to Aboriginal heritage. This site typically being of moderate significance in the ACHA and one of the main site types that would be affected. Additional investigation of these sites was undertaken and is presented in Section 4.

Table 1.1 Heritage NSW comments and where addressed in this report

Heritage NSW comments	Where addressed
Greater clarity is required on the current management provisions of sites under existing AHIPs and whether the management of these sites will change under the proposed SSD. For example, site #39-4-0311 is currently listed in Schedule A (No Harm) in AHIP C0004570 but will be impacted by this proposal. Further justification is required on the change of management where it will occur. Where adequate justification is not provided, Heritage NSW may recommend that the original AHIP conditions remain in place.	Section 3

Table 1.1 Heritage NSW comments and where addressed in this report

Heritage NSW comments	Where addressed
Please provide additional information on whether the significance assessment for all valid sites within the Project area have changed since their original designation.	Section 4.4
Please update figures to include polygons of all sites (both valid and destroyed) across the Project area to provide greater clarity on the spread of Aboriginal cultural heritage.	Section 4.3
The Management Strategy and Recommendations (Section 10 of the ACHA) should include provisions for project redesign if further investigations in the CGO LEZ and CGO BS1 identify regionally significant Aboriginal cultural heritage.	Section 5
Heritage NSW recommends that an ACHMP be developed and implemented for the project. Heritage NSW recommends the ACHMP should be included in the Conditions of Approval and that an ACHMP be created and approved by Department of Planning and Environment prior to any development activities occurring within the Project area.	Section 5

1.2 Project area

The CGO site (the site) is located in the Central West Region of NSW, approximately 38 km north-east of West Wyalong, 60 km south-west of Forbes and 350 km west of Sydney (Figure 1.1 to Figure 1.3).

The site is in the Bland Shire local government area (LGA) and is wholly zoned RU1 Primary Production under the *Bland Shire Local Environmental Plan 2011*. Land adjacent to CGO is used primarily for pastoral activities, including cropping and grazing, which is typical of the broader Bland Shire region.

The dominant local feature in the area where the Project will be located is the broad expanse of Lake Cowal, a natural, ephemeral freshwater lake. Lake Cowal covers an area of approximately 13,000 hectares (ha) and is the largest inland lake in NSW. In a regional context the lake forms part of the Wilbertroy-Cowal Wetlands located on the Jemalong Plain. The Lake Cowal-Wilbertroy Wetlands are listed as being of National significance in the Australian Wetlands Database.

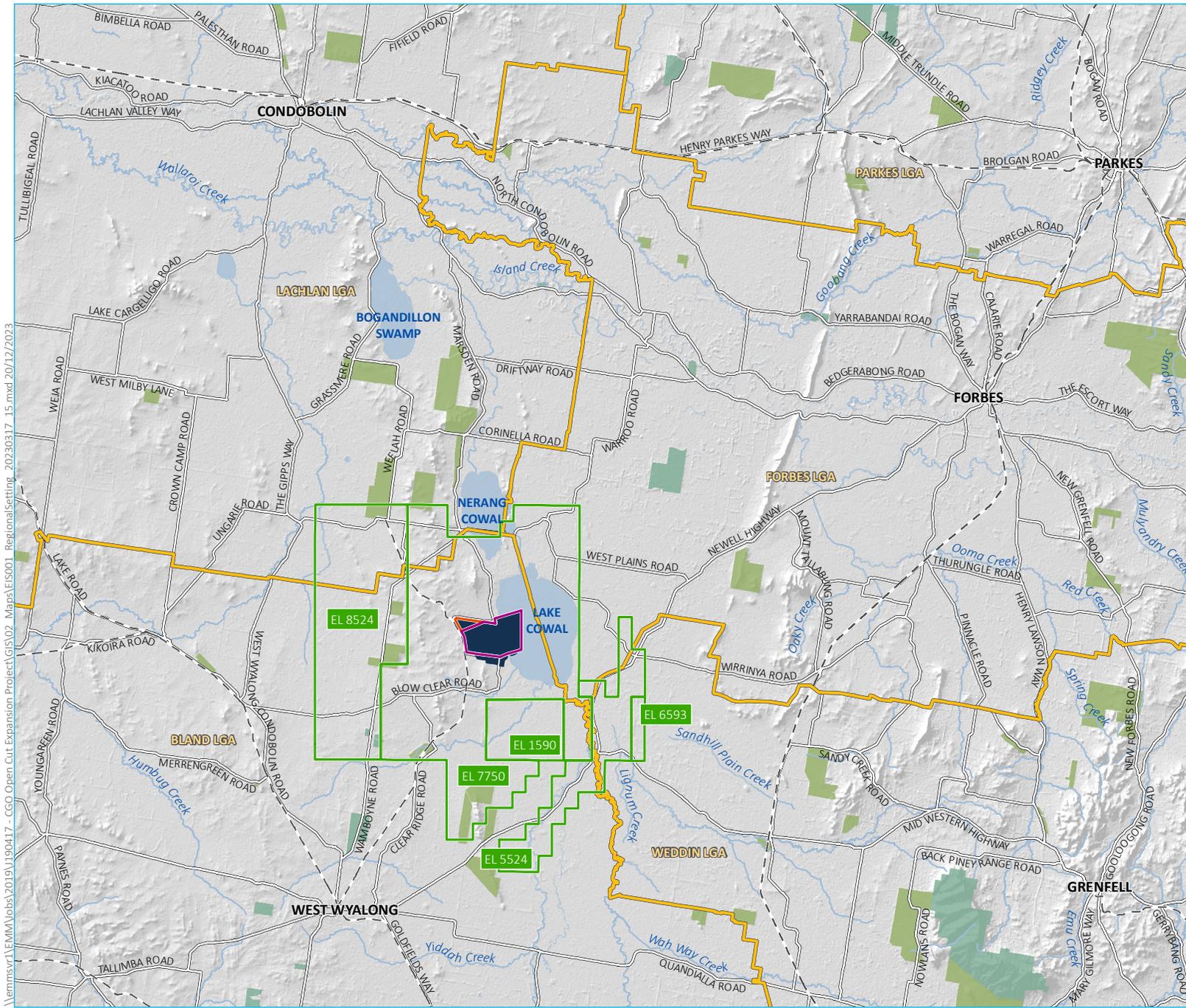
The lake sits within privately-owned land and is not protected under any conservation mechanism. When the lake is full, it supports a range of migratory birds and other fauna. When dry, the lakebed has been historically used for broad acre grain cropping and grazing. This land use continues on the non-Evolution owned portions of the lake however Evolution does not allow agricultural activities within its landholdings within Lake Cowal.

1.3 Authorship

This report was authored by Cameron Neal (EMM Archaeologist) and was reviewed by Alan Williams (Technical Lead, Aboriginal Heritage). We also acknowledge Mikhaila Chaplin (EMM Archaeologist), Amber Morgan (EMM Graduate Archaeologist), and Eugene and Richard Coe (Wiradjuri Condobolin Corporation) for their participation in fieldwork activities.

1.4 Limitations

This report is based on existing and publicly available environmental and archaeological information and reports about the Project area. The background research did not include any independent verification of the results and interpretations of externally sourced existing reports (except where the ground-truthing was undertaken). The report further makes archaeological predictions based on these existing data and targeted ground-truthing, and which may contain errors depending on the accuracy of these third-party studies and the extent of ground-truthing (constrained to surface) investigations.



- KEY**
- Project area
 - Mining lease (ML1535)
 - Mining lease (ML1791)
 - Exploration licence (EL)
 - Rail line
 - Main road
 - Named watercourse
 - Named waterbody
 - Local government area
 - NPWS reserve
 - State forest

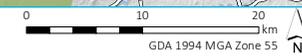
Regional setting of the project area

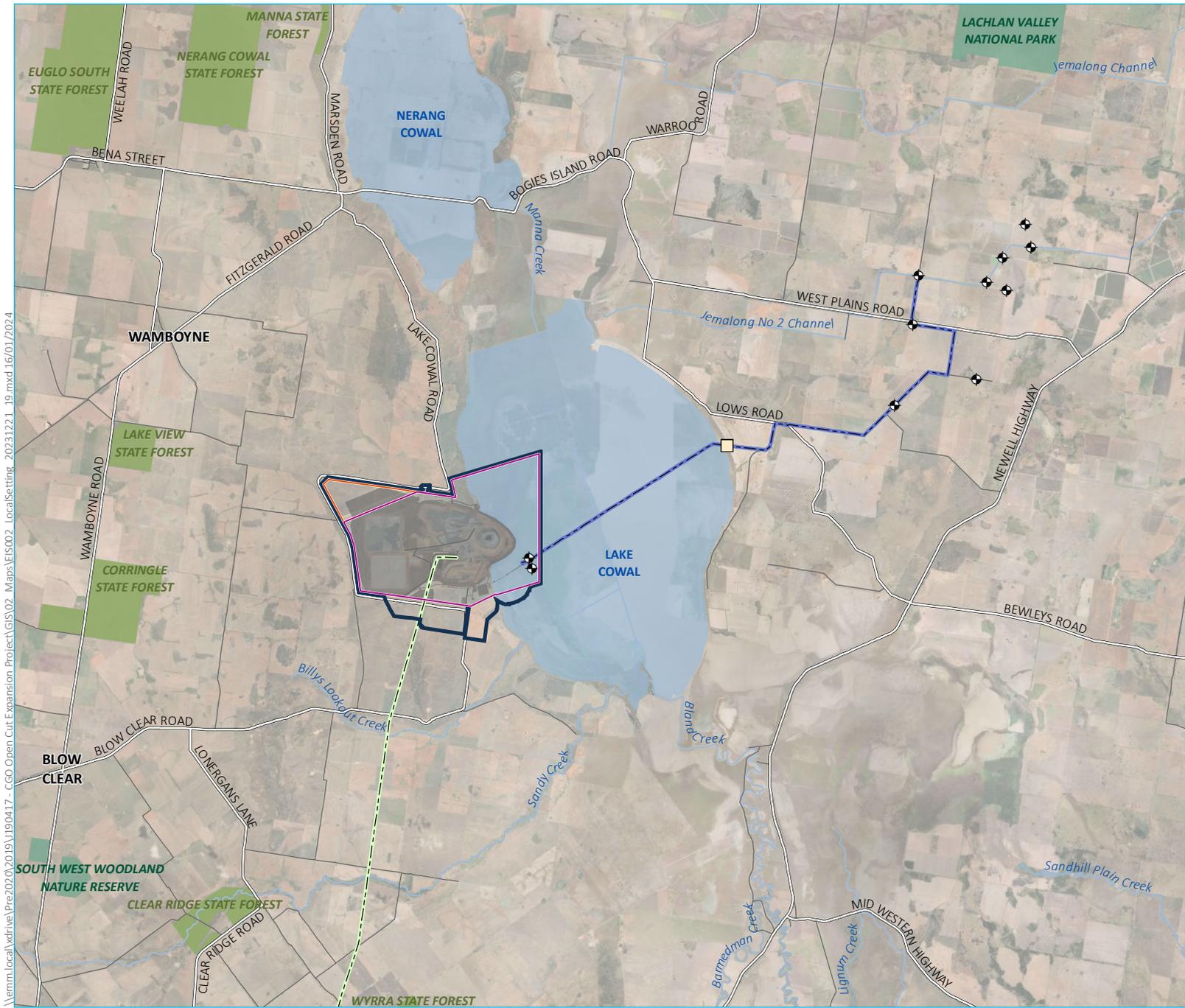
Evolution Mining
 Cowal Gold Operations
 Open Pit Continuation Project
 ACHA Addendum
 Figure 1.1



\\lemmsvr1\EMM\Jobs\2019\190417 - CGO Open Cut Expansion Project\GIS\02 Maps\EL5001 RegionalSetting_20230317_15.mxd 20/12/2023

Source: EMM (2023); Evolution (2023); DFSI (2017); GA (2011); ASGC (2006)





- KEY**
- Project area
 - DA14/98 approved surface disturbance
 - Mining lease (ML1535)
 - Mining lease (ML1791)
 - Eastern pump station
 - Saline groundwater supply bore
 - Water supply pipeline
 - Electricity transmission line
 - Major road
 - Minor road
 - Named watercourse
 - Named waterbody
 - NPWS reserve
 - State forest

\\lemm.local\ydrive\Pre2020\2019\190417 - CGO Open Cut Expansion Project\GIS\02_Maps\EIS002_LocalSetting_20231221_19.mxd 16/01/2024

Source: EMM (2023); Evolution (2023); DFSI (2017); ESRI (2023)

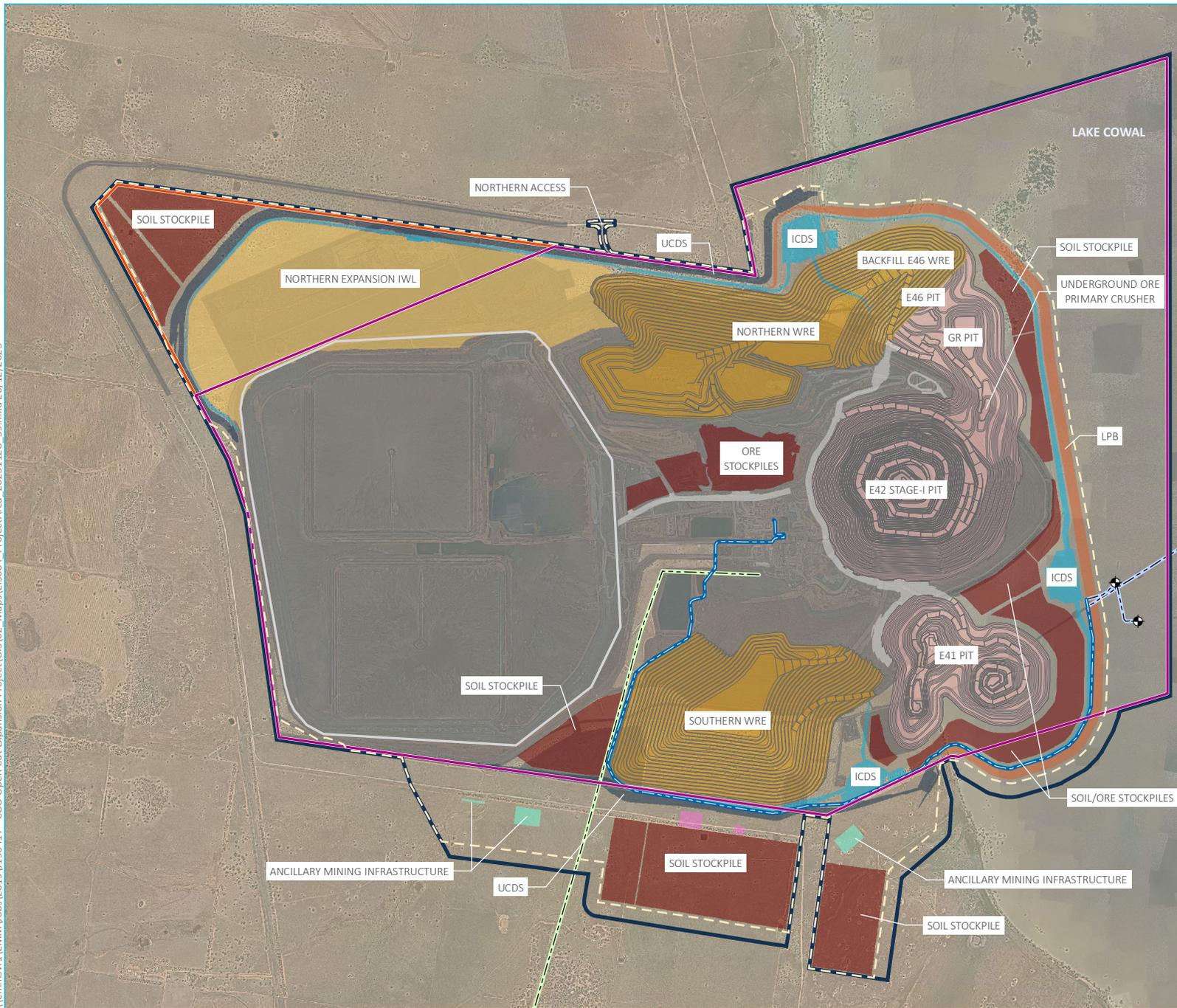


Local setting

Evolution Mining
Cowl Gold Operations
Open Pit Continuation Project
ACHA Addendum
Figure 1.2



\\lemmsvr1\EMM\Jobs\2019\190417 - CGO Open Cut Expansion Project\GIS\02_Maps\EIS004 - ProjectArea_2023\1128_39.mxd 20/12/2023



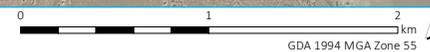
- KEY**
- Project area
 - Additional disturbance area
 - Approved disturbance area
 - Approved IWL footprint
 - Mining lease (ML1535) (offset for clarity)
 - Mining lease (ML1791) (offset for clarity)
 - Saline groundwater supply bore
 - Water supply pipeline
 - Electricity transmission line
 - Conceptual project infrastructure**
 - Open cut pit footprint
 - Northern expansion IWL
 - Waste rock emplacement (WRE)
 - Lake protection bund (LPB)
 - Stockpile
 - Up catchment diversion system (UCDS)
 - Internal catchment drainage system (ICDS)
 - Ancillary mining infrastructure
 - Magazine
 - Road
 - Water supply pipeline realignment

The project area

Evolution Mining
Cowal Gold Operations
Open Pit Continuation Project
ACHA Addendum
Figure 1.3



Source: EMM (2023); Evolution (2023); DFSI (2017); Nearmap (2023)



2 Aboriginal community consultation

2.1 Consultation undertaken since EIS submission

The Project has been liaising with three registered Aboriginal parties (RAPs) as part of the ACHA process. These include: West Wyalong Local Aboriginal Land Council (LALC), Wiradjuri Condobolin Corporation, and the Wiradjuri Council of Elders. Consultation with these organisations up to the finalisation of the ACHA in April 2023 is presented in EMM (2023).

Following submission of the EIS in June 2023, the following consultation activities have been undertaken:

- Public exhibition of the EIS and associated documents – 15 June to 12 July 2023.
- Advised of Heritage NSW comments and distributed a proposed excavation program of the hearth features within the Project area – 28 September 2023.
- Undertook additional field activities, including hearth excavations – 6 to 10 November 2023.
- Proposed an Aboriginal focus group meeting in late 2023 to discuss the excavations and this report – 14, 24, and 28 November, and 12 December 2023.

2.2 Consultation on this addendum

Several attempts were made to undertake a meeting with the Aboriginal participants in late 2023, but availability of all parties could not be organised prior to the Christmas break. Ongoing attempts will be made to host such a meeting on this report in early 2024. A copy of this report has been provided to the registered Aboriginal parties (with any comments if received provided in Attachment B).

A meeting to further discuss this report and the potential post-approval management plan contents (in the event the project is approved) is being organised for late January / early February 2024. This will be reported on separately to Heritage NSW once completed.

3 Existing permits and approvals

3.1 Key findings

- There are three existing Aboriginal heritage impact permits (AHIP) currently applicable to the majority of the Project area: Consent 1467/Permit 1468 (no expiry), Consent 1680/Permit 1681 (no expiry), and AHIP C0004570 (expires in 2033).
- There are a total of 119 of Aboriginal objects and/or sites currently registered in the Project area. Of these, 76 are encompassed within the curtilage of Consent 1467/Permit 1468, three within Consent 1680/Permit 1681, 24 within AHIP C0004570, and two are within multiple permits. Some 14 of the identified sites – many of them identified as part of EMM (2023) – are not encompassed within the existing permits. Some 49 of these have been previously destroyed (41.2%). Those sites destroyed have typically been archaeological mitigated and recovered as part of established management by Evolution.
- Neither Consent 1467/Permit 1468 nor Consent 1680/Permit 1681 identified any no-harm or conservation zones within or near the project. AHIP C0004570 identified one site that was not permissible for harm, namely a culturally modified tree (#39-4-0311). This site was previously and remains encompassed as permissible for removal in Permit 1468/Consent 1467. The careful removal and recovery ex situ of this site type has been regularly undertaken across the Project area for 20 years with the involvement of the Aboriginal participants. It is considered that comparable mitigation measures could be applied for this #39-4-0311 (Section 5).
- A comparison of the existing management and mitigation approaches within the Project area under these existing consents compared with the proposed actions in EMM (2023) is undertaken. This results in a shift from a broad ongoing surface artefact collection and grader scraping to targeted manual excavation of key sites of value.

3.2 Existing permits

There are three authorised impact permits that are applicable to the Project area: Consent 1467/Permit 1468, issued 27 November 2002 (no expiry); Consent 1680/Permit 1681, issued 28 July 2003 (no expiry); and AHIP C0004570, issued 27 June 2019 (duration of 14 years) (Attachment C). These impact permits cover the majority of the Project area.

Consent 1467/Permit 1468 and Consent 1680/Permit 1681 were issued to Barrick Australia Ltd (now Evolution Mining Pty Ltd):

- Permit 1468 allows for impacts to Aboriginal heritage through archaeological investigation in the ML1535 area as well as the water pipeline and borefield areas.
- Consent 1467 authorises the destruction of Aboriginal sites in the ML1535 area and water pipeline and borefield areas once conditions set out in Permit 1468 have been met.
- Permit 1681 allows for impacts to Aboriginal heritage from archaeological investigation in the relocated Travelling Stock Route (TSR) and road reserve zones.
- Consent 1680 authorises the destruction of Aboriginal sites in the relocated TSR and road reserve zones once conditions set out in Permit 1681 have been met.

Following modification of the AHIP system in NSW in 2010, further archaeological investigations were undertaken by Niche (2019) to investigate and assess the Aboriginal heritage impact of the proposed modification 14 project. This project proposed to expand mining activities into parts of the Project area not subject to Consent 1467/Permit 1468 or Consent 1680/Permit 1681. Following completion of the ACHA, AHIP C0004570 was granted in June 2019. This permit covers the north-western corner of the Project area (see Figure 3.1) and authorises impacts to Aboriginal heritage in this area once certain mitigative actions have been carried out, including surface collection and salvage excavation.

This most recent AHIP is the only one that includes a site that is excluded from harm. Specifically, Schedule A of the AHIP indicates that a culturally modified tree, #39-4-0311, in the south-eastern corner of ML1535, on the fringe of the E41 open cut pit, was to be conserved. It is unclear why the site was included in the AHIP, since: i) the site had previously been (and remains) included in Permit 1468/Consent 1467; ii) the site was not in the vicinity of the actual AHIP curtilage, which encompassed a northwestern portion of the Project area; and iii) there is little reference of discussion of the site in Niche (2019) that may indicate a reason why it was managed in this way. In contrast, the proposed management strategy in Niche (2019) for the site actually states ‘salvage if required, otherwise avoidance’. Regardless, currently, this is the only site currently listed in any permits as ‘no-harm’.

3.3 Current site status under existing permits

There are a total of 119 of Aboriginal objects and/or sites currently registered in the Project area (Table 3.1). Of these, 76 are encompassed within the curtilage of Consent 1467/Permit 1468, three within Consent 1680/Permit 1681, 24 within AHIP C0004570, and two are within multiple permits. Some 14 of the identified sites – many of them identified as part of EMM (2023) – are not encompassed within the existing permits. It must, however, be noted that the early consents and permits do not outline specific Aboriginal objects or sites within their curtilage but rather indicate that any cultural materials encountered, and as such all of these sites would be technically covered by the current approvals.

Prior to undertaking additional field investigations discussed in Section 4, 39 of the 119 sites (32.8%) were listed as ‘destroyed’ or ‘presumed to be destroyed’ (Table 3.1), based on their location within existing mine disturbance areas. Those sites listed as destroyed have typically been archaeological mitigated and recovered as part of established management by Evolution. Following completion of additional site investigations, it was confirmed that a further six sites were destroyed by the expansion of tailings and soil stockpile areas, including #39-4-0273, #39-4-0274 and #39-4-0277; and a further five sites (#39-4-0275, #39-4-0288, #39-4-0289, #39-4-0305, #39-4-0328) are no longer extant. Therefore under the existing permits, there a total of 49 destroyed sites (41.2%) and a total of 69 sites remaining extant (either ‘valid’ or ‘partially destroyed’) in the Project area (Table 3.1). One site [#39-4-0324] is listed as ‘not a site’ and is therefore not considered in these numbers.

With reference to the existing permits, Aboriginal objects and/or sites within the Project area can be divided as 32 valid sites (44 destroyed) within Consent 1467/Permit 1468, three valid sites (0 destroyed) within Consent 1680/Permit 1681, and 19 valid sites (five destroyed) within AHIP C0004570, and 15 valid sites either within multiple permits or not within existing approvals.

Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
39-4-0271	Lake Cowal 2017-055	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Destroyed
39-4-0272	Lake Cowal 2017-056	Isolated find	Consent 1467/Permit 1468	Destroyed
39-4-0273	Lake Cowal 2017-057	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Destroyed

Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
39-4-0274	Lake Cowal 2017-058	Hearth	Consent 1467/Permit 1468	Destroyed
39-4-0275	Lake Cowal 2017-059	Hearth	Consent 1467/Permit 1468	Presumed destroyed
39-4-0276	Lake Cowal 2017-060	Hearth	Consent 1467/Permit 1468	Valid
39-4-0277	Lake Cowal 2017-061	Hearth	Consent 1467/Permit 1468	Destroyed
39-4-0278	Lake Cowal 2017-062	Low density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
39-4-0279	Lake Cowal 2017-063	Isolated find	Consent 1467/Permit 1468	Presumed destroyed
39-4-0281	Lake Cowal 2017-054	Low density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
39-4-0282	Lake Cowal 2017-053	Isolated find	Consent 1467/Permit 1468	Presumed destroyed
39-4-0283	Lake Cowal 2017-052	Low density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
39-4-0284	Lake Cowal 2017-048	Hearth	Consent 1467/Permit 1468	Valid
39-4-0285	Lake Cowal 2017-050	Isolated find	Consent 1467/Permit 1468	Destroyed
39-4-0286	Lake Cowal 2017-049	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0287	Lake Cowal 2017-051	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0288	Lake Cowal 2017-047	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
39-4-0289	Lake Cowal 2017-046	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
39-4-0290	Lake Cowal 2017-045	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Valid
39-4-0291	Lake Cowal 2017-044	Hearth	Consent 1467/Permit 1468	Valid
39-4-0292	Lake Cowal 2017-043	Hearth	Consent 1467/Permit 1468	Valid
39-4-0293	Lake Cowal 2017-039	Low density artefact scatter	Consent 1467/Permit 1468	Partially Destroyed
39-4-0294	Lake Cowal 2017-040	Low density artefact scatter	Consent 1467/Permit 1468	Valid
39-4-0295	Lake Cowal 2017-041	Low density artefact scatter	Consent 1467/Permit 1468	Valid
39-4-0296	Lake Cowal 2017-042	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0297	Lake Cowal 2017-038	Isolated find	Consent 1467/Permit 1468	Presumed destroyed
39-4-0298	Lake Cowal 2017-037	Hearth	Consent 1467/Permit 1468	Destroyed
39-4-0299	Lake Cowal 2017-035	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed

Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
39-4-0300	Lake Cowal 2017-036	Hearth, medium density artefact scatter	Consent 1467/Permit 1468	Destroyed
39-4-0301	Lake Cowal 2017-034	Hearth	Consent 1467/Permit 1468	Valid
39-4-0302	Lake Cowal 2017-033	Hearth	Consent 1467/Permit 1468	Valid
39-4-0303	Lake Cowal 2017-032	Hearth, isolated find	Consent 1467/Permit 1468	Destroyed
39-4-0304	Lake Cowal 2017-031	Hearth, low density artefact scatter	Consent 1467/Permit 1468	Destroyed
39-4-0305	Lake Cowal 2017-030	Hearth	AHIP C0004570	Presumed destroyed
39-4-0306	Lake Cowal 2017-029	Isolated find	AHIP C0004570	Valid
39-4-0307	Lake Cowal 2017-028	Isolated find	AHIP C0004570	Valid
39-4-0308	Lake Cowal 2017-025	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0309	Lake Cowal 2017-026	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0310	Lake Cowal 2017-027	Low density artefact scatter	AHIP C0004570	Valid
39-4-0311	Lake Cowal 2017-021	Culturally modified tree	Consent 1467/Permit 1468	Valid – tentative
39-4-0312	Lake Cowal 2017-022	Low density artefact scatter	Consent 1467/Permit 1468	Valid
39-4-0313	Lake Cowal 2017-023	Low density artefact scatter	Consent 1467/Permit 1468	Valid
39-4-0314	Lake Cowal 2017-024	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0315	Lake Cowal 2017-003	Low density artefact scatter	AHIP C0004570	Valid
39-4-0316	Lake Cowal 2017-004	Low density artefact scatter	AHIP C0004570	Valid
39-4-0317	Lake Cowal 2017-005	Low density artefact scatter	AHIP C0004570	Valid
39-4-0318	Lake Cowal 2017-006	Hearth, unspecified artefact site	AHIP C0004570	Valid
39-4-0319	Lake Cowal 2017-007	Isolated find	AHIP C0004570	Valid
39-4-0320	Lake Cowal 2017-008	Low density artefact scatter	AHIP C0004570	Valid
39-4-0321	Lake Cowal 2017-009	Isolated find	AHIP C0004570	Valid
39-4-0322	Lake Cowal 2017-010	Low density artefact scatter	AHIP C0004570	Valid
39-4-0323	Lake Cowal 2017-011	Low density artefact scatter	AHIP C0004570	Valid
39-4-0325	Lake Cowal 2017-013	Low density artefact scatter	AHIP C0004570	Valid
39-4-0326	Lake Cowal 2017-014	Isolated find	AHIP C0004570	Valid
39-4-0327	Lake Cowal 2017-020	Isolated find	Consent 1467/Permit 1468	Valid
39-4-0328	Lake Cowal 2017-019	Hearth	AHIP C0004570	Presumed destroyed
39-4-0329	Lake Cowal 2017-015	Hearth	AHIP C0004570	Valid

Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
39-4-0330	Lake Cowal 2017-016	Hearth	AHIP C0004570	Valid
39-4-0331	Lake Cowal 2017-017	Hearth	AHIP C0004570	Valid
39-4-0332	Lake Cowal 2017-018	Hearth	AHIP C0004570	Valid
39-4-0333	Lake Cowal 2017-001	Isolated find	Consent 1680/Permit 1681	Valid
43-3-0021	Cowal site LC1	High density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-3-0022	Cowal site LC2	High density artefact scatter	Consent 1467/Permit 1468	Partially destroyed
43-3-0023	Cowal site LC3	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-3-0024	Cowal site LC4	Medium density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-3-0025	LC5	Low density artefact scatter	No permit	Valid
43-4-0007	Cowal site P1	Medium density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0008	Cowal Scarred Tree P2	Culturally modified tree	Consent 1467/Permit 1468	Destroyed
43-4-0020	Lake Cowal back plains site A	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0021	Cowal back plains site B	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0022	Cowal Back Plains site C	Medium density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0023	Lake Cowal back plains site D	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0024	E	Medium density artefact scatter	Consent 1467/Permit 1468	Presumed destroyed
43-4-0025	Lake Cowal back plains site F	Medium density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0026	Lake Cowal back plains site G	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0027	H	Medium density artefact scatter	Consent 1467/Permit 1468	Valid
43-4-0028	Lake cowal back plains site I	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0029	Lake Cowal back plains site J	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0030	Lake Cowal back plains site K	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0031	Lake Cowal back plains site L	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0032	Lake Cowal back plains site M	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0033	Lake Cowal back plains site N	Low density artefact scatter	Consent 1467/Permit 1468	Destroyed
43-4-0034	L-C-2	Stone quarry, artefact(s)	Consent 1467/Permit 1468	Presumed destroyed
43-4-0035	L-C-3	Culturally modified tree, unspecified artefact site	Consent 1467/Permit 1468	Presumed destroyed
43-4-0044	Wamboyne Back Plain Site 1	Isolated find	Consent 1467/Permit 1468	Destroyed
43-4-0045	Wamboyne Back Plain Site 2	Isolated find	Consent 1467/Permit 1468	Valid

Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
43-4-0054	Lake Cowal 2017-067	Hearth	Consent 1467/Permit 1468	Presumed destroyed
43-4-0055	Lake Cowal 2017-068	Hearth	No permit	Valid
43-4-0085	Lake Cowal 2018.049	Isolated find	Consent 1467/Permit 1468	Valid
43-4-0086	Lake Cowal 2018.046	Isolated find	Consent 1467/Permit 1468	Valid
43-4-0087	Lake Cowal 2018.055	Isolated find	Consent 1467/Permit 1468	Presumed destroyed
43-4-0088	Lake Cowal 2018.056	Low density artefact scatter	Consent 1467/Permit 1468	Valid
43-4-0089	Lake Cowal 2018.054	Low density artefact scatter	Consent 1467/Permit 1468	Valid
43-4-0090	Lake Cowal 2018.053	Unspecified artefact site	Consent 1467/Permit 1468	Valid
43-4-0091	Lake Cowal 2018.047	Unspecified artefact site	Consent 1467/Permit 1468	Valid
43-4-0092	Lake Cowal 2018.051	Low density artefact scatter	Consent 1467/Permit 1468	Valid
43-4-0105	Lake Cowal 2019 CI	Unspecified artefact site	AHIP C0004570	Valid
43-4-0107	Thornton Gilgai Isolated Artefact	Isolated find	AHIP C0004570	Destroyed
43-4-0108	Thornton Gilgai Scatter 25Sep19	Unspecified artefact site	AHIP C0004570	Destroyed
43-4-0109	Thornton Gilgai Hearth 25Sep19	Hearth	AHIP C0004570	Destroyed
43-4-0124	E40A OS	Low density artefact scatter, PAD	Consent 1467/Permit 1468	Valid
43-4-0140	IWL South-ST1	Culturally modified tree	Consent 1467/Permit 1468	Destroyed
39-4-0324	Lake Cowal 2017-012	Not a site	No permit	Not a site
TBA	CGO AS15	Low density artefact scatter	Consent 1467/Permit 1468	Valid
TBA	CGO AS10	Low density artefact scatter	Consent 1680/Permit 1681	Valid
43-4-0194	CGO AS5	Medium density artefact scatter	No permit	Valid
43-4-0197	CGO AS17	Medium density artefact scatter	Consent 1680/Permit 1681	Valid
43-4-0177	CGO AS19	Low-density artefact scatter	No permit	Valid
43-4-0198	CGO AS20	Low density artefact scatter	No permit	Valid
43-4-0176	CGO IF28	Isolated find	No permit	Valid
43-4-0174	CGO IF29	Isolated find	No permit	Valid
43-4-0170	CGO IF23	Isolated find	No permit	Valid
43-4-0175	CGO IF24	Isolated find	No permit	Valid
43-4-0190	CGO Hearth	Hearth	No permit	Valid
43-4-0171	CGO AS11	Low density artefact scatter	No permit	Valid
TBA	CGO AS24	Low density artefact scatter	No permit	Valid

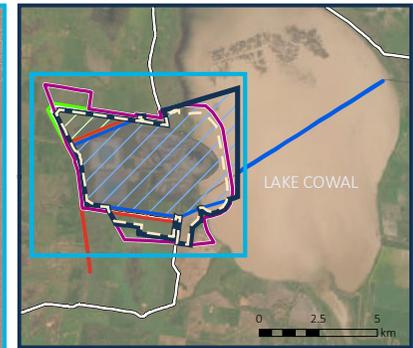
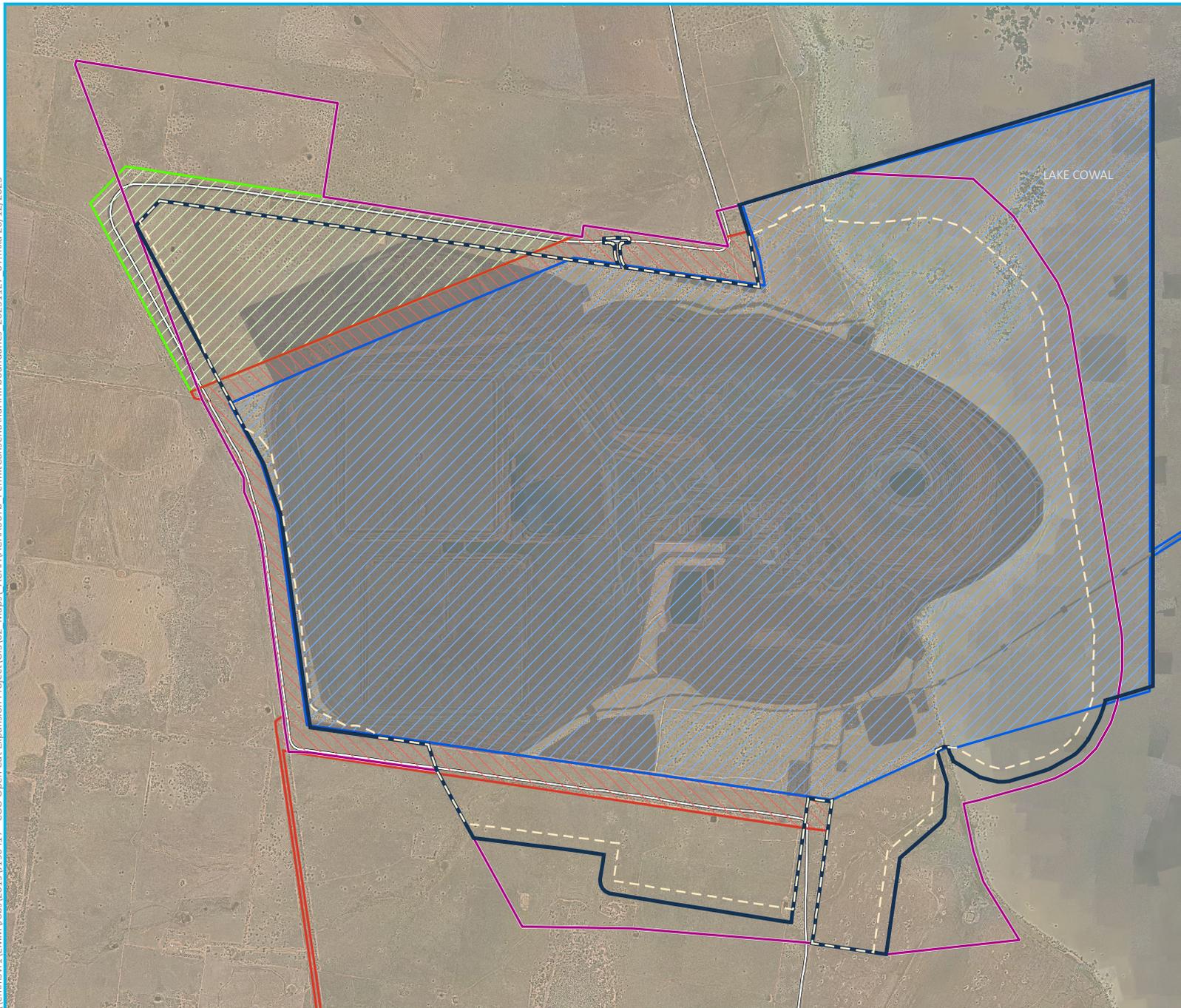
Table 3.1 Current Aboriginal objects and/or site status and their relationship with existing permits

AHIMS ID	Site name	Site type(s)	Consent/permit	Site status
43-4-0169	CGO AS22	Low density artefact scatter	No permit	Valid
43-4-0172	CGO AS12	Low density artefact scatter	No permit	Valid
43-4-0189	CGO LEZ	Resource and gathering	Consent 1680/Permit 1681 and Consent 1467/Permit 1468	Valid
43-4-0191	CGO BS1	Low density artefact scatter	Consent 1680/Permit 1681, Consent 1467/Permit 1468 and AHIP C0004570	Valid

Notes: **Red** text indicate changes to site status based on additional field investigations outlined in Section 4.

CGO BS1 was identified in EMM (2023) as a means of combining the low density stone artefact scatter known to be present across the Project area, which had been disparately recorded across several studies in the past. This includes a number of sites that have to be presented separately in this table to reflect the original identification against each permit. As such, there is some duplication in the records provided between CGO-BS1 and others in this table. CGO-BS1 incorporates CGO AS1-4, AS6-AS7, IF1, #39-4-0286, #39-4-0293, #39-4-0294, #39-4-0295, #39-4-0296, #39-4-0297, #39-4-0307, #39-4-0308, #39-4-0309, #39-4-0310, #39-4-0312, #39-4-0313, #39-4-0314, #39-4-0315, #39-4-0319, #39-4-0320, #39-4-0321, #39-4-0322, #39-4-0323, #39-4-0325, #39-4-0326, #39-4-0327, #39-4-0333, #43-4-0024, #43-4-0027, #43-4-0034, #43-4-0035, #43-4-0045, #43-4-0085, #43-4-0086, #43-4-0087, #43-4-0088, #43-4-0089, and #43-4-0092.

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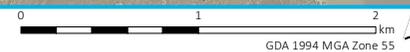


- KEY**
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
 - Permit/consent and AHIP boundaries
 - Existing consent 1467/Permit 1468
 - Existing consent 1680/Permit 1681
 - AHIP C0004570

Existing permits

Evolution Mining
 Cowal Gold Operations
 Open Pit Continuation Project
 ACHA Addendum
 Figure 3.1

Source: EMM (2023); Evolution (2023); DFSI (2017); Nearmap (2023)



3.4 Comparison of existing versus proposed management

Table 3.2 outlines those cultural materials within the Project disturbance footprint, their current mitigation requirements under existing permits, and the proposed management strategy in EMM (2023). The latter is only cursorily discussed in EMM (2023), since the management strategy would be further developed in the recommended Aboriginal cultural heritage management plan (ACHMP) for the Project. However, further guiding principles of these activities are outlined in Section 5.

The management of cultural materials that are permitted for loss or destruction under Consent 1680/Permit 1681, Consent 1467/Permit 1468 and AHIP C0004570 is dictated in an established Indigenous Archaeology and Cultural Heritage Management Plan (IACHMP) developed in 2003 for the current operations. The IACHMP outlined specific activities for a number of identified sites, and based on the current status of these sites (Table 3.1) these mitigations have been completed previously. Management appears to have primarily included the surface recovery and analysis of a 'representative sample' of cultural materials at each of the sites.

The IACHMP provides a general 'other' category for ongoing management of the Project area divided by the five major landforms across the Project area (lake bed, beach, slope, lake edge ridge, and back plain), and which operationally has been applied as:

- For any ground disturbance:
 - a) an initial surface collection of cultural materials by an archaeologist and Aboriginal participants followed by
 - b) a shallow grader scrape of the area followed by a repeat of the step above
 - c) works may then proceed.

The IACHMP provides no specific guidance on management of hearths or culturally modified trees. The former is captured in the approaches above. One identified culturally modified tree, Site P2 (#43-4-0008) is provided management directions in the form of removal of the scar component of the tree and its relocation to an on-site keeping place. These strategies were based on a special condition (#4) in permit 1468 (Attachment C) and have been adopted more broadly across any activities in the approved permit curtilages.

Table 3.2 provides a comparison of these existing mitigation strategies compared with those proposed management strategies stemming from EMM (2023). The latter proposes a focus on areas of moderate and high significance, and includes investigative and (if required) salvage excavations of #39-4-0313 and #43-3-0022. The lake's edge zone has formed an ongoing area of archaeological interest since its initial identification by Colin Pardoe in the late 1990s. Many of the previously identified sites of significance investigated by Pardoe and others have been within this zone, as are both #39-4-0313 and #43-3-0022. Similarly, here investigative excavations are proposed for the lake's edge zone (#43-4-0189) where within the Project disturbance footprint.

In the case of hearths, Section 5 now proposes an improved methodology for implementation. Rather than surface and topsoil stripping (grader scrapes), a program of formalised archaeological excavation and recovery for each of these sites is now proposed. Although many of the identified features were found to only be surface scatters of clay heat retainers, and as such works may be constrained to surface collection. In alignment with the Consent 1467/Permit 1468, EMM (2023) proposes the careful recovery and relocation of #39-4-0311, with further methods outlined in Section 5. This approach aligns with previous recovery of similar sites, such as #43-4-0156 and #43-4-0008.

The main difference between the previous and proposed mitigation strategy is that latter proposes a finite program focussing on sites of significance (Table 3.2). Through adopting extensive and careful archaeological methods with the registered Aboriginal parties, such an approach would maximise recovery of important cultural materials and provide the greatest information about the use and visitation of the region by past Aboriginal populations. This is in contrast to current processes that results in limited spatial context or information and is then subject to cursory analysis prior to curation. However, Section 5.3.3 continues to propose some form of methods comparable with above may continue into the future following discussions between the proponent and registered Aboriginal parties.

Table 3.2 Current and proposed mitigation strategies (refer Section 5) for Aboriginal objects and/or sites in the Project disturbance footprint

AHIMS #	Site	Site type	Status	Potential impact?	Within existing approval?	Current mitigation measures	Proposed mitigation measure
39-4-0273	Lake Cowal 2017-057	Hearth	Destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0274	Lake Cowal 2017-058	Hearth	Destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0275	Lake Cowal 2017-059	Hearth	Presumed destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0276	Lake Cowal 2017-060	Hearth	Valid	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0277	Lake Cowal 2017-061	Hearth	Destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0284	Lake Cowal 2017-048	Hearth	Valid	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0288	Lake Cowal 2017-047	Hearth, low density artefact scatter	Presumed destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0289	Lake Cowal 2017-046	Hearth, low density artefact scatter	Presumed destroyed	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0290	Lake Cowal 2017-045	Hearth, low density artefact scatter	Valid	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0291	Lake Cowal 2017-044	Hearth	Valid	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0292	Lake Cowal 2017-043	Hearth	Valid	Yes	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0301	Lake Cowal 2017-034	Hearth	Valid	Yes	Consent 1680/ Permit 1681	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required

Table 3.2 Current and proposed mitigation strategies (refer Section 5) for Aboriginal objects and/or sites in the Project disturbance footprint

AHIMS #	Site	Site type	Status	Potential impact?	Within existing approval?	Current mitigation measures	Proposed mitigation measure
39-4-0302	Lake Cowal 2017-033	Hearth	Valid	Yes	Consent 1680/ Permit 1681	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0305	Lake Cowal 2017-030	Hearth	Presumed destroyed	Yes	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0311	Lake Cowal 2017-021	Culturally modified tree	Valid-tentative	Yes	Consent 1467/ Permit 1468, and AHIP C0004570	Removal and relocation to keeping place, no specific methods provided. Included as no harm area in later permit, both consents remain valid	Recovery and relocation adopting methods in Section 5
39-4-0313	Lake Cowal 2017-023	Medium density artefact scatter	Valid	Yes	Consent 1467/ Permit 1468	Surface collection; grader scrape and surface collection	Investigative and potential salvage excavations
39-4-0318	Lake Cowal 2017-006	Hearth, unspecified artefact site	Valid	No	Consent 1467/ Permit 1468	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0328	Lake Cowal 2017-019	Hearth	Presumed destroyed	Yes	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	N/A – presumed destroyed.
39-4-0329	Lake Cowal 2017-015	Hearth	Valid	No	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0330	Lake Cowal 2017-016	Hearth	Valid	No	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0331	Lake Cowal 2017-017	Hearth	Valid	No	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
39-4-0332	Lake Cowal 2017-018	Hearth	Valid	No	AHIP C0004570	No specific measures, captured by surface collection and grader scrape	Surface collection and salvage excavation if required
43-3-0022	LC2	High density artefact scatter	Partially destroyed	Yes	Consent 1467/ Permit 1468	Surface collection; grader scrape and surface collection	Investigative and potential salvage excavations

Table 3.2 Current and proposed mitigation strategies (refer Section 5) for Aboriginal objects and/or sites in the Project disturbance footprint

AHIMS #	Site	Site type	Status	Potential impact?	Within existing approval?	Current mitigation measures	Proposed mitigation measure
43-4-0035	L-C-3	Culturally modified tree, unspecified artefact site	Presumed destroyed	Yes	Consent 1467/ Permit 1468	Removal and relocation to keeping place, no specific methods provided	N/A – presumed destroyed.
43-4-0055	Lake Cowal 2017-068	Hearth	Valid	No	AHIP C0004570	Surface collection; grader scrape and surface collection	Surface collection and salvage excavation if required
43-4-0189	CGO LEZ	Heritage focus area – cultural deposit	Valid	Yes - partial	Consent 1680/ Permit 1681, Consent 1467/ Permit 1468	Surface collection; grader scrape and surface collection	Investigative and potential salvage excavations
43-4-0190	CGO H1	Hearth	Valid	No	-	-	-
43-4-0191	CGO BS1	Low density artefact scatter	Valid	Yes - partial	Various previous recordings within Consent 1680/ Permit 1681, Consent 1467/ Permit 1468 and AHIP C0004570	Surface collection; grader scrape and surface collection	No mitigation proposed
43-4-0194	CGO-AS5	Medium density artefact scatter	Valid	No	-	-	-

Notes: Status presented in red reflect revised conditions from EMM (2023) following additional field investigations outlined in Section 4.

CGO BS1 incorporates CGO AS1-4, AS6-AS7, IF1, and the following AHIMS sites: #39-4-0286, #39-4-0293, #39-4-0294, #39-4-0295, #39-4-0296, #39-4-0297, #39-4-0307, #39-4-0308, #39-4-0309, #39-4-0310, #39-4-0312, #39-4-0313, #39-4-0314, #39-4-0315, #39-4-0319, #39-4-0320, #39-4-0321, #39-4-0322, #39-4-0323, #39-4-0325, #39-4-0326, #39-4-0327, #39-4-0333, #43-4-0024, #43-4-0027, #43-4-0034, #43-4-0035, #43-4-0045, #43-4-0085, #43-4-0086, #43-4-0087, #43-4-0088, #43-4-0089, and #43-4-0092.

4 Refining the archaeological data

4.1 Key findings

- Additional field investigations were undertaken to resolve 'tentative' classifications within the identified cultural assemblage. Investigations of 15 potential hearths was undertaken, and revealed that seven had been previously destroyed by natural or anthropogenic processes. An additional hearth was also encountered. Further, these hearths were all characterised as scattered surface burnt clay fragments, which limits any cultural deposit and associated research potential.
- The additional field investigation has resulted in a refinement of the cultural assemblage, and reveals some 20 discrete Aboriginal sites and objects (a reduction from 28) are within the Project area. These are encompassed within a complex landscape of surface and buried stone artefacts documented as CGO LEZ (#43-4-0189) and CGO BS1 (#43-4-0191).
- A review of the significance of the cultural assemblage has been undertaken and included a review of classifications by previous investigations compared with EMM (2023). While the earliest studies do not provide formal significance assessment, they highlight the importance of several sites along the lake's edge (e.g. LC 2 [#43-3-0022]) and this landform itself, both of which are captured in the latest assessments. Many of the other sites have received consistent classifications ranging from low – moderate values over the last decade.
- An update of the potential impacts by the Project has been undertaken, and shows a reduction in adverse harm. Specifically, some 12 Aboriginal objects and/or sites (a reduction from 19) would now be impacted by the Project, as well portions of CGO LEZ (#43-4-0189) and CGO BS1 (#43-4-0191). All of these objects and sites are currently within existing permits and approvals for their recovery and mitigation. Lake Cowal 2017-021 (#39-4-0311) is captured within an early consent, but has been encompassed within a no-harm area in a more recent permit.

4.2 Additional field investigations

Following receipt of Heritage NSW comments that sought clarification on the identified cultural assemblage and potential project impacts, an additional field investigation was considered warranted. This focussed on trying to further understand the survival and validity of a number of hearth features. These sites were the dominant portion of the cultural assemblage encountered in EMM (2023) and were largely assigned a tentative classification. Attachment E provides further details on these investigations, with a summary outlined below.

A field program was undertaken by archaeologists and Aboriginal participants between 6 and 10 November 2023 to further explore and understand these sites. Overall these works visited 15 of the identified hearth features within the Project disturbance footprint. Of these, three were found to have been destroyed by existing mining activities, including #39-4-0273, #39-4-0274, and #39-4-0277. Despite extensive effort, including large-scale clearance of grass cover in the reported locations, a further five sites could not be relocated and are similarly considered lost or destroyed, including #39-4-0275, #39-4-0288 and #39-4-0289, #39-4-0305, and #39-4-0328. This is not an uncommon outcome, EMM has been involved in mitigation activities for the mine since 2019, and have frequently failed to identify hearths previously recorded. As outlined below, these features are commonly represented by scattered burnt clay fragments, and therefore extremely susceptible to erosion and loss through time.

Seven of the hearth features were identified and subject to test excavations, including #39-4-0276, #39-4-0284, #39-4-0290, #39-4-0291, #39-4-0292, #39-4-0301 and #39-4-0302. Excavations indicate that in all cases, these features had little, if any, buried deposit, and instead reflected a surface scatter of clay heat retainers. Specifically, between one and seven discrete clay fragments were found at each of these locations. They can be defined on Fanning et al. (2009) typology of these features as ‘scattered’ hearths – effectively the remains of a hearth once the surrounding sediment matrix has been eroded and lost. Subsequently, the tentative status of these sites has been re-classified as ‘valid’ (Table 3.2; Section 4).

In addition to the 15 hearth features originally considered, a further hearth feature was encountered during the field program. This site was some 40 m southeast of #39-4-0291 and encountered during attempts to find this previously documented site. It was labelled as ‘CGO23 Hearth 1’ (#43-4-0197).

Overall, this has resulted in a change of 15 hearth sites in EMM (2023) to eight. Further, additional excavations indicate that these hearths are largely scattered surface cultural materials, which limits some of their critical research potential (such as faunal remains, some dateable materials, etc), and their significance. Comparison with other hearths recorded at Lake Cowal and further afield show that such sites of higher significance generally feature a charcoal deposit and an intact or minimally disturbed circular/semi-circular arrangement of clay heat retainers, these features may be buried, partially exposed, or dispersed on the ground surface with the circular structure evident. These characteristics are not evident at any of the sites assessed during the additional field investigation.

4.3 A revised archaeological resource

This ACHA Addendum has refined the archaeological resource as outlined in EMM’s (2023). EMM (2023) concluded the following cultural assemblage within the Project area:

...there are some 28 documented sites amongst the continuous background distribution of surface and shallowly buried artefacts across the study area. These can be broken down as:

- One area of past foci and activity (#43-3-0022) characterised by high densities of surface and sub-surface artefacts ($\bar{x} = \sim 52/m^2$) and which reflect extensive and/or repeated visitation and occupation by people over the last 5 ka. Based on field observations and the excavation program, this site was considered some ~ 4 ha (200 x 200 m) in size. At least part of this site has been previously mitigated in the early 2000s, and at some point been described as ‘destroyed’ on the AHIMS database, but excavations have validated the presence of cultural materials.
- Two area of moderate stone artefact densities that have been identified by other investigations (#39-4-0313) and/or the Aboriginal participants (CGO AS5 [#43-4-0194]).
- Twenty-two hearths found across the study area, which reflect a single period of past Aboriginal activity – CGO H1 [#43-4-0190]; #39-4-0305; #39-4-0318; #39-4-0328; #39-4-0329; #39-4-0330; #39-4-0331; #39-4-0332; #39-4-0274; #39-4-0275; #39-4-0276; #39-4-0277; #39-4-0284; #39-4-0291; #39-4-0292; #39-4-0301; #39-4-0302; #39-4-0273; #39-4-0288; #39-4-0289; #39-4-0290; and #43-4-0055.
- Two culturally modified trees (#39-4-0311 and #43-4-0035) identified as part of previous investigations of the Project area.
- A stone artefact background scatter that is predicted to occur across the study area and extending beyond its limits within which low artefact densities of $\sim 0.4\text{--}5/m^2$ may be expected (CGO BS1 [#43-4-0191]). This includes a large number of the previously recorded isolated and low density stone artefact sites currently documented across the Project area, including CGO AS1-4, AS6-AS7, and IF1, #39-4-0286, #39-4-0293, #39-4-0294, #39-4-0295, #39-4-0296, #39-4-0297, #39-4-0307, #39-4-0308, #39-4-0309, #39-4-0310, #39-4-0312, #39-4-0313, #39-4-0314, #39-4-0315, #39-4-0319, #39-4-0320, #39-4-0321, #39-4-0322, #39-4-0323, #39-4-0325, #39-4-0326, #39-4-0327, #39-4-0333, #43-4-0024, #43-4-0027, #43-4-0034, #43-4-0035, #43-4-0045, #43-4-0085, #43-4-0086, #43-4-0087, #43-4-0088, #43-4-0089, and #43-4-0092.

- A zone of ~100 m encompassing the lake's edge micro-environment within which higher densities of stone artefacts and/or other areas of past foci may be expected to be present.

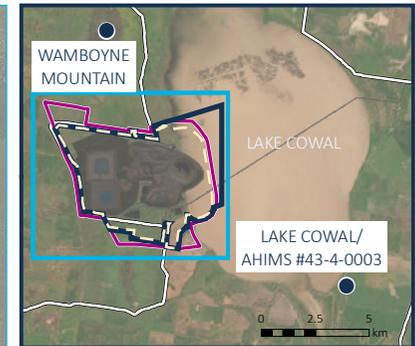
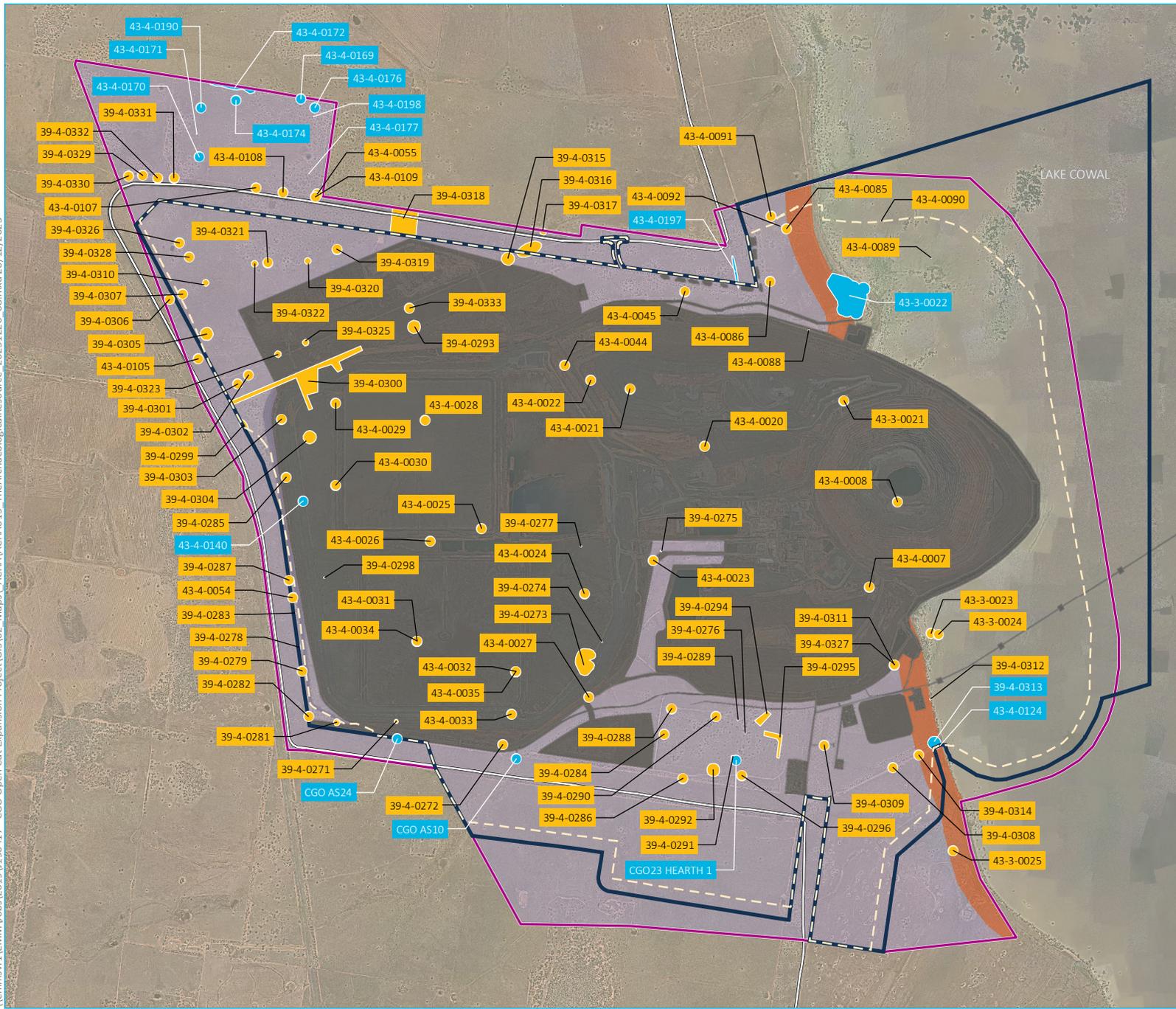
As outlined above, a significant portion of the cultural assemblage (22 of 28 discrete sites) were hearths, reflective of the extensive use of the lake's edge and nearby Gilgai (ephemeral water-holes), and these formed a focus of additional field investigation. Many of these sites had either not been identified during previous field survey or could not be validated without further test excavations. Some 15 of these were within the Project disturbance footprint and were subject to further investigations (Section 4.2). These concluded that eight hearths were valid (consisting of seven previous recordings and a newly documented hearth), with seven destroyed. All of these sites were found to be heavily degraded and truncated, with limited cultural deposit remaining.

When taking these new findings into account, some 20 sites can now be considered in the Project area, as well as a complex landscape of surface and buried stone artefacts now captured as #43-4-0191 and #43-4-0189:

- One area of past foci and activity (#43-3-0022) characterised by high densities of surface and sub-surface artefacts ($\bar{x} = \sim 52/m^2$) and which reflect extensive and/or repeated visitation and occupation by people over the last 5 ka. Based on field observations and the excavation program, this site was considered some ~4 ha (200 x 200 m) in size. At least part of this site has been previously mitigated in the early 2000s, and at some point been described as 'destroyed' on the AHIMS database, but excavations have validated the presence of cultural materials.
- Two areas of moderate stone artefact densities that have been identified by other investigations (#39-4-0313) and/or the Aboriginal participants (CGO AS5; #43-4-0194).
- Fifteen hearths found across the study area, which reflect a single period of past Aboriginal activity – #43-4-0190; #39-4-0318; #39-4-0329; #39-4-0330; #39-4-0331; #39-4-0332; #39-4-0276; #39-4-0284; #39-4-0291; #39-4-0292; #39-4-0301; #39-4-0302; #39-4-0290; #43-4-0055; and #43-4-0197.
- Two culturally modified trees (#39-4-0311 and #43-4-0035) identified as part of previous investigations of the Project area. It is considered probable that #43-4-0035, situated in the centre of an established tailings dam has been previously destroyed by mining activities.
- A stone artefact background scatter that is predicted to occur across the study area and extending beyond its limits within which low artefact densities of $\sim 0.4\text{--}5/m^2$ may be expected (CGO BS1; #43-4-0191). This includes a large number of the previously recorded isolated and low density stone artefact sites currently documented across the Project area, including CGO AS1-4, AS6-AS7, and IF1, #39-4-0286, #39-4-0293, #39-4-0294, #39-4-0295, #39-4-0296, #39-4-0297, #39-4-0307, #39-4-0308, #39-4-0309, #39-4-0310, #39-4-0312, #39-4-0313, #39-4-0314, #39-4-0315, #39-4-0319, #39-4-0320, #39-4-0321, #39-4-0322, #39-4-0323, #39-4-0325, #39-4-0326, #39-4-0327, #39-4-0333, #43-4-0024, #43-4-0027, #43-4-0034, #43-4-0035, #43-4-0045, #43-4-0085, #43-4-0086, #43-4-0087, #43-4-0088, #43-4-0089, and #43-4-0092.
- A zone of ~100 m encompassing the lake's edge micro-environment within which higher densities of stone artefacts and/or other areas of past foci may be expected to be present. This has since been documented as CGO LEZ (#43-4-0189).

Of these 20 discrete objects and sites, 18 are within existing permits and/or consents for their mitigation (Table 3.2). Unlike recent AHIPs, the original approvals for the Project do not specify Aboriginal sites encompassed within the initial application, but rather provide consent to harm and mitigate any cultural materials within their presented curtilage. Only #39-4-0311 has conflicting approvals, with Consent 1467/Permit 1468 providing approval for recovery in accordance with the IACHMP, but AHIP C0004570 more recently identifying it as a no-harm zone. CGO BS1 and CGO LEZ are also partially encompassed within the various permits and/or consents, but extend beyond edges of the Project area. Seven of these sites are outside of the Project disturbance footprint, and this will be further discussed in Section 4.5.

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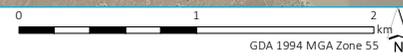
- KEY**
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
 - Ceremonial cultural site (refer to inset)
 - Lake edge zone (43-4-0189)
 - Background scatter (43-4-0191)
 - Surveyed Aboriginal site
 - Point
 - Polygon
 - Previously registered AHIMS site
 - Point
 - Polygon

Revised archaeological resource

Evolution Mining
 Cowal Gold Operations
 Open Pit Continuation Project
 ACHA Addendum
 Figure 4.1



Source: EMM (2023); Evolution (2023); DFSI (2017); OEH (2023); Nearthmap (2023)



GDA 1994 MGA Zone 55

4.4 Further details of significance assessment

Following the additional field investigations outlined in Section 4.2, several of the hearths tentatively identified and assigned a significance classification are reconsidered in Table 4.1 and Table 4.2. As outlined above, only 7 of the investigated 15 hearths, and a newly identified site, were positively identified as anthropogenic. However, many of these did not contain cultural deposits and were rather scattered burnt clay retainers on the surface. None of the seven sites are situated in their primary context and are not associated with any undisturbed hearth features or buried lithic scatters. Previous significance of these features was based on their research potential, being able to provide chronological information on when the locale was used in the past, and dietary habits through faunal and/or lipid analysis. However, the additional investigations have shown that such cultural deposits are not present within these sites, and therefore reduces their research potential.

Likewise, these sites are not rare, and they are well-represented in the local and regional archaeological record. Excluding the 16 hearth sites recorded in the proposed Project disturbance footprint (both valid and destroyed), there are a further 16 recorded in the general area, comprising approximately 9% of the total sites recorded. Comparison with other hearth sites recorded in Lake Cowal and surrounding regions (e.g. Pardoe 2009) further demonstrates their lack of rarity and shows that they are not archaeologically representative. Excavations carried out by Pardoe (2009a, 2009b) uncovered a hearth at LCE-2 identified a 25 cm deep deposit of ashy and charcoal, and included >50 artefacts.

Based on these findings, all of the remaining identified hearths within the Project disturbance footprint are considered to be of low significance (Table 4.1). As outlined in Table 4.2., this now aligns them more closely with several previous studies that undertook some consideration of their value. The newly identified #43-4-0197 (CGO23 Hearth 1) has also been assessed to be low significance being of similar composition and form as the remaining hearths investigated in Section 4.2.

In accordance with Heritage NSW comments (Section 1.1), Table 4.3 provides any previous significance ranking for Aboriginal object and sites outlined in Section 4.3, and any changes made to this classification by EMM (2023). Appendix D provides a comparable breakdown of all the discrete objects and sites now incorporated into CGO BS1 (#43-4-0191). These comparisons are primarily made with investigations undertaken in the last five years. While many of the sites in the Project area were identified prior to the mine in the mid-1990s and early 2000s, none of these reports provided a specific significance classification for the sites encountered. It is clear from Cane (1995, 1996, 1998) and Pardoe (2003, 2009a, 2009b, 2013) that a number of large camp sites situated along the fringe of Lake Cowal were considered of greater value and importance, both scientifically and by the Aboriginal participants of the time. These include LC1, LC2, LC6A, P1 (#43-3-0021, #43-3-0022, #43-3-0026, #43-4-0007, respectively), and to a lesser extent LC 3, LC 4, LC 5, and LC 6 (#43-3-0023, #43-3-0024, #43-3-0025, #43-3-0026, respectively). However, the report does not undertake any formal significance assessment of these sites with which Table D.1 can be populated. Of these key locales previously identified, only LC 2 remains within the Project disturbance footprint. While considered destroyed in the AHIMS database (as a result of works by Pardoe [2009a, 2009b]), EMM (2023) has shown significant portions of the deposit to remain; and it has been assessed as of high significance. These earlier investigations also highlighted the importance of the lake's edge zone within which many of these key base and hunting camps were originally documented. Similarly, here no specific identification of the zone within the AHIMS system nor significance classification was provided.

When reviewing previous assessments of the cultural assemblage with both EMM (2023) and this report, there is broad consistency (Table 4.2). Two sites are identified as of high significance, including LC 2 and the lake's edge zone, which conforms with earlier albeit un-classified findings by Cane and Pardoe (see above). Moderately significant sites, primarily focussed on culturally modified trees, are assigned similar classifications by both Niche (2018, 2019a) and EMM (2023). There are some minor differences in relation to moderately significant stone artefact sites. EMM (2023) identified #43-4-0194 as of moderate value, a site which was identified during the field investigations and therefore not captured in Niche's previous assessments. This site was identified primarily based on cultural significance and Aboriginal participant's views, rather than technological composition. Niche's (2019a)

investigation identified #39-4-0313 as of high significance, whereas EMM (2023) and this report has concluded this site to be of only moderate value. Niche based their assessment on the relatively high number of artefacts (=20) recovered during their investigations and potential for subsurface deposits. EMM's reconsideration reaches similar conclusions, but in comparison with other sites encountered, notably #43-3-0022, it was considered of lesser value against the broader cultural assemblage. It is, however, noted that the site is captured within the lake's edge zone (#43-4-0189), which is assessed as of high significance. Finally, with the revision of many of the hearths following field investigations to low significance, they now align more closely with previous findings.

Heritage NSW sought that where regionally significant cultural materials are encountered a process of project re-design is undertaken. The Aboriginal cultural heritage assessment addendum developed in response to this issue and broader questions, provides definitions of regionally significant cultural materials (see Section 5).

Table 4.1 Revised significance of hearth sites in the Project disturbance footprint

AHIMS #	Site	Site type	Site status	EMM's (2023) significance assessment	Revised significance				
					Scientific	Aesthetic	Historical	Cultural	Overall
39-4-0273	Lake Cowal 2017-057	Hearth	Destroyed	Moderate	-	-	-	-	-
39-4-0274	Lake Cowal 2017-058	Hearth	Destroyed	Moderate	-	-	-	-	-
39-4-0275	Lake Cowal 2017-059	Hearth	Presumed destroyed	Moderate	-	-	-	-	-
39-4-0276	Lake Cowal 2017-060	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0277	Lake Cowal 2017-061	Hearth	Destroyed	Moderate	-	-	-	-	-
39-4-0284	Lake Cowal 2017-048	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0288	Lake Cowal 2017-047	Hearth	Presumed destroyed	Moderate	-	-	-	-	-
39-4-0289	Lake Cowal 2017-046	Hearth	Valid	Moderate	-	-	-	-	-
39-4-0290	Lake Cowal 2017-045	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0291	Lake Cowal 2017-044	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0292	Lake Cowal 2017-043	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0301	Lake Cowal 2017-034	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0302	Lake Cowal 2017-033	Hearth	Valid	Moderate	Low	-	-	Low	Low
39-4-0305	Lake Cowal 2017-030	Hearth	Presumed destroyed	Moderate	-	-	-	-	-
39-4-0328	Lake Cowal 2017-019	Hearth	Presumed destroyed	Moderate	-	-	-	-	-
43-4-0197	CGO23 Hearth 1	Hearth	Valid	N/A	Low	-	-	Low	Low

Notes: **Red** text denotes a tentative status of a site pending further investigations.

Table 4.2 Previous and current significance of the cultural assemblage

AHIMS #	Site	Site type	Status	Potential impact?	Niche's (2018) significance assessment	Niche's (2019) significance assessment	EMM's (2023) significance assessment	Current significance classification
39-4-0276	Lake Cowal 2017-060	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0284	Lake Cowal 2017-048	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0290	Lake Cowal 2017-045	Hearth, low density artefact scatter	Valid	Yes	-	Low	Moderate	Low
39-4-0291	Lake Cowal 2017-044	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0292	Lake Cowal 2017-043	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0301	Lake Cowal 2017-034	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0302	Lake Cowal 2017-033	Hearth	Valid	Yes	-	Low	Moderate	Low
39-4-0311	Lake Cowal 2017-021	Culturally modified tree	Valid-tentative	Yes	-	Moderate	Moderate	Moderate
39-4-0313	Lake Cowal 2017-023	Medium density artefact scatter	Valid	Yes	-	High	Moderate	Moderate
39-4-0318	Lake Cowal 2017-030	Hearth	Presumed destroyed	Yes	Low	Low	Moderate	Low
39-4-0329	Lake Cowal 2017-006	Hearth, unspecified artefact site	Valid	No	Low	Low	Moderate	Low
39-4-0330	Lake Cowal 2017-016	Hearth	Valid	No	Low	Low	Moderate	Low
39-4-0331	Lake Cowal 2017-017	Hearth	Valid	No	Low	Low	Moderate	Low
39-4-0332	Lake Cowal 2017-018	Hearth	Valid	No	Low	Low	Moderate	Low
43-3-0022	LC2	High density artefact scatter	Partially destroyed	Yes	-	-	High	High

Table 4.2 Previous and current significance of the cultural assemblage

AHIMS #	Site	Site type	Status	Potential impact?	Niche’s (2018) significance assessment	Niche’s (2019) significance assessment	EMM’s (2023) significance assessment	Current significance classification
43-4-0035	L-C-3	Culturally modified tree, unspecified artefact site	Presumed destroyed	Yes	-	-	Moderate	Moderate
43-4-0055	Lake Cowal 2017-068	Hearth	Valid	No	Low	Low	Moderate	Low
43-4-0191	CGO BS1	Low density artefact scatter	Valid	Yes - partial	See Appendix D	See Appendix D	Low	Low
43-4-0190	CGO H1	Hearth	Valid	No	-	-	Moderate	Low
43-4-0189	CGO LEZ	Heritage focus area – cultural deposit	Valid	Yes - partial	-	-	High	High
43-4-0194	CGO-AS5	Medium density artefact scatter	Valid	No	-	-	Moderate	Moderate
43-4-0197	CGO23 Hearth 1	Hearth	Valid	Yes	-	-	-	Low

Notes: **Red** text denotes a tentative status of a site pending further investigations.

4.5 Updated potential impacts

The proposed Project includes the development of three new satellite open pits to the north and south of the existing open pit, the northern expansion of the IWL, expansion of the LPB and existing southern and northern waste rock emplacements and a number of ancillary activities including soil stockpiling. Further information on the proposed Project may be found in EMM (2023).

Following the additional field investigations in Section 4.2, the previous consideration of potential impacts warrants revision. Table 4.3 provides a summary considering the potential impacts compared with the updated cultural assemblage outlined in Section 4.3.

EMM (2023) concluded that:

...of the 28 identified sites within the EIS study area, 19 would be subject to direct impacts that would result in the complete loss of value (#39-4-0313, #43-3-0022, #39-4-0288, #39-4-0289, #39-4-0290, #39-4-0305, #39-4-0328, #39-4-0273, #39-4-0274, #39-4-0275, #39-4-0276, #39-4-0277, #39-4-0284, #39-4-0291, #39-4-0292, #39-4-0301, #39-4-0302, #39-4-0311, and #43-4-0035). These consists of 14 potential hearths, two culturally modified trees, and two significant stone artefact sites. However, many of these sites only have a tentative classification at this stage, and some are within areas of ancillary activities where minor design changes may result in their conservation. Importantly of the six sites avoided, CGO AS5 that was considered of cultural value by the Aboriginal participants will remain unaffected, as well as several potential hearths.

In addition, the assessment identified significant surface and buried cultural material identified on the lake's edge zone (CGO LEZ). Of the ~62 ha that comprises this feature, some 34 ha (55%) would be directly affected primarily by the establishment of three new open pits and ancillary activities associated with these (namely, E46 and GR pits to the north, and E41 pit to the south). Notably within this zone, #43-3-0022 will be directly affected by the establishment of, and ancillary activities associated with, the new open pit E46. Similarly, to the south, #39-4-0313 will be directly affected by the establishment of, and ancillary activities associated with, the establishment of the southern extent of the expanded LPB. Proposed impacts to both discrete sites will result in complete loss of value of these sites, and redesign does not seem feasibly given their close proximity to the existing mine and location within the additional disturbance areas.

With the revised cultural assemblage, it is now evident that of the 21 Aboriginal objects and sites within the Project area, 12 would be adversely affected (Figure 4.2). The Project continues to impact the two significant stone artefact sites (LC2 [#43-3-0022] and Lake Cowal 2017-023 [#39-4-0313]), and two culturally modified tree sites (Lake Cowal 2017-021 [#39-4-0311] and L-C-3 [#43-4-0035]). It must however be highlighted that there is strong evidence one of these, L-C-3 (#43-4-0035), has been previously mitigated during the establishment of the tailings dam. The Keeping Place contains a number of recovered trees, and one of these is considered probably that of #43-4-0035. Unfortunately, neither the original notes nor AHIMS site card on L-C-3 provide detailed information on the site that allow a comprehensive comparison of recovered trees with this site.

With the additional field investigations, the Project would no longer impact the same number of hearth sites, with eight rather than 14 such types now within the Project disturbance footprint. Eight sites would remain outside of any proposed development activities, including CGO AS5 (#43-4-0194).

There is no change in the potential partial impacts to the lake's edge zone and background artefact scatter encompassing large parts of the Project disturbance footprint.

It is highlighted that of the 12 Aboriginal sites and objects that would be adversely affected by the Project, all are currently encompassed by existing impact permits and approvals. The portions of CGO LEZ (#43-4-0189) and CGO BS 1 (#43-4-0191) within the Project Disturbance Area are also entirely captured within these approvals. As outlined in Section 3, there is a conflict in relation to Lake Cowal 2017-021 (#39-4-0311), which is approved for recovery in Consent 1467/Permit 1468, but identified in AHIP C0004570 as a no-harm zone.

Table 4.3 Updated potential impacts for the Aboriginal sites and objects within the Project area

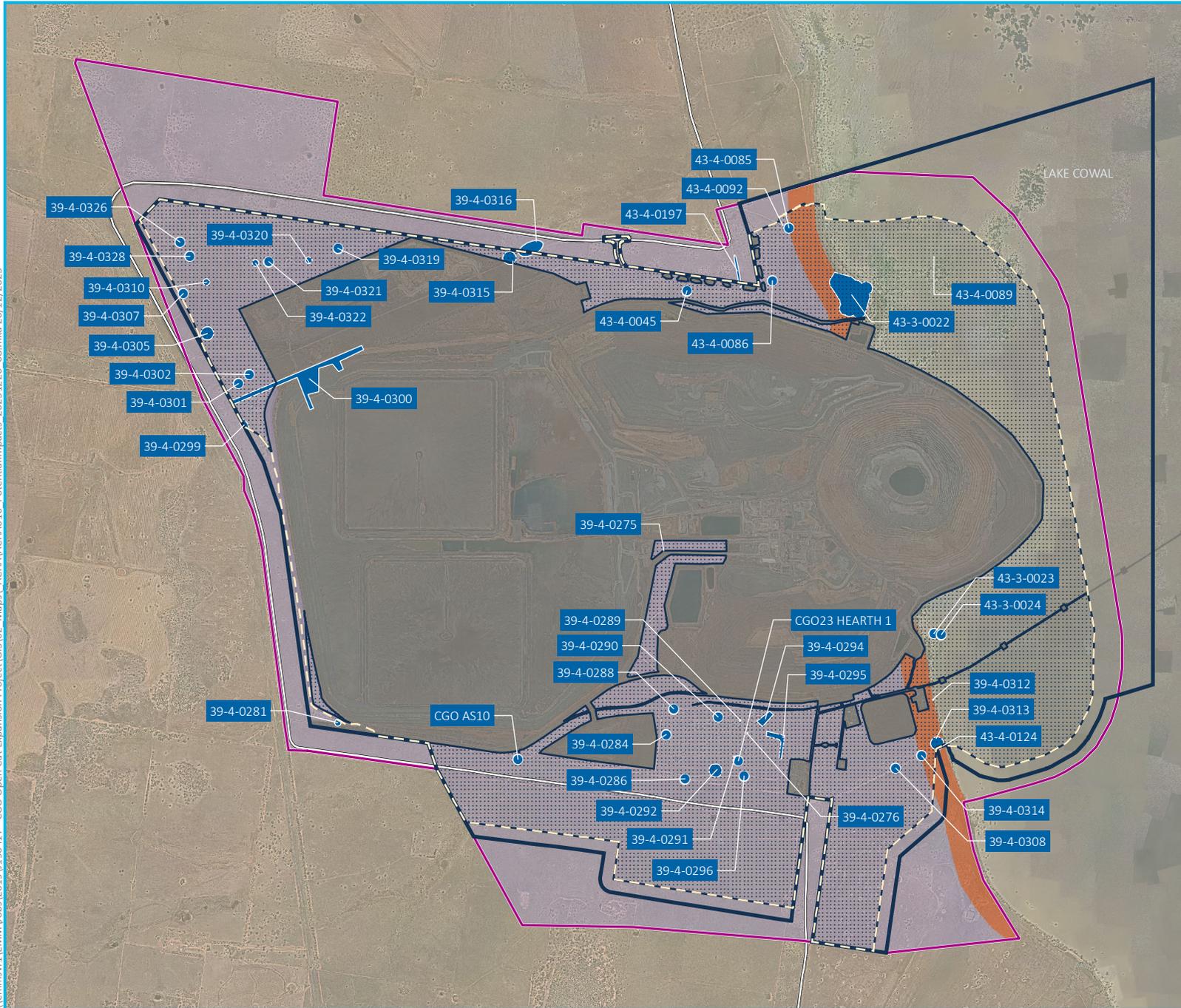
AHIMS #	Site	Site type	Status	Significance	Consent/permit	Type of harm	Degree of harm	Consequence of harm
39-4-0276	Lake Cowal 2017-060	Hearth	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
39-4-0284	Lake Cowal 2017-048	Hearth	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
39-4-0290	Lake Cowal 2017-045	Hearth, low density artefact scatter	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
39-4-0291	Lake Cowal 2017-044	Hearth	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
39-4-0292	Lake Cowal 2017-043	Hearth	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
39-4-0301	Lake Cowal 2017-034	Hearth	Valid	Low	1680/1681	Direct	Whole	Complete loss of value
39-4-0302	Lake Cowal 2017-033	Hearth	Valid	Low	1680/1681	Direct	Whole	Complete loss of value
39-4-0311	Lake Cowal 2017-021	Culturally modified tree	Valid-tentative	Moderate	1467/1468; C0004570	Direct	Whole	Complete loss of value
39-4-0313	Lake Cowal 2017-023	Medium density artefact scatter	Valid	Moderate	1467/1468	Direct	Whole	Complete loss of value
43-3-0022	LC2	High density artefact scatter	Partially destroyed	High	1467/1468	Direct	Whole	Complete loss of value
43-4-0035	L-C-3	Culturally modified tree, unspecified artefact site	Presumed destroyed	Moderate	1467/1468	Direct	Whole	Complete loss of value
43-4-0197	CGO23 Hearth 1	Hearth	Valid	Low	1467/1468	Direct	Whole	Complete loss of value
43-4-0191	CGO BS1	Low density artefact scatter	Valid	Low	1467/1468; 1680/1681; C0004570	Direct	Partial	Partial loss of value
43-4-0189	CGO LEZ	Heritage focus area – cultural deposit	Valid	High	1467/1468	Direct	Partial	Partial loss of value
39-4-0318	Lake Cowal 2017-030	Hearth	Presumed destroyed	Low	1467/1468	None	-	-
39-4-0329	Lake Cowal 2017-006	Hearth, unspecified artefact site	Valid	Low	C000457	None	-	-

Table 4.3 Updated potential impacts for the Aboriginal sites and objects within the Project area

AHIMS #	Site	Site type	Status	Significance	Consent/permit	Type of harm	Degree of harm	Consequence of harm
39-4-0330	Lake Cowal 2017-016	Hearth	Valid	Low	C000457	None	-	-
39-4-0331	Lake Cowal 2017-017	Hearth	Valid	Low	C000457	None	-	-
39-4-0332	Lake Cowal 2017-018	Hearth	Valid	Low	C000457	None	-	-
43-4-0055	Lake Cowal 2017-068	Hearth	Valid	Low	C000457	None	-	-
43-4-0190	CGO H1	Hearth	Valid	Low	-	None	-	-
43-4-0194	CGO-AS5	Medium density artefact scatter	Valid	Moderate	-	None	-	-

Notes: **Red** text denotes a tentative status of a site pending further investigations.

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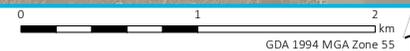


- KEY**
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
 - Lake edge zone (43-4-0189)
 - Background scatter (43-4-0191)
 - Direct impact area
 - Potentially impacted Aboriginal sites
 - Point
 - Polygon

Potential Aboriginal heritage impacts within the project area

Evolution Mining
Cowel Gold Operations
Open Pit Continuation Project
ACHA Addendum
Figure 4.2

Source: EMM (2023); Evolution (2023); DFSI (2017); OEH (2023); Nearmap (2023)



5 Further definition of future mitigation measures

5.1 Key findings

- This section outlines the draft content of an Aboriginal cultural heritage management plan (ACHMP) should development consent be granted for the Project, and which would provide a framework for post-approval Aboriginal heritage requirements. The draft ACHMP contents will include the need to develop suitable archaeological mitigation measures and the surrender of existing Aboriginal heritage impact permits, although some direction is included in this section to address Heritage NSW questions.
- General archaeological salvage methodologies for five Aboriginal sites of moderate and high significance located with the Project disturbance footprint have been described, with further refinement recommended as part of the ACHMP.

5.2 Aboriginal cultural heritage management plan

The Heritage NSW comments include a proposed ACHMP requirement, which is in accordance with EMM's (2023) recommendation. Should the Project be approved, Evolution will prepare an ACHMP in accordance with the requirements of any conditions of consent, and in consultation with the registered Aboriginal parties. The Project area is already subject to an ACHMP for their current operation, so is familiar with the framework and requirements of cultural heritage management under these instruments of approval.

To address other Heritage NSW questions, Evolution propose to include the following in the ACHMP:

- Processes and procedures for the modification and/or surrendering of the existing impact permits and approvals across the Project area, including Consent 1467/Permit 1468, Consent 1680/Permit 1681 and AHIP C000457. This would include:
 - review any overlap of the existing permits and approvals and identify whether the permit requires variation to encompass a revised boundary or to be surrendered
 - review of the conditions of each existing permits and approvals to determine any outstanding requirements, such as cultural assemblage analysis, reporting and/or curation
 - integration of any outstanding conditions into the project specific requirements of the ACHMP
 - submission of AHIP variation and/or surrender forms for each active permits and approval to Heritage NSW for processing. Liaison with Heritage NSW to ensure changes/relinquishment only come into effect following approval of the ACHMP.

In relation to these processes and procedures, of critical focus in the ACHMP would be:

1. The completion of post-excavation analysis of recovered cultural materials, which due to the current mitigation activities is generally ongoing; and due to COVID restrictions has been limited in recent years. Further, there has been limited new ground disturbance within the Project Area in recent years.
2. Determining the future curation of the cultural assemblage (both existing and proposed for recovery), including culturally modified trees and stone artefacts. Currently, a Keeping Place is established in the Project area, southeast of the current mining operations, and can only be accessed by representatives of the Wiradjuri Condobolin Corporation (WCC). However, this Keeping Place was established early in the mining activities prior to the establishment of WCC's Condobolin cultural centre. Further, discussions

during EMM (2023) suggest that improved accessibility for education and interpretation at the Lake Cowal Conservation Centre was also a potential option. As such, determining the repository and the methods for transferring the cultural assemblage would be included in the ACHMP.

In addition, Heritage NSW recommend that the ACHMP 'should include provisions for project redesign if further investigations in the CGO LEZ and CGO BS1 identify regionally significant Aboriginal cultural heritage'.

Due to the location of the E46 and E41 satellite ore bodies, some parts of the Project cannot be re-designed while maintaining the Project's viability. In a situation where regionally significant cultural materials are encountered, Project re-design would always be explored, however where this proves unfeasible due to ore body locations, Evolution would liaise with DPHI, Heritage NSW, archaeologist and registered Aboriginal parties to implement additional mitigation measures and activities beyond those proposed in the Aboriginal cultural heritage management plan in lieu of avoidance.

A definition of 'regionally significant' would be developed in consultation with the Aboriginal participants as part of the ACHMP. With review of EMM (2023), it is expected that the term would include:

- presence of cultural materials of Pleistocene (>10,000 years ago) age, which is known regionally, but has not been encountered at Lake Cowal
- presence of deeply (>1 m) stratified cultural materials, with most excavations to date suggesting only shallow or truncated soil profiles are present at Lake Cowal
- presence of lunette landforms, soil profiles and/or cultural deposits. Typically lunettes are found on the eastern side of Lake Cowal and other comparable water bodies in western NSW, and are frequently found to contain highly significant cultural materials
- presence of rare cultural materials, such as wooden artefacts, which given the soil profiles are not expected, but would be extremely rare if encountered
- identification of ancestral remain/s, and especially those of significant antiquity. No such remains have been documented to date, but they are known in other parts of Lake Cowal and are of significance to the local Aboriginal community.

In addition to the ACHMP, Heritage NSW identified an extensive suite of recommendations for the management of Aboriginal heritage, which should also be included in the ACHMP. These recommendations can be found in Attachment A.

5.3 Archaeological mitigation measures

The specific archaeological mitigation requirements for the Project would be developed and incorporated into the ACHMP. This section provides an indicative *guide* for such measures that may be proposed during the development of the ACHMP should development consent be granted for the Project. Further, to align with co-design principles, the ACHMP would be developed in consultation with the registered Aboriginal parties.

5.3.1 Management of culturally modified trees

Two culturally modified trees would be adversely affected by the Project, (Lake Cowal 2017-021 [#39-4-0311] and L-C-3 [#43-4-0035]). Of these, one is considered to have been previously recovered as part of the tailings dam construction in the early 2000s (Section 4.5).

All management of culturally modified trees would be incorporated into the ACHMP. The ACHMP would include the following guiding principles:

- Undertake an archival recording of the site in accordance with Heritage NSW (2006) *Photographic recording of heritage items using film or digital capture* guidelines or equivalent.
- Careful removal and recovery of the tree:
 - establish safe work surface around the tree
 - apply measures to support the trunk of the tree for the duration of the works, and to enable removal of crown, and subsequent movement of the trunk
 - use appropriate equipment to remove the upper portions of the crown and trunk incrementally until the only the trunk ~1 m above the scar remains
 - undertake excavations around the base of the tree to enable either removal with the root bole intact, or more commonly to provide enough space to enable sawing of trunk and/or roots a suitable distance below the scar (ideally >1 m) to loosen the tree
 - use the mobile crane (or equivalent) to lift the remaining trunk onto a suitable truck. The truck should have a bed of tyres and geofabric material installed to ensure the trunk is protected in transit
 - once the trunk is in place, secure appropriately, and relocate to the agreed repository
 - the trunk would be moved to the agreed repository where suitable management of the trunk is implemented, including the use of moisture absorbing crystals and/or regular monitoring to ensure long term survival of the tree
 - the tree removal would be directed by the arboriculturist with assistance of specialised tree-logging team and ancillary support from the proponent. It would be undertaken with the participation and over-sight of the heritage consultant and representatives of the registered Aboriginal parties.

5.3.2 Archaeological salvage excavation

This section provides an indicative *guide* for research questions and objectives, approach, methods, and quantum of archaeological salvage that may be proposed during the development of the ACHMP should development consent be granted for the Project. Further, to align with co-design principles, the ACHMP would be developed in consultation with the registered Aboriginal parties.

i Research aims and objectives

The following section provides a proposed archaeological program – or mitigation approach – to offset and minimise the harm to cultural materials that would result from the Project. It has been designed to align with and build upon the findings of the EMM (2023); and recover a large cultural assemblage through salvage excavation for preservation in record and future curation. To date, the ACHA has been limited to test excavations composed of test pits systematically spread across small parts of the Project area.

While this approach proved robust in providing an archaeological model for the locale, the approach remains a fairly coarse resolution (spatially and temporally) with limited investigation. As such, additional excavations of the proposed development allow for an improved investigation of areas of higher archaeological value within the Project disturbance footprint, and allows finer resolution recovery of these key cultural deposits to further inform the spatial and temporal use of the region in the past. At this stage, all additional excavations would only be undertaken within the curtilages of LC2 (#43-3-0022), Lake Cowal 2017-023 (#39-4-0313) and CGO LEZ (#43-4-0189) (Figure 5.1). Additional surface collection of clay heat fragments from the adversely affected hearths would also occur, since these may also assist in answering research questions.

Overall, the aims of the salvage excavation are to consider the following:

- To answer and/or resolve the research questions outlined in Section 5.3.2ii in relation to the formative and stratigraphic nature of the deposits, and what they can tell us about Aboriginal populations in the past.
- To use fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the past Aboriginal occupation. This includes a greater understanding of resource exploitation; technological attributes; identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To obtain an appropriate assemblage of Aboriginal objects, for detailed documentation and long-term curation, within the spatial limits of the Project (i.e. preservation in record).
- To allow greater cultural association between the site and the registered Aboriginal parties (i.e. 'cultural salvage') through involvement in the excavation, and options for the interpretation of the results as part of the overall Project.
- To ensure that the Project can proceed with minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during activities.
- To integrate with the recommendations of the ACHA to provide a holistic and comprehensive understanding of the archaeological landscape and cultural materials within it.
- To inform any future interpretation for the Project.

ii Research questions

The following provide a series of research questions that should be further considered and/or answered as part of any archaeological investigative and salvage excavation program:

- What is the chronological age of the various soil profiles encountered?
 - Are Pleistocene deposits present, and if so what is their spatial extent and depths?
 - Can a robust chronology be developed from the shallow soil profiles present within the Project disturbance footprint to further improve an understanding of the recovered cultural assemblage?
- What is the age, composition, technological attributes, and significance of cultural materials within the Project disturbance footprint?
 - Are any of the cultural materials of Pleistocene age?
 - Can we identify changes in technology, procurement and general activities through time?

- Can we identify the onset and/or proliferation of Quandong processing implements identified in the region by Pardoe et al. (2019)? Pardoe et al. (2019) identify this locale as one of the type sites for this type of implement, but its origins and timing of use remain unknown.
- Can inter and/or intra- variation within the cultural assemblage be identified? How do these variations inform the timing and specific activities at each locale investigated?
- Can the spatial extent of discrete past activities (i.e. site size) be determined to inform the potential distribution of cultural materials elsewhere in the Project area and environs; and to further inform any subsequent salvage excavation requirements?
- Can additional analysis of heated clay retainers through chronology and/or geochemical techniques further inform the timing and activities that were being undertaken by Aboriginal people in the past?
- What are the environmental characteristics associated with the distribution of cultural materials within the Project disturbance footprint?
 - Can the formative processes of the stratigraphic profile provide information on the nature, movement and/or survivability of the cultural materials?
 - Can we identify any past flooding and/or inundation by Lake Cowal that may inform past conditions and use of the lake's edge in the past?
 - Can pollen, phytoliths, geochemistry and/or other analyses inform the development of the environment, and Aboriginal people's activities within them?
 - Are there other key factors in the distribution and extent of the material culture within the area?
- How does the additional excavations along the edges of Lake Cowal inform the zones of archaeological sensitivity developed for the Project area? Are they robust, or require further modification?
- What are the cultural, social and public values associated with the cultural materials in the Project disturbance footprint? Does the excavations support or require modification of the significance and values previously assigned to Aboriginal sites, places and/or locales within the Project disturbance footprint?

iii Approach and methods

Given the spatial extent of several of the sites, archaeological excavation would typically include an investigative phase followed by a salvage excavation where cultural materials and/or findings meet certain thresholds. The approach and methods would be undertaken to inform and answer the research questions, as well as to recover a substantive portion of the cultural materials that may be lost due to development activities.

These two phases are outlined below. In addition, it is probable that these works would be staged across the Project to align with the proposed construction phase. Specifically, the northern portions of the Project disturbance area would be subject to development first, and mitigation activities would therefore begin here and work southwards.

The investigative archaeological methods for LC2 (#43-3-0022), Lake Cowal 2017-023 (#39-4-0313) and CGO LEZ (#43-4-0189) are proposed as follows (Figure 5.1):

- Investigative Excavation
 - A grid of 1 m² test pits would be established across the identified site curtilage + 20 m buffer (Figure 4.1) and within the Project disturbance footprint using a differential GPS device (or equivalent). Test pits would be spaced systematically every 10–20 m across these areas.
 - All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required. Excavation would be undertaken as 1 m² units. Each square would be given an alpha-numeric label for identification purposes.
 - All excavation would be undertaken in 10 cm spits to the depth of under-lying clay subsoil (<100 cm below surface).
 - All sediment would be placed in buckets, labelled according to its assigned test pit number and spit, and recorded and documented. All sediment would then be sieved through a 5 mm wire aperture mesh, and any historic and/or Aboriginal cultural material recovered, labelled and bagged for subsequent analysis and curation.
 - Field Documentation
 - All test pits would be documented using photographic records, written descriptions and scaled drawings.
 - Soil profiles would be recorded in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010), including scaled drawings, photographs, and written descriptions.
 - Soil samples may be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information. OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.
 - Reduced levels of the top and bottom of the test pit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.
- Salvage excavation
 - Where thresholds are met (Section 5.3.2ii(a)), additional archaeological excavations would be undertaken in these identified locations. These works are proposed to consist of contiguous open area salvage excavation using higher resolution recovery techniques. It is considered that each open area salvage excavation would be a maximum of 25 m² (5 x 5 m), and up to six would be applied across the Project area where thresholds are met. Whether salvage excavations exceed six locations would also be determined based on the findings of the investigative program and to answer the research questions and/or recover significant cultural materials. The number, size, extent and location of open area excavations, and whether they continue beyond the 150 m² provided here would be developed based on thresholds, significance of the findings, and in discussion with the Excavation Director, proponent and Aboriginal participants.

- The following methods are proposed for all salvage excavations:
 - Establishment of a 5 x 5 m grid centred on area/s of archaeological interest proposed for expansion following investigations in the investigative phase using a hand-held Leica RTK CS10/GS08 survey grade Differential GPS device (or equivalent).
 - All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required. Excavation would be undertaken as 1m². Each square would be given an alpha-numeric label for identification purposes.
 - All excavation would be undertaken in 5 cm spits to the depth demonstrated to be culturally sterile within the investigative stages of the archaeological excavation.
 - All sediment would be placed in buckets, labelled according to its assigned test pit number and spit, and recorded and documented. All sediment would then be wet-sieved through a 3 mm wire aperture mesh, and any historic and/or Aboriginal cultural material recovered, labelled and bagged for subsequent analysis and curation.

- Field Documentation
 - All excavations would be documented using photographic records, written descriptions and scaled drawings.
 - Soil profiles would be recorded in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010), including scaled drawings, photographs, and written descriptions.
 - Soil samples would be collected for description, sedimentological and chronological analysis where such analysis is considered likely to contribute significant information. OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.
 - Reduced levels of the top and bottom of the test pit, and at the top of each fourth spit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.

Excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Aboriginal participants and proponent as the conditions in the field and nature of the excavations develop. This includes the movement/discontinuance of test pits to avoid existing obstacles, buried services and disturbances.

a [Thresholds for archaeological salvage](#)

The initiation of salvage excavation would *only* be undertaken in areas where the thresholds outlined below are met. The location of salvage excavations would be determined at the completion of the investigative phase outlined above and at those locations where the greatest potential for answering the research questions (Section 5.3.2ii) is identified.

The thresholds for salvage expansion would include:

- Stone artefact densities greater than 40/m² and therefore indicative of past occupation based on our broader understanding of the Project area (EMM 2023). Values of several hundreds and even thousands are known regionally, and as such higher values would be considered more favourably.
- Where evidence of multiple phases of past activity is identified through changing raw material types and/or distinct technological attributes at different depths within the soil profile. Currently two phases of past activity have been documented, preference would be given to locations that demonstrate this pattern and/or where greater number of phases is identified.
- Where dense concentrations of cultural materials are discovered at depths that may be considered of Pleistocene age and/or at depths that may be of this time period.
- Where Quandong processing implements and/or fragments are encountered, and which may improve our understanding of the timing, production, and use of these rare tool types.
- Where rare or unique stone artefacts and/or other archaeological material is recovered.
- Where unique and/or rare stratified archaeological features (e.g. hearths, cooking pits, etc.) are identified.
- Where identified cultural deposits have the ability to inform the research questions Section 5.3.2ii.

iv Post excavation analysis and reporting

The post-excavation analysis (incorporating data from the excavations) would be designed to address the research objectives and aims based on the results of the excavation. Typically, these activities would occur following any field campaign and once the development activities would commence. These would include, but not be necessarily limited to the following:

- Stone artefact analysis, including descriptive and functional recording of the assemblage, as well as interpretation of past activities, post-depositional change and comparison with other nearby data. Conjoining may also be attempted where sufficient cultural materials have been recovered. Geochemical analysis of stone artefacts for provenance and other material source research questions using X-Ray Fluorescence, Inductively Coupled Plasma Mass Spectrometry and/or Thermal Ionisation Mass Spectrometry may also be undertaken. These samples would be processed either at Australia's Nuclear Science and Technology Organisation (ANSTO), University of Wollongong and/or University of New South Wales.
- Other human indicators, including the consideration of sediment DNA and/or faecal biomarkers. While of limited commercially available, Consiglio Nazionale delle Ricerche (National Research Council of Italy) Institute of Polar Sciences (CNR-ISP), Venice, Italy and the Australian Centre for Ancient DNA, University of Adelaide would be contacted to explore the interest and feasibility to undertake these types of analyses. These are both cutting edge techniques that can further inform the presence of past human activity, but their application in cultural heritage management has not been explored to date in Australia.
- Geochronology, including the processing and analysis of samples to inform the absolute age of the soil profile and/or cultural assemblage recovered. This would include Optically Stimulated Luminescence ages, as well as radiocarbon samples. While large number of these samples are likely to be collected, given the prohibitive cost of processing, it is probable that a small number of ages would be obtained in a small number of master-sequences to inform the broader archaeological program. The samples would be processed by either University of Gloucestershire and/or University of Wollongong.

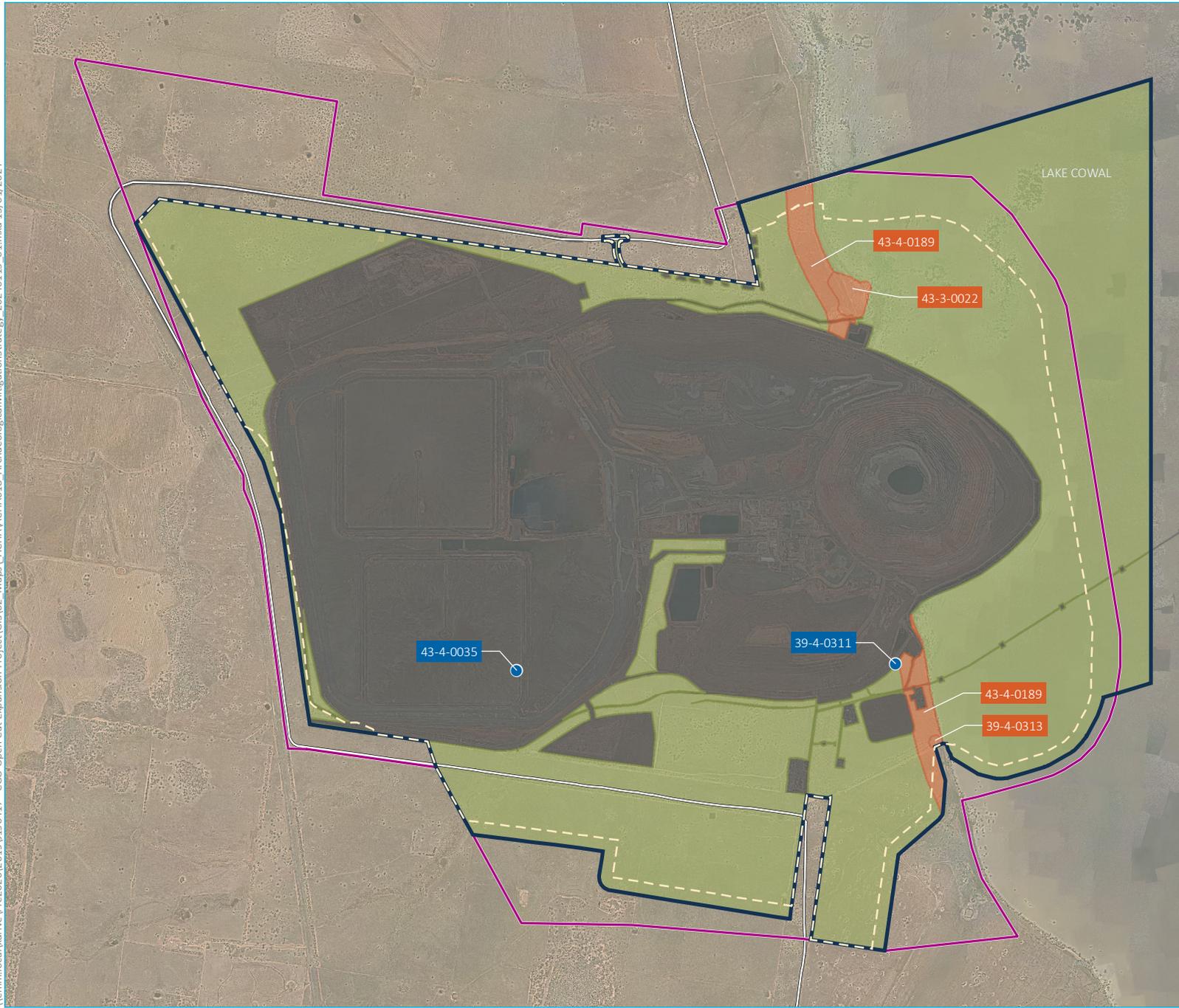
- Geochemistry and soil analysis that would be used to further inform and interpret the formation history of the soil profile from which cultural materials are recovered. This would include the use of Itrax X-ray Fluorescence (XRF) core scanning methods at ANTSO, as well as particle size analysis to explore changes in the alluvial and colluvial history of Lake Cowal.
- Palaeo-environmental analysis, including palynology, phytolith analysis and/or charcoal analysis to explore the past vegetation and fire regimes that may have influenced and/or modified by past human activity. These would utilise the same samples collected for geochemistry and/or sampling and sent to a range of university specialists in these fields to process and interpret the results.
- Reporting that would provide information on the field investigations, compilation and synthesis of the post-excavation analyses, and interpretation of the results to inform the past activity and use of the region.

5.3.3 Cultural monitoring

Over the last 20 years the proponent has been undertaking recovery and long-term curation of surface and shallowly buried cultural materials in advance of development activities. This has included the surface and grader scraping of the ground surface, with any cultural materials recovered (Section 3.4). Culturally modified trees have also been documented and recovered prior to any development activities.

Discussions with the registered Aboriginal parties would be undertaken on whether this cultural monitoring in some form continues in areas where specific archaeological mitigations outlined above are not proposed; and the nature and methods of these activities. Should they be continued, the approach and methods would be integrated into the ACHMP outlined in Section 5.3.

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- KEY**
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
- Proposed archaeological mitigation strategy**
- Culturally modified trees proposed for recovery
 - Archaeological salvage excavations required
 - No further archaeological mitigation proposed

Proposed archaeological mitigation strategy (indicative)

Evolution Mining
Cowal Gold Operations
Open Pit Continuation Project
ACHA Addendum
Figure 5.1



Source: EMM (2024); Evolution (2023); DFSI (2017); OEH (2023); Nearmap (2023)

0 1 2 km
GDA 1994 MGA Zone 55

6 Conclusion

This report provides additional information to supplement the Aboriginal cultural heritage assessment undertaken for the Project. It has focussed on responding and clarifying uncertainties in the ACHA identified by Heritage NSW as part of the EIS submission.

The report has focussed on providing further information on the existing Aboriginal heritage approvals for the Project, their current status, and the methods and mitigation measures they require. It also includes additional investigation of previously identified sites with a 'tentative' classification in the ACHA. These sites were primarily hearth features, which are common in the Project Area, but can be found in various conditions, and/or mis-identified as a result of natural burning. This has resulted in the further characterisation of nine hearth features and the de-classification of several that were either natural or previously destroyed (likely through natural erosion).

Finally, the report provides further information on a potential mitigation approach to investigating and recovering key sites and cultural materials, including culturally modified trees and stone artefactual deposits. These should be considered guiding principles, since they would be further developed and discussed with the registered Aboriginal parties during a recommended post-approval management plan.

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Attachment A

Heritage NSW – Advice on Environmental Impact
Statement (EIS) (SSD-42917792)



Philip Nevill
Team Leader
Department of Planning & Environment
Email: philip.nevill@planning.nsw.gov.au

Your reference: SSD-42917792
Our reference: DOC23/509305

Dear Philip,

Advice on Environmental Impact Statement (EIS) - State Significant Development – Cowal Gold Operations Open Pit Continuation – SSD-42917792

Thank you for your referral uploaded to the Major Projects Portal on 9 June 2023 seeking advice on the above State Significant Development (SSD) proposal. In preparing this advice I have reviewed the following documents:

- Cowal Gold Operations Open Pit Continuation: Environmental Impact Assessment – prepared by EMM Pty Ltd, dated May 2023.
- Appendix L – Aboriginal Cultural Heritage Assessment Report – prepared by EMM Pty Ltd, dated May 2023.

The Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared in reference to the relevant guidelines. Heritage NSW agrees with the proposed Management Strategy and Recommendations (Section 10 of the ACHAR). Below contains recommendations for additions to the ACHAR and several areas that require clarification. Recommended draft Conditions of Approval in included in **Attachment A**.

- Greater clarity is required on the current management provisions of sites under existing AHIPs and whether the management of these sites will change under the proposed SSD. For example, site #39-4-0311 is currently listed in Schedule A (No Harm) in AHIP C0004570 but will be impacted by this proposal. Further justification is required on the change in management of sites where it will occur. Where adequate justification is not provided, Heritage NSW may recommend that the original AHIP conditions remain in place.
- Please include additional information on whether the significance assessment for all valid sites within the project area have changed since their original designation.
- Please update figures to include polygons of all sites (both valid and destroyed) across the project area to provide greater clarity on the spread of Aboriginal cultural heritage.
- The Management Strategy and Recommendations (Section 10 of the ACHAR) should include provisions for project redesign if further investigations in CGO LEZ and CGO BS1 identify regionally significant Aboriginal cultural heritage.
- Heritage NSW recommends that an ACHMP be developed and implemented for the project. Heritage NSW recommends the ACHMP should be included in the Conditions of Approval and that an ACHMP be created and approved by Department of Planning and Environment prior to any development activities occurring within the project area. Recommended conditions for an ACHMP have been included in **Attachment A**.

Please note that the above comments relate only to Aboriginal cultural heritage regulation matters. Heritage NSW may provide separate comments in relation to environmental heritage considerations. Heritage NSW reserve the right to modify the proposed salvage methodology presented in the ACHAR.



If you have any questions regarding these comments, please contact Corey O'Driscoll, Senior Assessments Officer, at Heritage NSW on 6229 7079 and corey.odriscoll@environment.nsw.gov.au

Yours sincerely

Nicole Davis

Manager Assessments

Heritage NSW

Department of Planning and Environment

(As Delegate under *National Parks and Wildlife Act 1974*)

Date: 11 July 2023



ATTACHMENT A: RECOMMENDED DRAFT CONDITIONS FOR ABORIGINAL CULTURAL HERITAGE

Below are our recommended draft conditions for the protection of Aboriginal Heritage and the implementation of an Aboriginal Cultural Heritage Management Plan.

Aboriginal Heritage

- 1) All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects except as authorised by this approval.
- 2) The Registered Aboriginal Parties (RAPs) must be kept informed about the SSD. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the SSD.
- 3) The proponent must consider project redesign to avoid any regionally significant Aboriginal cultural heritage identified during additional archaeological investigations (i.e., surface collection, test excavations, and salvage excavations).

Aboriginal Cultural Heritage Management Plan

- 4) Prior to carrying out any development, the Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - b) be prepared in consultation with Aboriginal Stakeholders;
 - c) reviewed by Heritage NSW;
 - d) include a methodology for a test excavation and salvage excavation program with Aboriginal Stakeholder participation of sites to be impacted with consideration to understanding site characteristics, and local and regional archaeological context;
 - e) include a description of the measures that would be implemented for:
 - i) protecting the Aboriginal heritage items identified within the project footprint or items located outside the approved development footprint, including fencing off the Aboriginal heritage items prior to commencing construction;
 - ii) salvaging and relocating the Aboriginal heritage items located within the approved development footprint;
 - iii) salvaging, relocating or avoiding any Aboriginal heritage items located within the approved development footprint identified during test excavations of the site;
 - iv) include updated baseline mapping of the heritage items within and adjoining to the development disturbance area;
 - v) include updated mapping of all areas that have been and will be subject to monitoring, test excavations, and salvage excavations
 - vi) include conservation options for the mitigation and avoidance to impacts AHIMS registered sites situated within and outside the project footprint;
 - vii) prepare a methodology outlining when Registered Aboriginal Parties must be notified of changes to the Heritage Management Plan;
 - viii) include a procedure for assessing significance of Aboriginal Objects identified during the monitoring, test excavations, and salvage excavation and ensure that the management and mitigation measures are considered for all sites, and with special consideration for those of high significance;
 - ix) a strategy for the long-term management of any Aboriginal heritage items or material collected during the test excavation or salvage works;

- x) a contingency plan and reporting procedure if:
 - (1) an Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values) in accordance with any guidelines and standards prepared by Heritage NSW.
 - (2) the Unexpected Heritage Finds and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in relation to Aboriginal cultural heritage, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction.
 - (3) the Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction.
- xi) ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions; and
- xii) ongoing consultation with Aboriginal stakeholders during the implementation of the plan; and
- f) include the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s), prepared by a suitable qualified expert. The Aboriginal Cultural Heritage Excavation Report(s), must:
 - i) be prepared in accordance with the *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, 2011* and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, 2010*; and
 - ii) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).
 - iii) The RAPs must be given a minimum of 28 days to consider the report and provide comments before the report is finalised. The final report must be provided to the Planning Secretary, Heritage NSW, the relevant Councils, and the relevant Local Aboriginal Land Council, and the RAPs within 24 months of the completion of the Aboriginal archaeological collections and excavations (both test and salvage).
- g) where previously unidentified Aboriginal objects are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects must not recommence until Heritage NSW has been informed. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition and include registration in the Aboriginal Heritage Information Management System (AHIMS).

Attachment B

Aboriginal community consultation

B.1 Consultation log

Aboriginal Consultation Requirements for Proponents (DECCW 2010)*

ABORIGINAL COMMUNICATIONS LOG

Project Name: Cowal Gold Operations Open Cut Continuation Project

Project #: J190417

DATE	OUTGOING / INCOMING	ORGANISATION	INTERNAL CONTACT	EXTERNAL CONTACT	CONTACT TYPE	COMMENTS
4-Mar-22	Outgoing	Heritage NSW	Alan Williams	Nicole Davis	Email	Distributed request for information
4-Mar-22	Outgoing	NSW NTS Corp	Alan Williams		Email	Distributed request for information
4-Mar-22	Outgoing	Bland Shire Council	Alan Williams		Email	Distributed request for information
4-Mar-22	Outgoing	Riverina Local Land Services	Alan Williams		Email	Distributed request for information
4-Mar-22	Outgoing	Native Title Tribunal	Alan Williams		Email	Distributed request for information
4-Mar-22	Outgoing	West Wyalong LALC	Alan Williams		Email	Distributed request for information
7-Mar-22	Outgoing	Wiradjuri Condobolin Corporation	Alan Williams	Ally Coe	Email	Provided a courtesy e-mail advising that the consultation process is underway.
7-Mar-22	Outgoing	Native Title Tribunal	Alan Williams		Email	Distributed request for information
7-Mar-22	Outgoing	The Office of the Registrar, Aboriginal Land Rights Act 1983	Alan Williams		Email	Distributed request for information
8-Mar-22	Incoming	Native Title Tribunal	Alan Williams		Email	Returned the search indicating no active or finalised claims within the crown and mining easements encompassing the site.
9-Mar-22	Incoming	Heritage NSW	Alan Williams	Barry Gunther	Email	Provided a list of three organisations requiring consultation for the project.
9-Mar-22	Incoming	Riverina Local Land Services	Alan Williams	Fin Martin	Email	Provided a list of two organisations requiring consultation for the project.
17-Mar-22	Outgoing	West Wyalong LALC	Alan Williams		Email	Distributed a letter seeking their interest in being involved in the project.
17-Mar-22	Outgoing	Wiradjuri Condobolin Corporation Ltd	Alan Williams		Email	Distributed a letter seeking their interest in being involved in the project.
17-Mar-22	Outgoing	Mooka Traditional Owners Council	Alan Williams		Post	Distributed a letter seeking their interest in being involved in the project.
17-Mar-22	Outgoing	Wiradjuri Council of Elders	Alan Williams		Email	Distributed a letter seeking their interest in being involved in the project.
18-Mar-22	Outgoing	West Wyalong Advocate			Newspaper	Publication of a notification seeking interest in the project
30-Mar-22	Outgoing	West Wyalong LALC, Wiradjuri Condobolin Corporation, Wiradjuri Council of Elders, Mooka Aboriginal Corporation	Alan Williams		Email/Post	Provided a reminder of the notification period shortly expiring
31-Mar-22	Incoming	Wiradjuri Condobolin Corporation Ltd	Ally Coe	Alan Williams	Email	Registered an interest in the project
31-Mar-22	Incoming	West Wyalong LALC	Linton Howarth	Alan Williams	Email	Registered an interest in the project
5-Apr-22	Incoming	Wiradjuri Council of Elders	David Acherson	Alan Williams	Email	Registered an interest in the project
14-Apr-22	Outgoing	Heritage NSW	Alan Williams	Nicole Davis	Email	Advised of the registered Aboriginal parties in the project
14-Apr-22	Outgoing	West Wyalong LALC	Alan Williams	Linton Howarth	Email	Advised of the registered Aboriginal parties in the project
21-Apr-22	Outgoing	All RAPs	Alan Williams		Email	Distributed project information and assessment methodology and sought to arrange a meeting in early May
5-May-22	Outgoing	All RAPs	Alan Williams		Phone/email	Contacted the RAPs to organise a face-to-face meeting later in May to discuss the project. WCC and Wiradjuri Elders confirmed availability, messages were left with West Wyalong LALC
19-May-22	Outgoing	All RAPs	Alan Williams, Simon Coates	Richie and Eugene Coe, Linton Howarth, David Acherson	Meeting	Undertook an Aboriginal focus group meeting to discuss the project and proposed assessment methods. Details minutes are provided elsewhere in the ACHA.
23-May-22	Outgoing	All RAPs	Alan Williams		Email	Distributed minutes of the recent meeting for review, input and approval
27-Jul-22	Outgoing	All RAPs	Alan Williams		Email	Provided information on upcoming fieldwork activities.
3-Aug-22	Outgoing	All RAPs	Alan Williams		Email	Confirmed fieldwork for the coming weeks
3-Aug-22	Outgoing	All RAPs	Alan Williams		Email	Provided information on the upcoming cultural values mapping, and sought inputs in terms of community members to liaise with, etc.
8-19 August 2022	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Cameron Neal, Megan Sheppard Brennard		Field Survey	Undertook field survey investigations of the study area.
15-Sep-22	Outgoing	All RAPs	Alan Williams		Email	Provide a brief update on the coming activities and tasks associated with the ACHA in the coming weeks.
28-Sep-22	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Cameron Neal	Richie Coe, Linton Howarth	Phone	Rang to confirm availability to participate in test excavations from 10-21 October.
28-Sep-22	Outgoing	Heritage NSW	Cameron Neal		Email	Notified Heritage NSW of upcoming test excavations and provided methodology documents to date.
29-Sep-22	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Cameron Neal	Richie Coe, Linton Howarth		Provided a brief update on test excavation methodology, including planned test pit location and mapped extent of micro-environment zones.
4-Oct-22	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Cameron Neal	Richie Coe, Linton Howarth	Phone	Enquired with Richie and Linton whether their respective organisations were able to provide extra site officers during the test excavations. WWLALC was not able to do so due to existing fieldwork or other commitments elsewhere. Richie Coe advised he would follow up on the potential availability of Jared and/or Eugene Coe.
4-Oct-22	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Email	Re-sent site induction documents, proposed test pit locations and methodology.
6-Oct-22	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Phone	Discussed Evolution Mine induction requirements with Linton.
13-Oct-22	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Email, phone	Re-sent site access form and proposed test pit locations, and provided further clarification on Evolution induction requirements.
13-Oct-22	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Richie Coe	Phone	Rang to confirm availability of Jared and/or Eugene Coe for participation in test excavations. Richie advised neither were available due to previous commitments with other work at CGO.

Aboriginal Consultation Requirements for Proponents (DECCW 2010)*

ABORIGINAL COMMUNICATIONS LOG

Project Name: Cowal Gold Operations Open Cut Continuation Project

Project #: J190417

DATE	OUTGOING / INCOMING	ORGANISATION	INTERNAL CONTACT	EXTERNAL CONTACT	CONTACT TYPE	COMMENTS
10-13 October 2022	Outgoing	West Wyalong LALC; Wiradjuri Condoblin Corporation	Cameron Neal		Fieldwork	Undertook test excavations, but significantly hampered by weather and ultimately postponed.
21-Oct-22	Outgoing	West Wyalong LALC; Wiradjuri Condoblin Corporation	Cameron Neal	Richie Coe, Linton Howarth	In person, phone	Discussed with Richie in person and rang Linton to advise that fieldwork had been postponed due to inclement weather.
21-Oct-22	Outgoing	All RAPs	Alan Williams		Phone	Rang all RAPs to discuss the upcoming cultural values mapping and seeing availability and people that we should talk to as part of the study.
29-Oct-22	Outgoing	All RAPs	Alan Williams		Phone	Rang all RAPs to discuss the upcoming cultural values mapping and seeing availability and people that we should talk to as part of the study.
1-Nov-22	Outgoing	All RAPs	Alan Williams		Email	Provided Phil's details and advised he was coming next week to undertake the cultural values mapping
5-9 Dec 22	Outgoing	West Wyalong LALC, Wiradjuri Condobolin Corporation	Alan Williams		Fieldwork	Cultural values mapping undertaken by Phil Clarke and multiple representatives of the local Aboriginal community
12-Dec-22	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Email/Phone	Discussed the upcoming test excavation in early January, and WWLALC participation
14-Dec-22	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Ally Coe	Email/Phone	Discussed the upcoming test excavation in early January, and WWLALC participation
5-Jan-23	Outgoing	West Wyalong LALC; Wiradjuri Condoblin Corporation	Alan Williams		SMS	Re-confirmed the excavations were still planned for next week, and to contact AW if any issues with attendance.
9-Jan-23	Outgoing	West Wyalong LALC	Alan Williams	Linton Howarth	Email/Phone	Contactedd WWLALC following non-attendance at the test excavations. LH indicated the he would struggle to attend the first week, but would be present for much of the second week, and was ok for the work to proceed in their absence
9-Jan-23	Outgoing	Wiradjuri Condobolin Corporation	Alan Williams	Ally Coe, Kristy	Email/Phone	Contacted WCC following non-attendance at the test excavations. Kristy advised that she would follow up with Richard Coe who was proposed for participation, and get back to AW.
9-20 January 2023	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	OzArk	-	Fieldwork	Undertook a second phase of archaeological test excavation across the Project area.
17-Feb-23	Outgoing	Wiradjuri Condobolin Corporation	Taylor Reid	Richie Coe	Phone	Contacted WCC requesting availability for Mon 26 Feb to escort and monitor TR/AW on-site to collect OSL samples from test excavation pits.
26-Feb-23	Outgoing	Wiradjuri Condobolin Corporation	Taylor Reid, Alan Williams, Richie Coe	-	Fieldwork	Site visit to collect OSL samples from several test excavation pits.
20-Mar-23	Outgoing	All RAPs	Alan Williams		Email	Distributed draft report for review and comment to the participants. Also offered to meet with them to discuss and work through the report.
20-Mar-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Alan Williams		Email	Distributed the cultural values mapping study for review, comments and redaction to the participants of the study.
4-Apr-23		All RAPs	Cameron Neal		Email	Followed up with RAPs to remind them of report finalisation date and to offer a discussion with EMM about the report, if they wish to do so.
17-Apr-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Phone	Rang Linton to confirm whether he had any feedback on the ACHA and cultural values report as the RAP review period is coming to a close. He stated that he did have some minor comments but he was away from his office and he would send his feedback early tomorrow.
17-Apr-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Ally Coe	Phone, Email	Rang Ally to confirm whether WCC had any feedback on the ACHA and cultural values report as the RAP review period is coming to a close. No answer on phone, followed up with an email.
17-Apr-23	Outgoing	Wiradjuri Council of Elders	Cameron Neal	David Acheson	Phone	Rand David to confirm whether he had any feedback on the ACHA and cultural values report as the RAP review period is coming to a close. David is happy with both reports and did not provide further feedback.
18-Apr-23	Incoming	West Wyalong LALC	Linton Howarth	Cameron Neal	Email	Linton stated he is happy with the ACHA but noted he is not a Wiradjuri man and would like that reflected in the report. Linton also shared several suggestions/changes for the cultural values report, mainly spelling changes and notes on linguistic and oral history information. CN thanked Linton for sharing his knowledge and confirmed each document would be updated accordingly.
28-Sep-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation; Wiradjuri Council of Elders	Cameron Neal	Various	Email	Distributed proposed hearth excavation methodology and requested feedback by 26 October.
12-Oct-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation	Cameron Neal	Various	Email	Enquired regarding availability of RAPs to participate in upcoming hearth excavations.
13-Oct-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Phone	Rang Linton to follow up on email dated 12 Oct 2023. Linton indicated he should be available and that he would follow up soon.
16-Oct-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Office	Phone	Rang to enquire about the availability of WCC site officers to participate in upcoming fieldwork. No response, left a voicemail message.
17-Oct-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Office	Phone	Rang to follow up on phone call from 16/10/23. Danielle from WCC office informed CN that Richard and Eugene Coe were available to participate.

Aboriginal Consultation Requirements for Proponents (DECCW 2010)*

ABORIGINAL COMMUNICATIONS LOG

Project Name: Cowal Gold Operations Open Cut Continuation Project

Project #: J190417

DATE	OUTGOING / INCOMING	ORGANISATION	INTERNAL CONTACT	EXTERNAL CONTACT	CONTACT TYPE	COMMENTS
23-Oct-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Office	Email	Discussed induction requirements. WCC office would set up Eugene with induction materials as he is no longer employed by Evolution at CGO. Richard not required to complete inductions as he is still actively employed by Evolution at CGO. Asked if Richard is happy to act as escort in a vehicle provided by Evolution, as per Evolution advice.
23-Oct-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Email	Passed on advice from Evolution that Linton is required to complete a medical and induction prior to arriving on site.
23-Oct-23	Incoming	West Wyalong LALC	Linton Howarth	Cameron Neal	Email	Linton advised he is free on 1 and 2 November, as well as the following week, to undertake the induction.
30-Nov-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Email	Apologised for delayed response due to fieldwork during the preceeding week. Provided Linton with induction instructions.
30-Nov-23	Incoming	West Wyalong LALC	Linton Howarth	Cameron Neal	Email	Linton asked for access dates to include in induction and CN advised dates are 6-11 November.
1-Nov-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Office	Email	Asked to confirm availability of Richard and Eugene, and that Eugene was able to complete his inductions.
3-Nov-23	Incoming	Wiradjuri Condobolin Corporation	Office	Cameron Neal	Email	Danielle from WCC office advised that Richard and Eugene are still available. Advised Eugene completed general induction and asked whether more modules were required. CN advised that all modules listed on Eugene's INX induction portal need to be completed.
3-Nov-23	Outgoing	Wiradjuri Condobolin Corporation, West Wyalong LALC	Cameron Neal	Various	Email	Provided RAPs with final fieldwork logistics and information.
7-Nov-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Phone	Asked Linton if he was able to complete his induction and whether he is still able to participate in fieldwork during the week. Linton advised he is unable to participate due to staffing issues.
14-Nov-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation; Wiradjuri Council of Elders	Cameron Neal	Various	Email	Proposed AFG date of 28 November, likely in West Wyalong or Condobolin. Advised this timing is flexible and another day W/C 27 Nov can be arranged if more suitable.
14-Nov-23	Incoming	West Wyalong LALC	Linton Howarth	Cameron Neal	Email	Advised 28 November is suitable for AFG.
14-Nov-23	Incoming	Wiradjuri Council of Elders	Paul Brydon	Cameron Neal	Email	Paul advised he is unavailable for the week but is happy to be an apology. Confirmed EMM would keep him updated of meeting outcomes.
21-Nov-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Reception, Ally Coe	Email	Followed up with WCC to enquire about suitability of suggested date for AFG.
24-Nov-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation; Wiradjuri Council of Elders	Cameron Neal	Various	Email	Advised RAPs that AFG has been postponed due to logistical considerations. Suggested new date of 5 December.
27-Nov-23	Outgoing	West Wyalong LALC	Cameron Neal	Linton Howarth	Phone	Rang to discuss date of AFG. No answer, left a voicemail message.
27-Nov-23	Outgoing	Wiradjuri Condobolin Corporation	Cameron Neal	Office	Phone	Rang to discuss date of AFG. Advised by WCC office that Ally is essentially uncontactable currently due to meetings, and the message will be passed onto him.
27-Nov-23	Incoming	Wiradjuri Council of Elders	Paul Brydon	Cameron Neal	Email	Paul advised he is unavailable for the week but is happy to be an apology. Confirmed EMM would keep him updated of meeting outcomes.
29-Nov-23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation; Wiradjuri Council of Elders	Cameron Neal	Various	Email	Emailed RAPs to advise that a date for the AFG suitable for all parties has not been secured, and EMM is therefore proposing a final date of 19 December. Due to project deadlines this is the latest week the AFG can be held, and EMM will not be rescheduling further.
12/Dec/23	Outgoing	West Wyalong LALC; Wiradjuri Condobolin Corporation; Wiradjuri Council of Elders	Cameron Neal	Various	Email	Emailed to follow up with RAPs regarding the proposed date of 19 December for the AFG meeting.
17/Jan/23	Outgoing	All RAPs	Alan Williams	-	Email	Distributed the addendum report, and sought interest and availability for a meeting to discuss.

Attachment C

Existing impact permits and approvals

C.1 Consent 1467



CONSENT: 1467
(HO use only)

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90**

CONSENT

**CONSENT TO CARRY OUT THE DESTRUCTION OF AN
ABORIGINAL OBJECT/PLACE**

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute Aboriginal objects within the meaning of Sections 5(1) and 90 of the National Parks and Wildlife Act 1974 ("Aboriginal objects"), and WHEREAS application has been made by:

Barrick Australia Limited
10th Floor, 2 Mill Street,
Perth, WA, 6000

Postal Address:
Locked Bag 12
Cloisters Square
Perth WA 6850

FOR CONSENT to destroy those objects identified in Schedule A and situated in the lands described in Schedule B of the proposed new open cut gold mine at Lake Cowal.

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Special and Specific Terms and Conditions pertaining to Consents to Destroy Aboriginal objects all of which conditions are detailed in the attached pages.

DATED at *Draft* this *27* day of *November* 2002

Tony Kern

for Director-General of
National Parks and Wildlife



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SCHEDULE A:

All Aboriginal objects situated within the boundaries of the lands described in schedule B, unless excluded in the Special and Specific conditions.

SCHEDULE B:

- The area of Mining Lease Application 45 under the *Mining Act 1992 (NSW)* lodged by Barrick Australia Limited ("MLA 45") (as shown on the map in Schedule C to this Consent);
- The area of the following proposed bores (as shown on the map in Schedule D of this Consent) as follows:
 - the proposed bore within the road reserve to the west of Portion 69, Parish of Gibrigal, County of Gipps;
 - the proposed bore within Travelling Stock Reserve 84719 to the south of Portion 19, Parish of Gibrigal, County of Gipps;
 - the proposed bore within the road reserve to the north of Portion 105, Parish of Cadalgulee, County of Gipps; and
 - the proposed bore within the road reserve to the west of Portion 104, Parish of Cadalgulee, County of Gipps.
- The area of the proposed water pipeline (and its 40 metre wide corridor) which runs from the borefield to MLA45 within the following land (as shown on the map in Schedule C, D and E of this Consent):
 - the road reserve that runs to the west of Portions 69 and 19, Parish of Gibrigal, County of Gipps;
 - the road reserve (part of Burcher Road) and part of Travelling Stock Reserve 84719 that runs to the south of Portion 19, Parish of Gibrigal, County of Gipps;
 - the road reserve that runs to the east of Portion 66, Parish of Cadalgulee, County of Gipps;
 - the road reserve that runs to the north of Portion 105, Parish of Cadalgulee, County of Gipps, until it reaches the proposed bore;
 - the road reserve (part of Webster's Road) that runs in a south westerly direction adjacent to Portions 104 and 102, Parish of Cadalgulee, County of Gipps until it reaches the north west corner of Portion 93, Parish of Cadalgulee, County of Gipps;
 - the road reserve that runs to the west of Portion 93, Parish of Cadalgulee, County of Gipps for approximately 1 kilometre;
 - Lots 44, 45 and 46 on DP42918 - in an east/west direction parallel to, and approximately 175 metres from, the northern boundary of Lots 44, 45 and 46, for approximately 2 kilometres; and
 - Lots 46 and 47 on DP 42918 and Lots 18, 23 and 24 on DP753097 - in a south westerly direction for approximately 7 kilometres until it reaches MLA 45.

SPECIAL and SPECIFIC CONDITIONS

1. The Consent does not cover human skeletal remains. Should human remains be discovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. The Consent covers only those objects described in the instrument of Consent and in any Schedules thereto.
3. This Consent operates in respect of the land covered by MLA 45 only for the period that the following approvals remain in force:
 - Exploration Licence 2864 and Exploration Licence 4510 or any renewals of the same; or
 - the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 or a modification of the same or any new development consent which authorises the Cowal Gold Mine.



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4. This Consent operates as follows:
- 4.1 Subject to paragraph 4.3, 4.4 and 4.5 below, this Consent does not operate in relation to a specific area until a holder of Permit # 1468 has certified in writing, in accordance with Special Condition 16 of that permit, that the archaeological works authorised by Permit # 1468 for that specific area have been completed;
- 4.2 Subject to the Special and Specific Conditions of this Instrument of Consent, once that certification has been given in relation to a specific area, this Consent authorises the destruction of Aboriginal objects in the area specified in the certification by Barrick Australia Limited, its employees and contractors and the employees and contractors of its parent company Barrick Gold of Australia Limited in the course of their lawful activities in that area. In particular:
- Where Permit # 1468 authorises the collection of a representative sample of Aboriginal objects from the surface of land, this Consent authorises the destruction of surface and sub-surface Aboriginal objects that remain after the representative sample (as determined by the permit holder and/or his instructed delegates) has been collected;
 - where Permit # 1468 authorises the collection of a representative sample of Aboriginal objects after excavation, this Consent authorises the destruction of Aboriginal objects that remain after excavated Aboriginal objects identified by the permit holder and/or his instructed delegates have been collected;
 - where Special Condition 9 of Permit # 1468 authorises the identification of concentrations of Aboriginal objects on the back plain, this Consent authorises the destruction of Aboriginal objects on the back plain after the permit holder and/or his instructed delegates have undertaken the measuring and recording activities authorised by Special Condition 9.
- 4.3 If Permit # 1468 does not authorise any archaeological works within a specific area, this Consent authorises the destruction of all Aboriginal objects within that specific area.
- 4.4 This Consent may operate within the footprint of the proposed open cut pit and site P1 (NPWS#43-4-7) before the test pit excavations and extended excavations authorised by Special Condition 3 of Permit # 1468 have been carried out, provided that a permit holder has certified pursuant to Special Condition 16 of Permit # 1468 that the salvage and collection activities in relation to surface Aboriginal objects in that area have been completed.
- 4.5 Nothing in this Consent or Permit # 1468 should be interpreted to mean that all surface and/or sub-surface Aboriginal objects must be collected from any specific area before a holder of Permit # 1468 may certify that the collection activities for that specific area have been completed and this Consent may operate in relation to the relevant area.
5. This consent shall lapse when the Minister for Mineral Resources acknowledges that satisfactory rehabilitation work has been completed under a mining lease granted in respect of MLA 45 or eighteen (18) years after the completion of construction works, which ever occurs first. For the purpose of this condition, construction works are the earthworks, engineering and building works which are required to be completed before mining operations commence.
6. Should any Aboriginal objects listed in Schedule 'A' above remain in existence/in situ at the date of the lapse of this Consent, any destruction of the Aboriginal objects will be unlawful unless authorised by a new consent granted under section 90 of the *National Parks and Wildlife Act 1974*.
7. During the term of this Consent, Barrick Australia Limited shall furnish the National Parks and Wildlife Service with a report on the activities carried out under the Consent, if required by the Director General.
8. A copy of this consent and the Permit # 1468 shall be available for inspection as per General Condition 6 (see below) at the Cowal Gold Project Office at all times during the period of the consent.

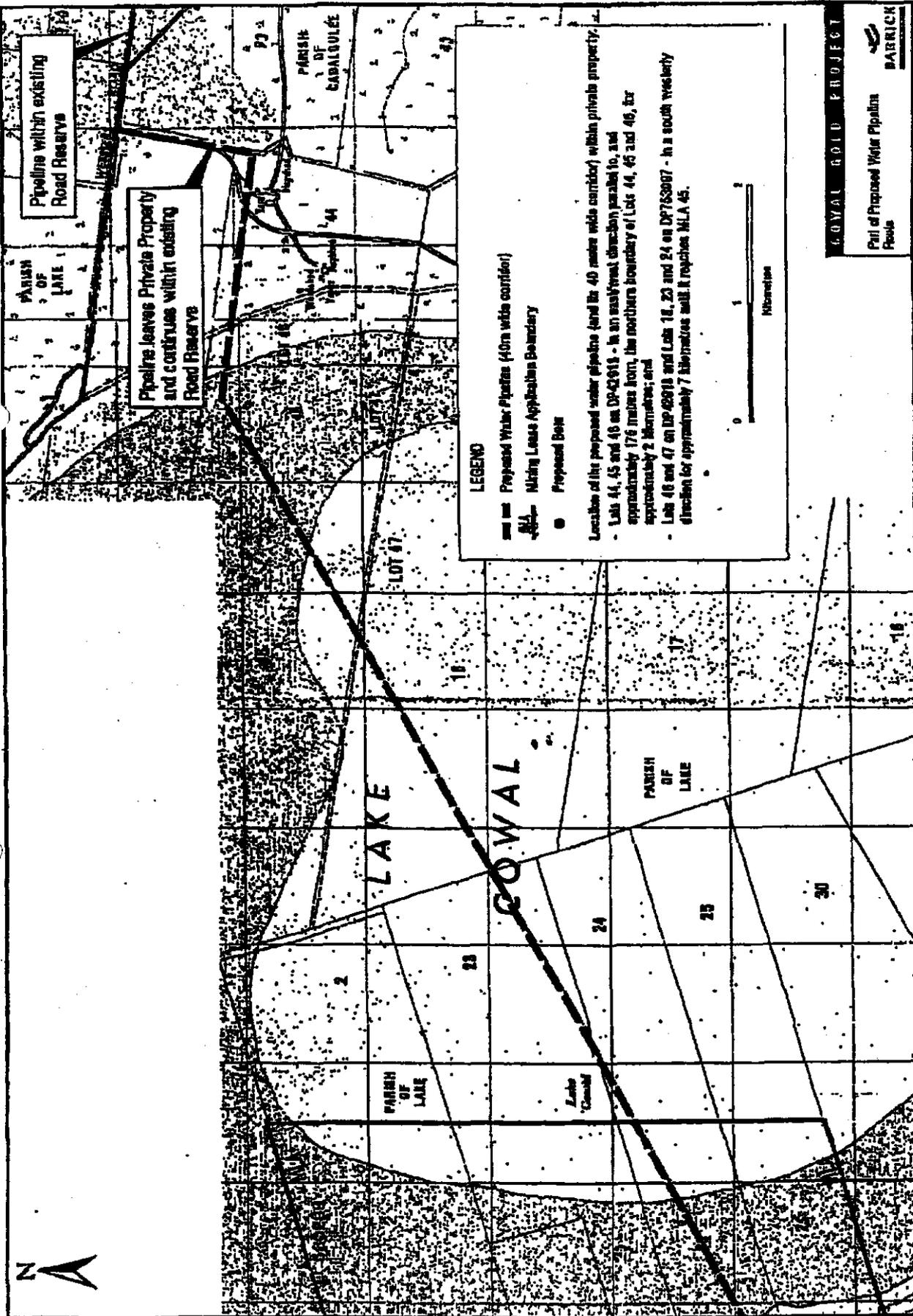


9. Offset Conditions

- 9.1 The obligations contained in this condition are subject to the following:
- subject to subparagraph (b) below, the details and scope of each of the matters referred to in this condition are to be agreed in writing with the registered native title claimants for the area of MLA45 and the West Wyalong Local Aboriginal Land Council (hereafter, the "Aboriginal Community"), unless such agreement is not reached before the commencement of construction, when they will be determined by the Director-General;
 - if the Aboriginal Community advises Barrick Australia Limited and the Director-General in writing that they do not want Barrick Australia Limited to fund one of the obligations referred to in paragraphs 9.2 to 9.5, the obligation contained in the relevant condition immediately ceases;
 - the total amount of funds dedicated to complying with the obligations referred to in paragraphs 9.2 to 9.5 need not exceed \$250,000; and
 - the deadline for completion of any of the obligations referred to in paragraphs 9.2 to 9.5 may be extended by the Director-General if he considers that it is reasonable in the circumstances to do so.
- 9.2 Barrick Australia Limited must fund the design and construction of a keeping place for Aboriginal objects collected pursuant to Permit # 1468, at a location to be agreed with the Aboriginal Community. The keeping place must be constructed within 12 months of the commencement of mining operations.
- 9.3 Barrick Australia Limited must fund a regional cultural heritage study and the associated research and publication of a booklet about Wiradjuri cultural heritage and associations with land. The study and booklet must be centred on Lake Cowal and the area between Lake Cowal and the Lachlan River. The scope and methodology of the study shall be agreed with the Director-General. The regional study shall identify areas of cultural significance to Aboriginal people including areas within Barrick Australia Limited's land holdings which may be considered for future conservation. The study must be completed and the booklet published within 3 years of the commencement of construction, subject to any requests for extensions of time by the Aboriginal Community to allow additional study to be carried out. 1000 copies of the booklet must be produced. The booklet must be distributed to the Wiradjuri Council of Elders, the West Wyalong Local Aboriginal Land Council, the Condobolin Local Aboriginal Land Council, the Mooka Traditional Owners Council, the Wiradjuri Regional Aboriginal Land Council, the New South Wales Aboriginal Land Council, NPWS, the Australian Museum, NSW Heritage Office, local public libraries, local councils, local schools, the Mitchell Library and other bodies nominated by the Aboriginal Community.
- 9.4 Barrick Australia Limited must fund the creation of a transportable display consisting of information and material on the Wiradjuri people in the context of Lake Cowal and the region generally, to be available for educational purposes at schools, public libraries, council offices, public buildings and other places nominated by the Aboriginal Community. The display must be completed within 6 months of publication of the booklet referred to in paragraph 9.3 above.
- 9.5 Barrick Australia Limited must fund a survey to document the whereabouts of Aboriginal objects taken from Wiradjuri land and held in public and private collections around Australia, and support (by financial and other means) any submission by the Aboriginal Community for the return of that material to the Wiradjuri people. The survey must be completed within 12 months from the commencement of construction.
10. This Consent authorises any destruction of Aboriginal objects which may occur at Sites B, C, D, E and H as a result of vehicular movements following completion of the conservation works required by special condition 8 of Permit # 1468 at any such site.
11. Whenever the word "destroy" is used in this consent it includes destroy, deface, damage or desecrate. Whenever the word "destruction" is used in this consent it includes destruction, defacement, damage or desecration.



Schedule E



Pipeline within existing Road Reserve

Pipeline leaves Private Property and continues within existing Road Reserve

LEGEND

Proposed Water Pipelines (40m wide corridor)

Mining Lease Application Boundary

Proposed Dam

Locations of the proposed water pipelines (and its 40 metre wide corridor) within private property:

- Lots 44, 45 and 46 on DP42919 - in an east/west direction parallel to, and approximately 176 metres from, the northern boundary of Lots 44, 45 and 46, for approximately 2 kilometres; and
- Lots 46 and 47 on DP 69018 and Lots 18, 23 and 24 on DP783087 - in a south westerly direction for approximately 7 kilometres with it reaches M.L.A. 45.



COWAL GOLD PROJECT

Part of Proposed Water Pipelines

BARRICK

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 9 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a



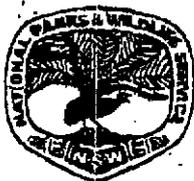
summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.

14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.



112069981

C.2 Permit 1468



PERMIT #: 1468
(HO use only)

NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 57 (1)

PERMIT (AMENDED)

PERMIT TO CARRY OUT PRELIMINARY RESEARCH, EXCAVATE, SALVAGE and COLLECT

PERMIT ISSUED TO:

- | | | | |
|---|--|---|--|
| 1 | Dr Colin Pardoe
Bio-anthropology and Archaeology
3 Rose Street
Gilberton
Sth Australia, 5081 | 2 | Dr Johan Kamminga
National Heritage Consultants
34 Simpson Street
Watson
ACT, 2602 |
|---|--|---|--|

Postal Address:
As Above

AUTHORITY is hereby given for the person/s named above to:

- disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object within the meaning of that term in section 5(1) of the *National Parks and Wildlife Act 1974 (NSW)* ("Aboriginal object"); and
- to disturb or move on any land an Aboriginal object that is the property of the Crown, in the course of undertaking research, excavation, salvage, collection and storage/curation of Aboriginal objects as described in the Research Design and Study Plan for the Barrick Australia Limited Cowal Gold Project which was Attachment 5 to the application for this permit dated 15 August 2002 (the "Application"), as modified by the special and specific conditions contained in this permit.

AREA COVERED by Permit for purpose as named above: as described in Schedule B of Consent # 1467 issued in conjunction with this permit.

TERM OF PERMIT: As specified in Specific Condition 5 of Consent #1467 issued in conjunction with this permit.

TERMS AND CONDITIONS OF THIS PERMIT

This permit is issued subject to the General Terms and Conditions covering archaeological permits and consents, as well as those Specific and Special Terms and Conditions pertaining to each type of permit as determined by the Director-General, which may appear hereunder: See attached page.

DATED at *Burrumbidgee* this *27th* day of *October* 2003

Director-General of the Department of Environment and Conservation

Terry Keon A/Director Control
27-10-03

SPECIAL and SPECIFIC CONDITIONS

1. This permit does not cover human skeletal remains. Should human remains be uncovered all work at the particular location shall cease and the Department of Environment and Conservation, Cultural Heritage Branch, archaeologist at Dubbo shall be notified immediately.
2. All work shall be carried out in accordance with the Research Design and Study Plan that is Attachment 5 to the Application (the "Research Design and Study Plan") as modified by the Special and Specific Conditions applying to the permit.
3. This permit allows for test pit investigations and extended excavation (if warranted) of three alluvial fans within the footprint of the proposed open cut pit and site P1 (NPWS# 43-4-7). It further allows for the salvage, collection and storage/curation of a representative sample of Aboriginal objects located during these works in accordance with Special Condition 12. These works must be carried out in the following manner:
 - Excavation need not proceed beyond the test pit investigation stage in the absence of any cultural material.
 - All test pits and excavations shall be conducted in accordance with the Research Design and Study Plan except that test pits for the alluvial fans on the open cut footprint shall be placed as follows. A 10 metre (or less) x 1 metre trench shall be placed on the fan on any axis as determined by the permit holders and/or their instructed delegates who must be qualified archaeologists. This shall be intersected by a second trench of the same dimensions perpendicular to the first such that the trenches will define and fall within the boundaries of an extended 10 m x 10 m excavation should cultural material be encountered.
4. The scarred tree known as P2 (NPWS # 43-4-8) shall be treated as per the Research Design and Study Plan with the following qualifications:
 - The tree shall be cut a minimum of 40-50 cm above and below the scar (where possible). Where this is not possible cuts will be made as far away from the scar edge as practicable.
 - The cut surfaces of the scarred sections shall be bored with a number of holes which shall be filled with an insecticide to provide termite resistance. The holes should then be plugged and the surfaces sealed to exclude moisture.
 - The tree shall be temporarily stored in the temporary keeping place (as approved for Section 87 permit no 1361) in a manner that will provide freedom from incidental damage yet allow for continuous air circulation. That is, the tree shall not be wrapped or constrained in any manner that prevents the timber from breathing or causes it to become wet such that it may be subject to undue cracking or fungal attack.
 - The final location of the tree shall be determined in consultation with the Wiradjuri Condobolin Corporation. The final location of the tree must satisfy the following. A concrete slab or similar shall be laid and the super structure of the shelter be prefabricated and ready for immediate installation before moving the object to the selected location. This is to avoid any undue exposure to the weather that may negatively impact upon the integrity of the object. Said shelter shall be constructed in a manner that provides security but visual access only to the object.
 - Interpretive signage shall be provided by Barrick Australia Limited to the shelter briefly explaining the traditional function of the object.
5. This permit allows for the excavation of site LC 1 (NPWS# 43-3-21). It further allows for the salvage, collection and storage/curation of a representative sample of Aboriginal objects located during these works in accordance with Special Condition 12. The excavation shall be undertaken in accordance with the Research Design and Study Plan by a specialist archaeologist nominated by the registered native title claimants for the area of MLA 45 as specified in the Research Design and Study Plan. If the registered native title claimants for the area of MLA 45 advise the permit holders in writing that they do not wish to nominate a specialist archaeologist to undertake these works, the excavation works shall be undertaken by the permit holder and/or his instructed delegates who must be qualified archaeologists. The excavations will however be overseen by a holder of this

permit and the nominated archaeologist must comply with any directions from the permit holders.

6. Salvage works at sites LC1, LC2, LC3, LC4, PL, A, F, G, I, J, K, L, M and N, defined in Attachment S of the Application and situated on the land described in Schedule B of Consent # 1467 shall be completed in the following manner:
 - A permit holder and/or his instructed delegates shall inspect the land in these site locations and identify surface Aboriginal objects. The Wiradjuri Condobolin Corporation, West Wyalong Local Aboriginal Land Council and Mooka Traditional Owners Council (hereafter the "Aboriginal community") shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in recording and collection works.
 - A representative sample of Aboriginal objects from each site shall be taken. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with Special Condition 13 until they are dealt with in accordance with the procedures outlined in Special Condition 12.
 - The collected Aboriginal objects shall be replaced in a location as close as possible to their original location at a time when the works within the specific area do not pose a future threat to them. Replacement will be supervised by a permit holder and/or his instructed delegates. The Aboriginal community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in replacement works.
 - Remaining Aboriginal objects shall be collected with the soil during soil stripping operations and temporarily stored in soil stockpiles before being replaced during rehabilitation activities.
 - A Cultural Heritage Officer retained by Barrick shall undertake routine monitoring following replacement as a threat abatement measure. Should this officer identify a likely threat, the officer shall be empowered to halt proceedings. Barrick Australia Limited shall immediately upon notification, investigate the matter, and should the threat be verified, take necessary action to remove or mitigate the threat.

7. Salvage works at sites LCB9 and LCB14 defined in Attachment S of the Application and situated on land described in Schedule B of Consent # 1467 shall be completed in the following manner:
 - A permit holder and/or his instructed delegates shall inspect the land in these site locations and identify surface Aboriginal objects. The Aboriginal community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in recording and collection works.
 - A representative sample of surface Aboriginal objects from each of these sites shall be collected. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with Special Condition 13 until they are dealt with in accordance with the procedures described in Special Condition 12.
 - a permit holder and/or his instructed delegates who must be qualified archaeologists shall excavate test pits of the width of the pipeline trench x 50 cm long x 50 cm deep, in 5 cm spits, at 5 metre intervals along that part of the proposed pipeline trench that is within Sites LCB9 and LCB14 to determine the existence of sub-surface cultural materials;
 - if sub-surface cultural materials are identified, an extended excavation shall be carried out along the length of the proposed pipeline trench within the relevant site to a maximum depth of 1 metre;
 - a representative sample of Aboriginal objects located during the test pit excavations and extended excavations (if any) shall be collected. Their position shall be recorded by a GPS and they shall be bagged and temporarily stored in accordance with the procedures described in Special Condition 12.
 - During the pipe laying activities, the trench and spoil shall be monitored for the incidence of sub-surface Aboriginal objects during removal. A representative sample of any Aboriginal objects so located shall be collected and treated in the manner set out above.
 - At the completion of pipe laying activities, the Aboriginal objects shall be replaced as near as practicable to their original location. The Aboriginal community shall be notified

of the programme and a representative /s shall be invited to observe and where appropriate participate in replacement works.

8. The following five sites defined in Attachment S of the Application and situated on the land described in Schedule B of Consent # 1467 shall have conservation works effected as follows:
 - Sites B, C, E and H shall be covered by a geo-textile blanket extending a minimum of two metres beyond all visible artefacts defining their boundaries. A layer of loam or sand, a minimum of 200 mm thick, shall be hand spread over this blanket, working progressively over fill as it is placed. That is, traffic directly on the blanket shall be avoided. A secondary geo-textile blanket shall cover the loam and be pegged down at the edges.
 - Topsoil stockpiles may be placed over these protected sites. If so, removal of top soil from the stockpiles for rehabilitation works shall stop when the first (top layer) of geo-textile is encountered. This blanket shall then be removed to facilitate hand seedfying of the loam for reconstitution and subsequent revegetation in accordance with the mine rehabilitation plan.
 - Site D lies on or very close to an existing drainage contour. A permit holder shall in consultation with design engineering staff determine if the contour can be shifted to avoid the site. The maximum area of the site that can reasonably be conserved shall be protected in the manner described for B, C, E and H.
 - After the completion of the above conservation works, the protected areas shall be sign-posted.
 - These measures shall be undertaken within 90 days of the period commencing 19th May 2003.
 - However, if the area of any of these sites is proposed to be utilised by Barrick Australia Limited for its activities, other than vehicular passage, within the area of MLA 45, the following shall occur:
 - A permit holder shall give 21 days written notice to the Director-General of their intention to undertake the archaeological works referred to below, together with evidence of Barrick Australia Limited's consultation with the Aboriginal community about the proposed archaeological works and any compensatory measures proposed to be undertaken by Barrick Australia Limited; and
 - A permit holder and/or his instructed delegates shall carry out inspection, salvage and collection works at each site in accordance with the procedure contained in Special Condition 6.
9. Additional works on the Back Plain (as that term is described in the Research Design and Study Plan) - Areas outside of the sites on the Back Plain that are identified in the Application shall be inspected to identify, where possible, other concentrations of surface Aboriginal objects within the Permit Area. The Aboriginal Community shall be notified of the programme and a representative/s shall be invited to observe and where appropriate participate in inspection and recording works.
 - In relation to 15 concentrations of Aboriginal objects, artefact densities in those concentrations shall be measured across areas of approximately 10m x 10 m. Their position shall be recorded by a GPS and the concentrations of Aboriginal objects shall be individually measured and described to provide supplementary detail for subsequent spatial and technological analysis.
 - The Aboriginal objects shall be left where found to be collected with the soil during soil stripping operations and temporarily stored in soil stockpiles before being replaced during rehabilitation activities.
10. Additional works generally - where the Research Design and Study Plan provides for the inspection of land and the collection of Aboriginal objects prior to construction earthworks other than as referred to in Special Conditions 6, 7, 8 and 9, such inspection and collection shall be carried out in accordance with the procedure contained in Special Condition 6.
11. All areas where soil stripping occurs shall be further inspected following this operation in the event that datable materials might be revealed. Samples shall be obtained by a permit

holder and/or his instructed delegates and be submitted for chronological analysis. Costs for such analysis shall be borne by Barrick Australia Limited.

12. All Aboriginal objects subject to salvage and collection shall be dealt with in accordance with this special condition. Sufficient data will be taken from each Aboriginal object, including material type and size characteristics, to enable a technological analysis to be undertaken for report purposes provided always that numbers are large enough for meaningful analysis. This information shall form the basis of a master inventory which must be maintained at all times. After collected items have been closely examined and classified by a permit holder and/or his instructed delegates who must be qualified archaeologists, each collected item that has been classified as an Aboriginal object shall be separately bagged and labelled duplicating the above information and placed in a clearly labelled box detailing the specific area of collection. They shall be dealt with in accordance with Special Condition 13.
13. All collected Aboriginal objects shall be retained in the existing temporary Keeping Place within the Barrick Cowal Gold Project Compound. Keys shall be held by the Cowal Gold Project Site Coordinator and access shall be limited to Aboriginal Community representatives, the permit holders and/or their instructed delegates, the Land, Environment and Wiradjuri Heritage Officer and for audit purposes, Department of Environment and Conservation, Cultural Heritage Branch staff. Note that these are temporary facilities and a more permanent on site Keeping Place may be required in the future for Aboriginal objects removed from the mine footprint area in the event that this area remains a water filled void.
14. Unless otherwise directed by the special conditions, any Aboriginal objects recovered being the property of the Crown shall be deposited at the Australian Museum, in accordance with the adopted procedures for the deposition of objects as prescribed by The Australian Museum, at or before a period of 2 years from the date of expiration of the permit or any renewal whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, the Australian Museum.
15. The holder/s of the permit shall furnish the Department of Environment and Conservation, Cultural Heritage Branch with a final report detailing the results of investigations within 9 months of the completion of the excavations and field investigations. Said report will be expected to address matters relating to the spatial distribution of sites, technological and chronological considerations, and inferences of land use histories related to palaeo- environments. A separate plain English report shall also be produced for the Aboriginal community within the same time frame.
16. When the archaeological works authorised by this permit for a particular area have been completed, a permit holder will certify that fact in writing to Barrick Australia Limited. Such certification may be given before the examination and classification of collected items pursuant to Special Condition 12. A copy of that certification shall be provided to the Director-General.
17. Where the Research Design and Study Plan refers to the Land, Environment and Wiradjuri Heritage Officer, it shall be read as referring to a cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council).
18. Where the Research design and Study Plan provides in relation to each zone that "works will stop in the relevant location when Barrick become aware of Aboriginal objects not previously identified during earthworks, construction or operation of the project, individual Aboriginal objects will be collected. Necessary permits or consents already in place shall be complied with prior to resumption of work in the relevant area" the following shall occur instead:
 - A Cultural Heritage Officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council) shall monitor construction earthworks;

- If an Aboriginal object (other than human skeletal remains) of a type that has not been previously identified during the archaeological works referred to in the Research Design and Study Plans and Special Conditions 3-10 of this permit, is identified, the Aboriginal object shall be collected and its position recorded by GPS. The collected Aboriginal object shall then be bagged and temporarily stored in accordance with Special condition 13 until it is dealt with in accordance with Special Condition 12.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the Department of Environment and Conservation against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the Department of Environment and Conservation shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the Department of Environment and Conservation and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 2 (specific Conditions) above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the Department of Environment and Conservation, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.

12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The Department of Environment and Conservation and The Australian Museum may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the Department of Environment and Conservation at the termination of each field work period.
15. The holder of the Permit or Consent shall notify the Dubbo office of the Department of Environment and Conservation at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

C.3 Consent 1680



CONSENT : 1680

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 90**

CONSENT

**CONSENT TO CARRY OUT THE DESTRUCTION OF AN
ABORIGINAL OBJECT/PLACE**

WHEREAS the Aboriginal objects described in Schedule "A" are situated upon the land described in Schedule "B", and which constitute Aboriginal objects within the meaning of Sections 5(1) and 90 of the National Parks and Wildlife Act 1974 ("Aboriginal objects"), and WHEREAS application has been made by:

Barrick Australia Limited
10th Floor, 2 Mill Street,
Perth. WA. 6000

Postal Address:
Locked Bag 12
Cloisters Square
Perth WA 6850

FOR CONSENT to destroy those objects identified in Schedule A and situated in the lands described in Schedule B of the proposed road upgrade and relocated travelling stock route at Lake Cowal.

NOW I, Brian Gilligan, Director-General of National Parks and Wildlife, in pursuance of Section 90 of the said Act, and subject to the Conditions hereunder set out DO HEREBY CONSENT to the destruction of the said objects by the said applicant.

TERMS AND CONDITIONS OF THIS CONSENT

This Consent is issued subject to General Terms and Conditions covering all archaeological Permits and Consents, as well as the Special and Specific Terms and Conditions pertaining to Consents to Destroy Aboriginal objects all of which conditions are detailed in the attached pages.

DATED at *Dubbo* this *Twenty Eighth* day of, *July* 2003

for Director-General of
National Parks and Wildlife

SCHEDULE A:

All Aboriginal objects situated within the boundaries of the lands described in schedule B, unless excluded in the Special and Specific conditions.

SCHEDULE B:

- The area of the proposed road upgrade as follows (and as shown on the maps attached as schedule C and D)
 - The road reserve that runs from the south west corner on Mining Lease 1535, parallel to the western side of the West Wyalong-Burcher Railway, for a distance of approximately 3.3 kilometres until its intersection with Lake Cowal/Blow Clear Road.
 - The road reserve that runs west from this point for a distance of approximately 10.5 kilometres (Blow Clear/Lake Cowal Road) to its intersection with Wamboyne Road at Blow Clear.

- The area of the proposed relocated Travelling Stock Route as follows (and as shown on the maps attached as schedule C):
 - From Lake Cowal Road on the northern side of Mining Lease 1535 westwards to the north west corner of Mining Lease 1535 (which is a corridor approximately 290 metres wide until it meets Lot 57 where it narrow to approximately 200 metres wide);
 - South from this point along the western boundary of Mining Lease 1535 to the south west corner of Mining Lease 1535 (which is a corridor approximately 200 metres wide);
 - Then east from this point along the southern boundary of Mining Lease 1535 until again intersecting the Lake Cowal Road (which is a corridor approximately 200 metres wide).

SPECIAL and SPECIFIC CONDITIONS

1. The Consent does not cover human skeletal remains. Should human remains be discovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. The Consent covers only those objects described in the instrument of Consent and in any Schedules thereto.
3. This Consent operates in respect of the land nominated above only for the period that the following approvals remain in force:
 - the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 or a modification of the same or any new development consent which authorises the Cowal Gold Mine; or
 - the approval granted for the Cowal Gold Project Access Road Upgrade by the Bland Shire Council on 21 April 1999 pursuant to Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW), or a modification of the same or any new approval which authorises the Cowal Gold Project Access Road Upgrade.
4. This Consent operates as follows:
 - 4.1 Subject to paragraph 4.3 below, this Consent does not operate in relation to a specific area until it has been certified in writing, in accordance with Special Condition 8 of Permit # 1681, that the archaeological works authorised by Special Condition 3 of Permit # 1681 for that specific area have been completed;
 - 4.2 Subject to the Special and Specific Conditions of this Instrument of Consent and the obligation to comply with Special Condition 11 of Permit #1681, once that certification has been given in relation to a specific area, this Consent authorises the

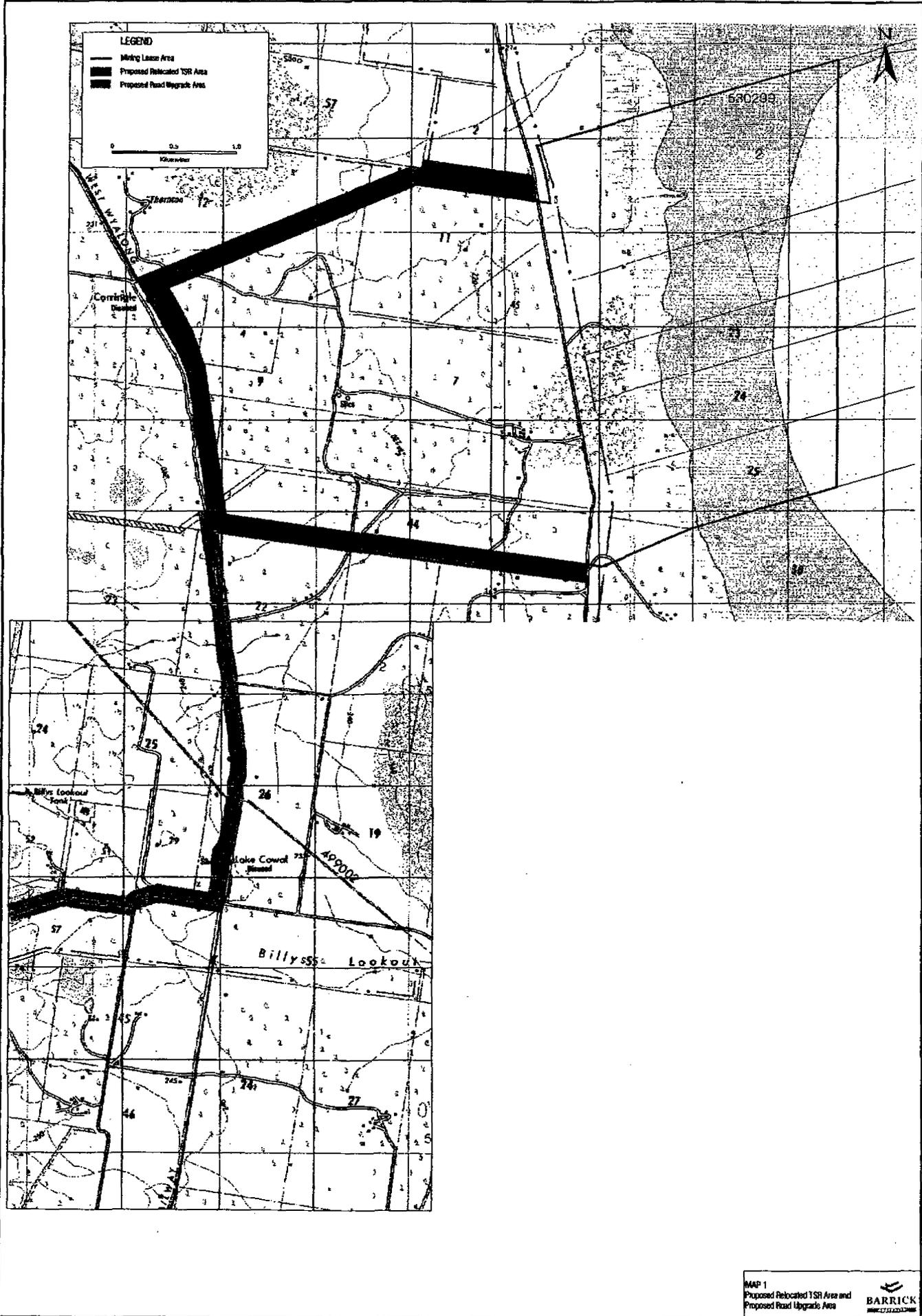
destruction of Aboriginal objects in the area specified in the certification by Barrick Australia Limited, its employees and contractors and the employees and contractors of its parent company Barrick Gold of Australia Limited in the course of their lawful activities in that area. In particular, where Permit # 1681 authorises the collection of a representative sample of Aboriginal objects from the surface of land, this Consent authorises the destruction of surface and sub-surface Aboriginal objects that remain after the representative sample (as determined by the permit holder and/or his instructed delegates) has been collected.

- 4.3 Nothing in this Consent or Permit # 1681 should be interpreted to mean that all surface and/or sub-surface Aboriginal objects must be collected from any specific area before it may be certified pursuant to Permit # 1681 that the collection activities for that specific area have been completed and this Consent may operate in relation to the relevant area.
5. This consent shall lapse when the Minister for Mineral Resources acknowledges that satisfactory rehabilitation work has been completed under Mining Lease 1535 or eighteen (18) years after the completion of construction works, whichever ever occurs first. For the purpose of this condition, construction works are the earthworks, engineering and building works which are required to be completed before mining operations commence.
6. Should any Aboriginal objects listed in Schedule 'A' above remain in existence/insitu at the date of the lapse of this Consent, any destruction of the Aboriginal objects will be unlawful unless authorised by a new consent granted under section 90 of the *National Parks and Wildlife Act 1974*.
7. During the term of this Consent, Barrick Australia Limited shall furnish the National Parks and Wildlife Service with a report on the activities carried out under the Consent, if required by the Director General.
8. A copy of this consent and the Permit # 1681 shall be available for inspection as per General Condition 6 (see below) at the Cowal Gold Project Office at all times during the period of the consent.
9. Wherever the word "destroy" is used in this consent it includes destroy, deface, damage or desecrate. Wherever the word "destruction" is used in this consent it includes destruction, defacement, damage or desecration.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. A Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.

7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.
8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 9 above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the permit or Consent to local Aboriginal communities. Upon request by the Service, the holder of the Permit or Consent shall supply a summary of his/her findings with photographs, diagrams, etc., as required, to local Aboriginal communities or other interest local groups.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period. A copy of all field records shall be lodged with The Australian Museum at the time the archaeological materials are deposited with the Museum.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.





LEGEND

-  Mining Lease Area
-  Proposed Relocated TSR Area
-  Proposed Road Upgrade Area

0 0.5 1.0
Kilometres



MAP 3
Proposed Relocated TSR Area and
Proposed Road Upgrade Area



C.4 Permit 1681



PERMIT #: 1681

**NATIONAL PARKS AND WILDLIFE ACT 1974
SECTION 87 (1)**

PERMIT

PERMIT TO SALVAGE and COLLECT

PERMIT ISSUED TO:

- | | | | |
|---|--|---|--|
| 1 | Dr Colin Pardoe
Bio-anthropology and Archaeology
3 Rose Street
Gilberton
Sth Australia, 5081 | 2 | Dr Johan Kamminga
National Heritage Consultants
34 Simpson Street
Watson
ACT, 2602 |
|---|--|---|--|

Postal Address:
As Above

AUTHORITY is hereby given for the person/s named above to:

- disturb or excavate any land, or cause any land to be disturbed or excavated, for the purpose of discovering an Aboriginal object within the meaning of that term in section 5(1) of the *National Parks and Wildlife Act 1974* (NSW) ("Aboriginal object"); and
- to disturb or move on any land an Aboriginal object that is the property of the Crown, in the course of undertaking salvage, collection and storage/curation of Aboriginal objects as described in the Research Design and Study Plan for the Barrick Australia Limited Cowal Gold Project which was Attachment 5 to the application for this permit dated 15 August 2002 (the "Application"), as modified by the special and specific conditions contained in this permit.

AREA COVERED by Permit for purpose as named above: as described in Schedule B of Consent # 1680 issued in conjunction within this permit.

TERM OF PERMIT: As specified in Special Condition 3 and 5 of Consent #1680 issued in conjunction with this permit.

TERMS AND CONDITIONS OF THIS PERMIT

This permit is issued subject to the General Terms and Conditions covering archaeological permits and consents, as well as those Specific and Special Terms and Conditions pertaining to each type of permit as determined by the Director, which may appear hereunder: See attached page.

DATED at Dubbo this ^{Twenty}~~Eight~~ day of, July 2003
Terry Kinn
Director General of National Parks and Wildlife

SPECIAL and SPECIFIC CONDITIONS

1. The permit does not cover human skeletal remains. Should human remains be uncovered all work at the particular location shall cease and the NPWS archaeologist at Dubbo shall be notified immediately.
2. All work shall be carried out in accordance with the Research Design and Study Plan that is Attachment 5 to the Application (the "**Research Design and Study Plan**") as modified by the Special and Specific Conditions applying to the permit.
3. Although no sites are known to occur in the Permit Area a permit holder and/or his instructed delegates shall inspect the land in the Permit Area which is proposed to be disturbed by construction work in connection with the development consent granted for the Cowal Gold Mine by the Minister for Urban Affairs and Planning on 26 February 1999 and the approval granted for the Cowal Gold Project Access Road Upgrade by the Bland Shire Council on 21 April 1999 pursuant to Part 5 of the *Environmental Planning and Assessment Act 1979*. Should surface Aboriginal objects be identified, a representative sample of Aboriginal objects shall be taken. Their position shall be recorded by GPS and they shall be bagged and temporarily stored according to Special Condition 5 until they are dealt with in accordance with the procedures outlined in Special Condition 4.
4. All Aboriginal objects subject to salvage and collection shall be dealt with in accordance with this Special Condition. Sufficient data will be taken from each Aboriginal object, including material type and size characteristics, to enable a technological analysis to be undertaken for report purposes provided always that numbers are large enough for meaningful analysis. This information shall form the basis of a master inventory which must be maintained at all times. After collected items have been closely examined and classified by a permit holder and/or his instructed delegates who must be qualified archaeologists, each collected item that has been classified as an Aboriginal object shall be separately bagged and labelled duplicating the above information and placed in a clearly labelled box detailing the specific area of collection. Examination and classification shall follow collection as expediently as possible so that development of the master inventory does not significantly lag behind collection works.
5. All collected Aboriginal objects shall be retained in the existing temporary Keeping Place within the Barrick Cowal Gold Project Compound. Keys shall be held by the General Manager Cowal Gold Project or his delegate, the Cowal Gold Project Site Coordinator, and access shall be limited to Aboriginal Community representatives, the permit holders and/or their instructed delegates, a cultural heritage officer retained by Barrick and for audit purposes, NPWS staff. Note that these are temporary facilities and a more permanent Keeping Place is required as a condition of Consent # 1467 for Aboriginal objects removed from the mine footprint area in the event that this area remains a water filled void.
6. Unless otherwise directed by the special conditions, any Aboriginal objects recovered, being the property of the Crown shall be deposited at the Australian Museum, in accordance with the adopted procedures for the deposition of objects as prescribed by The Australian Museum, at or before a period of 2 years from the date of expiration of the permit or any renewal whichever occurs first. Information about deposition requirements can be obtained from the Aboriginal Collections Manager, Division of Anthropology, the Australian Museum.
7. The holder/s of the permit shall furnish the National Parks and Wildlife Service with a final report detailing the results of investigations within 9 months of the completion of the excavations and field investigations. Said report will be expected to address matters relating to the spatial distribution of sites, technological and chronological considerations, and inferences of land use histories related to palaeo- environments. A separate plain

English report shall also be produced for the Aboriginal community within the same time frame.

8. When the archaeological works authorised by this permit for a particular area have been completed, a permit holder or his delegate, emeritus Professor Frederick James Allen, will certify that fact in writing to Barrick Australia Limited. Such certification may be given before the examination and classification of collected items pursuant to Special Condition 4. A copy of that certification shall be provided to the Director-General.
9. The inspecting, measuring and recording activities (for concentrations of surface Aboriginal objects) proposed in the Research Design and Study Plan for the back plain zone shall not be read as applying to the Permit Area.
10. Where the Research Design and Study Plan refers to the "*Land, Environment and Wiradjuri Heritage Officer*" in relation to the back plain zone, for the purposes of this permit, it shall instead be read as referring to a cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council).
11. Where the Research Design and Study Plan provides in relation to the back plain zone that "*works will stop in the relevant location when Barrick become aware of Aboriginal relics not previously identified during earthworks, construction or operation of the project. Individual Aboriginal objects will be collected. Necessary permits or consents already in place shall be complied with prior to the recommencement of work in the relevant area*" the following shall occur in the Permit Area instead:
 - A cultural heritage officer retained by Barrick (and approved by the West Wyalong Local Aboriginal Land Council) shall monitor construction earthworks;
 - If an Aboriginal object (other than human skeletal remains) of a type that has not been previously identified during the archaeological works referred to in Special Condition 3 of this permit, is identified, the Aboriginal object shall be collected and its position recorded by a GPS. The collected Aboriginal object shall then be bagged and temporarily stored in accordance with Special Condition 5 until it is dealt with in accordance with Special Condition 4.

GENERAL TERMS AND CONDITIONS

1. Permits and Consents are not transferable.
2. A Permit covers only that area stated in the Permit.
3. Consent covers only that area stated in the instrument of Consent and in any Schedules thereto.
4. Terms and conditions of Permits may be varied at any time at the discretion of the Director-General.
5. The Person to whom the Permit is issued or the Consent granted shall be responsible for the manner in which the work covered by the Permit or Consent is performed.
6. An officer of the National Parks and Wildlife Service, acting on the authority of the Director-General, may at any time examine work done or any objects recovered under any Permit or Consent.
7. Permits and Consents are necessary for all activities for which they are issued or granted, but do not in themselves give authority to enter or work on freehold land or leased Crown Land. Permission must be sought from the owner or occupier and arrangements made with him/her.

8. The holder of the Permit or Consent shall furnish, when required to do so, an undertaking to indemnify the National Parks and Wildlife Service against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses in respect of any accident or injury to any person or property which may arise solely out of the existence of any works associated with the Permit or Consent.
9. All reports received in connection with work carried out under a Permit or Consent shall be treated as confidential but the National Parks and Wildlife Service shall have the right to copy all such reports, to allow consideration thereof by qualified referees.
10. For a period of five years from the date of issue of the Permit or Consent, the holder of the Permit or Consent may refuse to allow the National Parks and Wildlife Service and The Australian Museum, if such information is held by those institutions, to make public any information contained in any report referred to in Condition 2 (specific Conditions) above, except where it is deemed necessary for management, protection or research reasons. After this period of five years from the date of issue of the Permit or Consent, the Service and The Australian Museum shall have the right to use and authorise the use of information contained in all reports submitted under the Permit or Consent, except where specifically requested by the holder of the Permit or Consent.
11. Upon publication of any information relating to work done under a Permit or Consent, a copy of such publication(s) shall be forwarded to the National Parks and Wildlife Service, The Australian Museum, Sydney, and the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra, unless permission to do otherwise has been obtained from the Service.
12. The holder of the Permit or Consent shall consult with the local Aboriginal community regarding the work covered by the Permit or Consent and shall respond to any reasonable request to involve the Aboriginal community in the work.
13. The National Parks and Wildlife Service and The Australian Museum may supply copies of relevant reports as furnished by the holder of the Permit or Consent to local Aboriginal communities.
14. The holder of the Permit or Consent shall keep field records and a copy of all such records shall be lodged with the National Parks and Wildlife Service at the termination of each field work period.
15. The holder of the Permit or Consent shall notify the Dubbo office of the National Parks and Wildlife Service at the commencement and completion of fieldwork, and shall supply to District officers details of field work programs and results if requested.

Aboriginal Heritage Impact Permit

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Office of
Environment
& Heritage

AHIP number: C0004570

(AHIMS Permit ID: 4376)

AHIP Issued To:

Evolution Mining (Cowal) Pty Ltd
Level 24
175 Liverpool Street
Sydney NSW 2000

OEH Office issuing this AHIP
Office of Environment and Heritage Conservation and Regional Delivery
South West 512 Dean Street Albury NSW 2640
Telephone number: (02) 6022 0624
Fax number: (02) 6021 0610
Email: rog.southwest@environment.nsw.gov.au

Additional details for public register

a) Name of development or project	Cowal Gold Operations – Processing Rate Modification
b) Location	Lot 101 and 102 DP 1059150, Lake Cowal Road, NSW 2671
c) Local Government Area(s)	Bland Shire Council
d) Description of harm authorised	<ul style="list-style-type: none">• Certain Aboriginal objects must not be harmed• Movement of certain Aboriginal objects• Salvage excavations• Community collection• Harm to certain Aboriginal objects through the proposed works
e) AHIP commencement date and duration	<i>Commencement:</i> 27 June 2019 <i>Duration:</i> 14 Years

AHIP TO HARM ABORIGINAL OBJECTS

A. Background

- (i) On 7 January 2019 an application was made to the Chief Executive of the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) pursuant to s.90 of the *National Parks and Wildlife Act 1974* (the Act).
- (ii) The purpose of the application was to harm aboriginal objects within the expansion area for Cowal Gold Operations, Modification 14 at Lake Cowal, NSW.
- (iii) OEH considered the application and supporting information provided, and matters under section 90K of the Act and decided to issue an AHIP subject to conditions.

B. AHIP issued subject to conditions

An AHIP is issued to harm Aboriginal objects identified in Schedules B and C, in accordance with the conditions of this AHIP.

This AHIP is issued pursuant to section 90 of the Act.

C. Commencement and duration of AHIP

This AHIP commences on the date it is signed unless otherwise provided by this AHIP.

Unless otherwise revoked in writing, this AHIP remains in force for:

- (i) 14 years from the date of commencement, that is, until 27 June 2033.

D. Proposed Works

Evolution Mining (Cowal) Pty Ltd (the Applicant), is proposing a Processing Rate Modification (MOD14, the project) for Cowal Gold Operations (CGO). The CGO is part of Mining Lease (ML) 1535 at Lake Cowal, near West Wyalong, New South Wales (NSW).

The proposed project includes:

- Increasing ore processing rate from 7.5 to 9.8 Million tons per annum
- Modification of the existing tailings storage to form one larger storage facility
- Relocation of infrastructure:
 - Contained water storage
 - Internal roads
 - Stockpiles of soil, ore and rock
- Installation of a second crushing circuit
- Duplication of water supply pipeline across Lake Cowal
- Increase extraction of water from external supply source
- Increase consumption of process consumables (including cyanide)
- Increase in human resources to develop and operate the facility
- Relocation of Travelling Stoke Reserve (TSR) and Lake Cowal Road
- Provision of crushed rock material to local councils to assist with road construction materials

The MOD14 project intends surface disturbance outside of the original consent area for ML 1535 and as such seeks a new AHIP to facilitate the development and harm to Aboriginal objects.

Subject to the application is harm in whole or in part to 23 objects.

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Note: A Dictionary at the end of the AHIP defines terms used in this document. Further information about this AHIP is also set out after the Dictionary.

A handwritten signature in black ink, appearing to read "A. Fisher", written over a dotted line.

Andrew Fisher
Senior Team Leader Planning – South West
Albury
(by Delegation)
DATED: 27 June 2019

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LAND TO WHICH THIS AHIP APPLIES

Lot 101 and 102, DP 1059150, Parish Wamboyne, County of Gipps, Bland Shire, being that area with boundary shown in purple 'Proposed AHIP Boundary' Figure 1 and as provided within Reeves, J. 2019. 'Aboriginal Cultural Heritage Assessment: Cowal Gold Operations – processing rate modification'. Report produced by Niche Environment and Heritage for Evolution Mining (Cowal), Sydney.

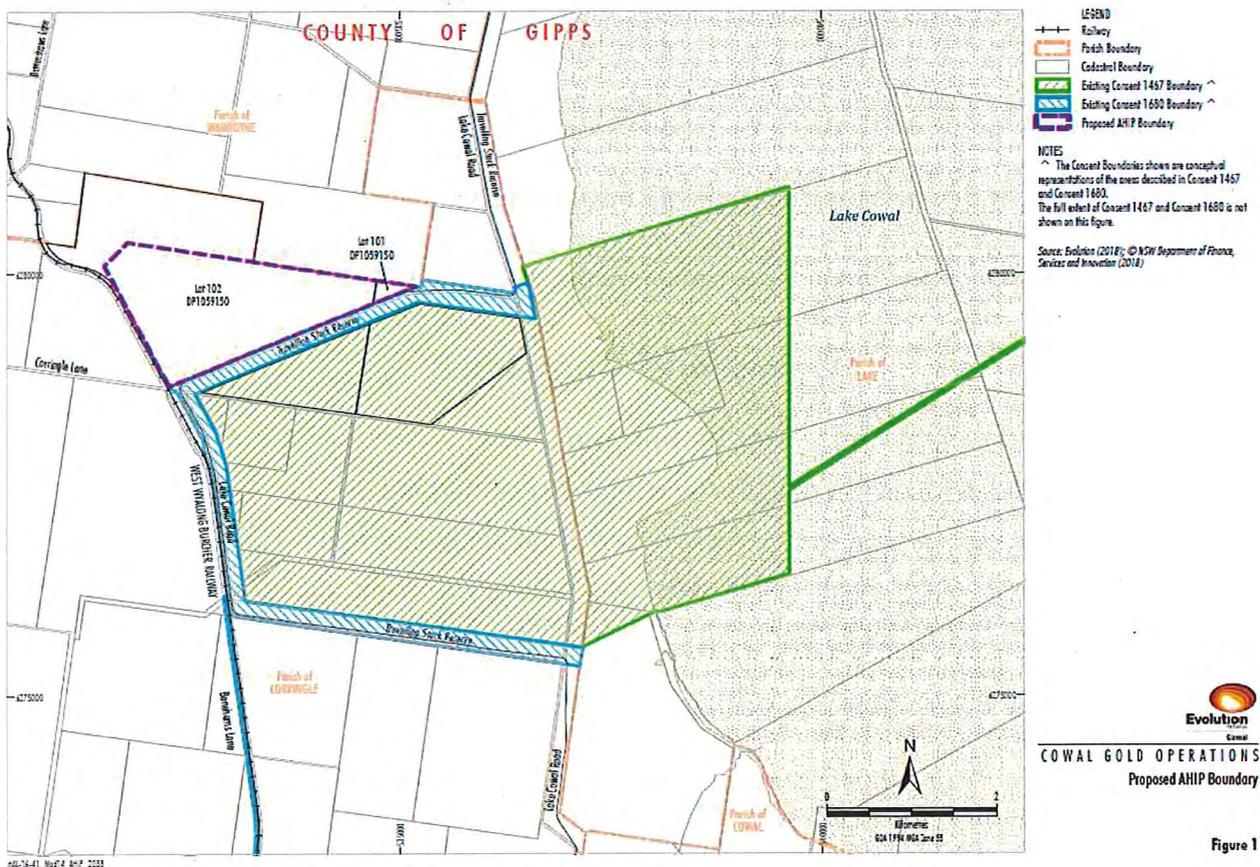


Figure 1. Consent area under this AHIP, as delineated in purple 'proposed AHIP boundary'.

CONDITIONS

The conditions of this AHIP specify the actions that are permitted and/or required in relation to areas and Aboriginal objects, which are detailed in the Schedules that follow.

Administrative Conditions

Responsibility for compliance with conditions of AHIP

1. The AHIP holder must ensure that all persons involved in actions or works covered by this AHIP (whether employees, contractors, sub-contractors, agents or invitees) are made aware of and comply with the conditions of this AHIP.

2. The *Indigenous Archaeology and Cultural Heritage Management Plan*, for Lake Cowal Gold Operations is to be updated reflecting the contents of this consent and any related instruments (i.e. s85 Care Agreement).

Project manager to oversee the actions relating to this AHIP

3. A suitably qualified and experienced individual must be appointed as a project manager who is responsible for overseeing, for and on behalf of the AHIP holder, all the actions relating to this AHIP.
4. The individual appointed as project manager must be the project manager nominated in the application form.
5. If an alternative to the nominated project manager is appointed, OEH must be notified of their contact details within 14 days of this appointment.

Actions must be in accordance with AHIP application

6. All actions on the land must be carried out in accordance with the application except as otherwise expressly provided by a condition of this AHIP.

Operational Conditions

Certain Aboriginal objects must not be harmed

7. All human remains in, on or under the land must not be harmed.
8. The Aboriginal objects described in Schedule A must not be harmed.
9. To ensure that the Aboriginal objects described in Schedule A are not harmed, the following measures must be implemented as soon as practicable and complied with:
 - (a) Visual markers must be installed to clearly indicate the location of the Aboriginal objects and 'no-harm area' described in Schedule A, to any person on foot or in a vehicle in the vicinity,
 - (b) Persons entering the land such as employees, contractors, sub-contractors, agents and invitees must be provided with an Aboriginal Cultural Heritage awareness and site module as part of site induction,
 - (c) Appropriate sediment control measures must be installed, operated and maintained to prevent harm to the Aboriginal objects and 'no-harm areas' described in Schedule A,
 - (d) Vehicles must not be driven on or in the immediate vicinity of an Aboriginal object described in Schedule A,
 - (e) Vehicles must not be driven on any part of a 'no-harm area' described in Schedule A,
 - (f) Plant, equipment or any materials including fill, must not be stored on any part of a 'no-harm area' described in Schedule A.
10. To ensure that the Aboriginal objects described in Schedule A are not harmed, the Evolution. 2019. 'Cowal Gold Operations Indigenous Archaeology and Cultural Heritage Management Plan' Evolution Mining, Lake Cowal, NSW, provided as part of the application, must be updated to reflect this permit and also the care agreement, and implemented as soon as practicable and complied with.

Certain Aboriginal objects may be moved

11. The Aboriginal objects described in Schedule B1 may only be moved.

12. The movement of these Aboriginal objects must be carried out in accordance with Reeves, J. 2019. 'Aboriginal Cultural Heritage Assessment: Cowal Gold Operations - processing rate modification'. Report produced by Niche Environment and Heritage on behalf of Evolution Mining (Cowal) Pty Ltd, West Wyalong, NSW that was provided with the application.

Salvage excavations

13. Salvage excavations may be carried out in, on or under each salvage excavation area described in Schedule B2.
14. Aboriginal objects that are recovered during the excavations may be analysed on-site and/or may be taken off-site for further analysis.
15. The excavations and analysis of Aboriginal objects, must be carried out in accordance with Reeves, J. 2019. 'Aboriginal Cultural Heritage Assessment: Cowal Gold Operations - processing rate modification'. Report produced by Niche Environment and Heritage on behalf of Evolution Mining (Cowal) Pty Ltd, West Wyalong, NSW. that was provided with the application, with the following modifications:
 - (a) Sample sieving of spoil from grader scrapes in windrows
 - (b) Dating of any *in situ* middens and ovens/hearths if viable samples are present
16. The excavations must be completed in an area before any harm of Aboriginal objects described in Schedule C can commence in that same area.

Community collection

17. The Registered Aboriginal Parties must be provided with an opportunity to collect Aboriginal objects within the 'community collection area' described in Schedule B3.
18. The opportunity for community collection must be provided:
 - (a) in accordance with Reeves, J. 2019. 'Aboriginal Cultural Heritage Assessment: Cowal Gold Operations - processing rate modification'. Report produced by Niche Environment and Heritage on behalf of Evolution Mining (Cowal) Pty Ltd, West Wyalong, NSW that was provided with the application, and
 - (b) before any harm of Aboriginal objects described in Schedule C can commence in the area.
19. Aboriginal objects that are recovered during the community collection may be analysed on-site and/or may be taken off-site for further analysis as decided by the Registered Aboriginal Parties.
20. If an opportunity for community collection has been provided and this collection does not occur, the AHIP holder may proceed with any actions to harm Aboriginal objects described in Schedule C, in accordance with the conditions of this AHIP.

Harm of certain Aboriginal objects through the proposed works

21. The Aboriginal objects described in Schedule C may be harmed. Nothing in this condition authorised harm to Aboriginal objects described in Schedule A (whether human remains, Aboriginal objects or 'no-harm areas').
22. Aboriginal objects described in Schedule C must not be harmed unless:
 - (a) all movement of Aboriginal objects described in Schedule B1 has occurred in the area,
 - (b) all excavations described in Schedule B2 have been completed in the area, and
 - (c) all opportunities for community collection of Aboriginal objects described in Schedule B3 have been provided in the area.

Long term management of certain Aboriginal objects

23. Long term management arrangements for any of the Aboriginal objects collected as part of this AHIP will be managed in accordance with Care Agreement C0004976
24. Requirement 26 "Stone artefact deposition and storage" in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (24 September 2010, available online at: <http://www.environment.nsw.gov.au/licences/archinvestigations.htm>) must be complied with.

Access routes

25. Where practicable, existing access routes to parts of the land where actions relating to this AHIP are to be carried out must be used.

Notification and Reporting Conditions

Notification of commencement and completion of actions

26. Written notice must be provided to the OEH office at least 7 days prior to the commencement of actions authorised by this AHIP.
27. Written notice must be provided to the OEH office within 7 days of the completion of actions authorised by this AHIP.

Copy of this AHIP and notices to be provided to Registered Aboriginal Parties

28. A copy of this AHIP must be provided to each Registered Aboriginal Party, within 14 days of receipt of the AHIP from OEH.
29. Where this AHIP is varied or transferred, a copy of the AHIP variation or transfer notice must be provided to each Registered Aboriginal Party, within 14 days of receipt of the notice.

Human remains

30. If any human remains are discovered and/or harmed in, on or under the land, the AHIP holder must:
 - (a) not further harm these remains
 - (b) immediately cease all work at the particular location
 - (c) secure the area so as to avoid further harm to the remains
 - (d) notify the local police and OEH's Environment Line on 131 555 as soon as practicable and provide any available details of the remains and their location, and
 - (e) not recommence any work at the particular location unless authorised in writing by OEH.

Incidents which may breach the Act or AHIP

31. The AHIP holder must notify the OEH office in writing as soon as practicable after becoming aware of:
 - (a) any contravention of s.86 of the Act not authorised by an AHIP, and/or
 - (b) any contravention of the conditions of this AHIP.

Reports about incidents which may breach the Act or AHIP

32. Where OEH suspects that an incident has occurred which may have breached the Act or AHIP, OEH may request a written incident report, which includes the following:

- (a) the nature of the incident
- (b) the actual or likely impact of the incident on Aboriginal objects and/or Aboriginal places
- (c) the nature and location of these Aboriginal objects and/or Aboriginal places, referring to and providing maps and photos where appropriate
- (d) any conditions of an AHIP which may have been breached, and
- (e) the measures which have been taken or will be taken to prevent a recurrence of the incident.

33. The incident report must be provided to the OEH office within the timeframe specified in the request.

Provision of Aboriginal Site Impact Recording Form

34. An Aboriginal Site Impact Recording Form must be completed and submitted to the AHIMS Registrar, for each AHIMS site identified in Schedules B and C, within 6 months of the completion of the actions authorised by this AHIP.

Note:

- (i) The Aboriginal Site Impact Recording Form can be found on the OEH website:
<http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm>
- (ii) Contact details for the AHIMS Registrar can be found on the OEH website:
<http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm>

Report about harm to Aboriginal objects Salvage Report

35. A Salvage Report must be prepared about the actions relating to the harm of Aboriginal objects (as permitted by this AHIP). The report must:

- (a) include a short summary of the report
- (b) describe any ongoing consultation with or involvement of representatives of Registered Aboriginal Parties in relation to this AHIP
- (c) describe how any Aboriginal objects or 'no-harm areas' described in Schedule A were managed during the period covered by the AHIP
- (d) provide details of the Aboriginal objects which were fully or partially harmed in the course of undertaking the actions
- (e) if any salvage excavations were authorised by this AHIP, provide a description of the methods and results of the salvage excavation
- (f) detail any community collection of Aboriginal objects undertaken by the Registered Aboriginal Parties
- (g) comment on the effectiveness of any mitigation measures that were implemented
- (h) comment on the effectiveness of any management plan which was in place
- (i) if any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now at that location
- (j) detail the results of any analysis of Aboriginal objects
- (k) detail the long term management arrangements for any Aboriginal objects, and
- (l) include a statement confirming that all Aboriginal Site Impact Recording Forms have been completed and submitted to the AHIMS Registrar.

36. The Salvage Report must be submitted to the OEH office within 6 months of the completion of the actions authorised by this AHIP.

37. A copy of the Salvage Report, including a summary of the report in plain English, must be sent by registered post to each Registered Aboriginal Party within 14 days of the report being submitted to OEH.

General Conditions

Indemnity

38. The AHIP holder agrees to indemnify and keep indemnified, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from and against all actions, demands, claims, proceedings, losses, damages, costs (including legal costs), charges or expenses suffered or incurred by them resulting from:
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising out of or in connection with any actions undertaken pursuant to this AHIP.

Release

39. The AHIP holder agrees to release to the full extent permitted by law, the Crown in right of NSW, the Minister administering the Act, the Chief Executive of OEH, and their employees, agents and contractors, in the absence of any willful misconduct or negligence on their part, from all suits, actions, demands and claims of every kind resulting from:
- (a) any damage or destruction to any real or personal property; and
 - (b) injury suffered or sustained (including death) by any persons arising from or in connection with any actions undertaken pursuant to this AHIP.

Written notice

40. Any requirement to provide written notice to the OEH office in this AHIP may be complied with by faxing the notice to the OEH office's fax number, emailing the notice to rog.southwest@environment.nsw.gov.au or by sending by registered post to the OEH office's address. The OEH office's contact details are specified at the front of this AHIP.

SCHEDULES

The following schedules identify the areas and Aboriginal objects that are subject to the conditions of this AHIP.

Schedule A: Aboriginal objects which must not be harmed

A1 Human remains

All human remains in, on or under the land must not be harmed, as specified by the conditions of this AHIP.

A2 Aboriginal objects that are identified on AHIMS

The following Aboriginal objects identified on AHIMS must not be harmed, as specified by the conditions of this AHIP.

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	39-4-0311	Modified tree	Lake Cowal 2017-21	N	537664	6276591	GDA

A3 No-harm areas

Not Applicable.

Schedule B: Aboriginal objects that may be harmed through the certain actions

B1 Movement

The following Aboriginal objects identified on AHIMS may only be moved in accordance with the conditions of this AHIP (excluding any Aboriginal objects described in Schedule A).

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	39-4-0315	Artefact	Lake Cowal 2017-003	N	534708	6279668	GDA
Whole	39-4-0316	Artefact	Lake Cowal 2017-004	N	534871	6279741	GDA
Whole	39-4-0317	Artefact	Lake Cowal	N	534978	6279873	GDA

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			2017-005				
Whole	39-4-0318	Artefact, heart retainer	Lake Cowal 2017-006	N	533914	6279947	GDA
Whole	39-4-0319	Artefact	Lake Cowal 2017-007	N	533400	6279743	GDA
Whole	39-4-0320	Artefact	Lake Cowal 2017-008	N	533177	6279651	GDA
Whole	39-4-0321	Artefact	Lake Cowal 2017-009	N	532874	6279641	GDA
Whole	39-4-0322	Artefact	Lake Cowal 2017-010	N	532771	6279631	GDA
Whole	39-4-0323	Artefact	Lake Cowal 2017-011	N	532949	6278945	GDA
Whole	39-4-0324	Hearth/Oven	Lake Cowal 2017-012	N	532802	6278992	GDA
Whole	39-4-0325	Artefact	Lake Cowal 2017-013	N	533161	6279034	GDA
Whole	39-4-0326	Artefact	Lake Cowal 2017-014	N	532197	6279787	GDA
Whole	39-4-0329	Heat Retainer	Lake Cowal 2017-015	N	531916	6280298	GDA
Whole	39-4-0330	Heat retainer	Lake Cowal 2017-016	N	531808	6280296	GDA
Whole	39-4-0331	Heat Retainer	Lake Cowal 2017-017	N	532155	6280283	GDA
Whole	39-4-0332	Heat Retainer	Lake Cowal 2017-018	N	532029	6280283	GDA
Whole	39-4-0328	Heat retainer	Lake Cowal 2017-019	N	532271	6279681	GDA
Whole	39-4-0310	Artefact	Lake Cowal 2017-027	N	532396	6279486	GDA
Whole	39-4-	Artefact	Lake	N	532222	6279398	GDA

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	0307		Cowal 2017-028				
Whole	39-4- 0306	Artefact	Lake Cowal 2017-029	N	532120	6279360	GDA
Whole	39-4- 0305	Oven	Lake Cowal 2017-030	N	532404	6279099	GDA
Whole	39-4- 0280	Heat Retainer	Lake Cowal 2017-066	N	532214	6278851	GDA
Whole	43-4- 0055	Heat Retainer	Lake Cowal 2017-068	N	533250	6280160	GDA

B2 Salvage excavations

Salvage excavations may be carried out in the area marked "AHIP application boundary", in 'Land to which this AHIP applies', and Schedule C2, but only in accordance with the conditions of this AHIP.

The salvage excavation area comprises the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	39-4- 0315	Artefact	Lake Cowal 2017-003	N	534708	6279668	GDA
Whole	39-4- 0316	Artefact	Lake Cowal 2017-004	N	534871	6279741	GDA
Whole	39-4- 0317	Artefact	Lake Cowal 2017-005	N	534978	6279873	GDA
Whole	39-4- 0318	Artefact, heart retainer	Lake Cowal 2017-006	N	533914	6279947	GDA
Whole	39-4- 0319	Artefact	Lake Cowal 2017-007	N	533400	6279743	GDA
Whole	39-4- 0320	Artefact	Lake Cowal 2017-008	N	533177	6279651	GDA
Whole	39-4-	Artefact	Lake	N	532874	6279641	GDA

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	0321		Cowal 2017-009				
Whole	39-4-0322	Artefact	Lake Cowal 2017-010	N	532771	6279631	GDA
Whole	39-4-0323	Artefact	Lake Cowal 2017-011	N	532949	6278945	GDA
Whole	39-4-0324	Hearth/Oven	Lake Cowal 2017-012	N	532802	6278992	GDA
Whole	39-4-0325	Artefact	Lake Cowal 2017-013	N	533161	6279034	GDA
Whole	39-4-0326	Artefact	Lake Cowal 2017-014	N	532197	6279787	GDA
Whole	39-4-0329	Heat Retainer	Lake Cowal 2017-015	N	531916	6280298	GDA
Whole	39-4-0330	Heat retainer	Lake Cowal 2017-016	N	531808	6280296	GDA
Whole	39-4-0331	Heat Retainer	Lake Cowal 2017-017	N	532155	6280283	GDA
Whole	39-4-0332	Heat Retainer	Lake Cowal 2017-018	N	532029	6280283	GDA
Whole	39-4-0328	Heat retainer	Lake Cowal 2017-019	N	532271	6279681	GDA
Whole	39-4-0310	Artefact	Lake Cowal 2017-027	N	532396	6279486	GDA
Whole	39-4-0307	Artefact	Lake Cowal 2017-028	N	532222	6279398	GDA
Whole	39-4-0306	Artefact	Lake Cowal 2017-029	N	532120	6279360	GDA
Whole	39-4-0305	Oven	Lake Cowal 2017-030	N	532404	6279099	GDA
Whole	39-4-0280	Heat Retainer	Lake Cowal 2017-066	N	532214	6278851	GDA

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Whole	43-4-0055	Heat Retainer	Lake Cowal 2017-068	N	533250	6280160	GDA
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B3 Community collection

Community collection may be carried out in the area marked "Proposed AHIP boundary", within 'Land to which this AHIP applies' and Schedule C2, in accordance with the conditions of this AHIP.

The community collection area includes the following known Aboriginal objects, as identified on AHIMS (excluding any Aboriginal objects described in Schedule A):

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	39-4-0315	Artefact	Lake Cowal 2017-003	N	534708	6279668	GDA
Whole	39-4-0316	Artefact	Lake Cowal 2017-004	N	534871	6279741	GDA
Whole	39-4-0317	Artefact	Lake Cowal 2017-005	N	534978	6279873	GDA
Whole	39-4-0318	Artefact, heart retainer	Lake Cowal 2017-006	N	533914	6279947	GDA
Whole	39-4-0319	Artefact	Lake Cowal 2017-007	N	533400	6279743	GDA
Whole	39-4-0320	Artefact	Lake Cowal 2017-008	N	533177	6279651	GDA
Whole	39-4-0321	Artefact	Lake Cowal 2017-009	N	532874	6279641	GDA
Whole	39-4-0322	Artefact	Lake Cowal 2017-010	N	532771	6279631	GDA
Whole	39-4-0323	Artefact	Lake Cowal 2017-011	N	532949	6278945	GDA
Whole	39-4-0324	Hearth/Oven	Lake Cowal 2017-012	N	532802	6278992	GDA
Whole	39-4-	Artefact	Lake Cowal	N	533161	6279034	GDA

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	0325		2017-013				
Whole	39-4-0326	Artefact	Lake Cowal 2017-014	N	532197	6279787	GDA
Whole	39-4-0329	Heat Retainer	Lake Cowal 2017-015	N	531916	6280298	GDA
Whole	39-4-0330	Heat retainer	Lake Cowal 2017-016	N	531808	6280296	GDA
Whole	39-4-0331	Heat Retainer	Lake Cowal 2017-017	N	532155	6280283	GDA
Whole	39-4-0332	Heat Retainer	Lake Cowal 2017-018	N	532029	6280283	GDA
Whole	39-4-0328	Heat retainer	Lake Cowal 2017-019	N	532271	6279681	GDA
Whole	39-4-0310	Artefact	Lake Cowal 2017-027	N	532396	6279486	GDA
Whole	39-4-0307	Artefact	Lake Cowal 2017-028	N	532222	6279398	GDA
Whole	39-4-0306	Artefact	Lake Cowal 2017-029	N	532120	6279360	GDA
Whole	39-4-0305	Oven	Lake Cowal 2017-030	N	532404	6279099	GDA
Whole	39-4-0280	Heat Retainer	Lake Cowal 2017-066	N	532214	6278851	GDA
Whole	43-4-0055	Heat Retainer	Lake Cowal 2017-068	N	533250	6280160	GDA

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Schedule C: Aboriginal objects which may be harmed through the proposed works

The Aboriginal objects described in this schedule may be harmed, but only in accordance with the conditions of this AHIP (excluding any Aboriginal objects described in Schedule A).

C1 Harm of Aboriginal objects identified on AHIMS

Portion of Site (whole or part)	AHIMS Site ID	Site Feature	Site Name	Information access restriction? (Y/N)	Easting	Northing	Datum
Whole	39-4-0315	Artefact	Lake Cowal 2017-003	N	534708	6279668	GDA
Whole	39-4-0316	Artefact	Lake Cowal 2017-004	N	534871	6279741	GDA
Whole	39-4-0317	Artefact	Lake Cowal 2017-005	N	534978	6279873	GDA
Whole	39-4-0318	Artefact, heart retainer	Lake Cowal 2017-006	N	533914	6279947	GDA
Whole	39-4-0319	Artefact	Lake Cowal 2017-007	N	533400	6279743	GDA
Whole	39-4-0320	Artefact	Lake Cowal 2017-008	N	533177	6279651	GDA
Whole	39-4-0321	Artefact	Lake Cowal 2017-009	N	532874	6279641	GDA
Whole	39-4-0322	Artefact	Lake Cowal 2017-010	N	532771	6279631	GDA
Whole	39-4-0323	Artefact	Lake Cowal 2017-011	N	532949	6278945	GDA
Whole	39-4-0324	Hearth/Oven	Lake Cowal 2017-012	N	532802	6278992	GDA
Whole	39-4-0325	Artefact	Lake Cowal 2017-013	N	533161	6279034	GDA
Whole	39-4-0326	Artefact	Lake Cowal	N	532197	6279787	GDA

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			2017-014				
Whole	39-4-0329	Heat Retainer	Lake Cowal 2017-015	N	531916	6280298	GDA
Whole	39-4-0330	Heat retainer	Lake Cowal 2017-016	N	531808	6280296	GDA
Whole	39-4-0331	Heat Retainer	Lake Cowal 2017-017	N	532155	6280283	GDA
Whole	39-4-0332	Heat Retainer	Lake Cowal 2017-018	N	532029	6280283	GDA
Whole	39-4-0328	Heat retainer	Lake Cowal 2017-019	N	532271	6279681	GDA
Whole	39-4-0310	Artefact	Lake Cowal 2017-027	N	532396	6279486	GDA
Whole	39-4-0307	Artefact	Lake Cowal 2017-028	N	532222	6279398	GDA
Whole	39-4-0306	Artefact	Lake Cowal 2017-029	N	532120	6279360	GDA
Whole	39-4-0305	Oven	Lake Cowal 2017-030	N	532404	6279099	GDA
Whole	39-4-0280	Heat Retainer	Lake Cowal 2017-066	N	532214	6278851	GDA
Whole	43-4-0055	Heat Retainer	Lake Cowal 2017-068	N	533250	6280160	GDA

C2 Areas where harm of Aboriginal objects is authorised

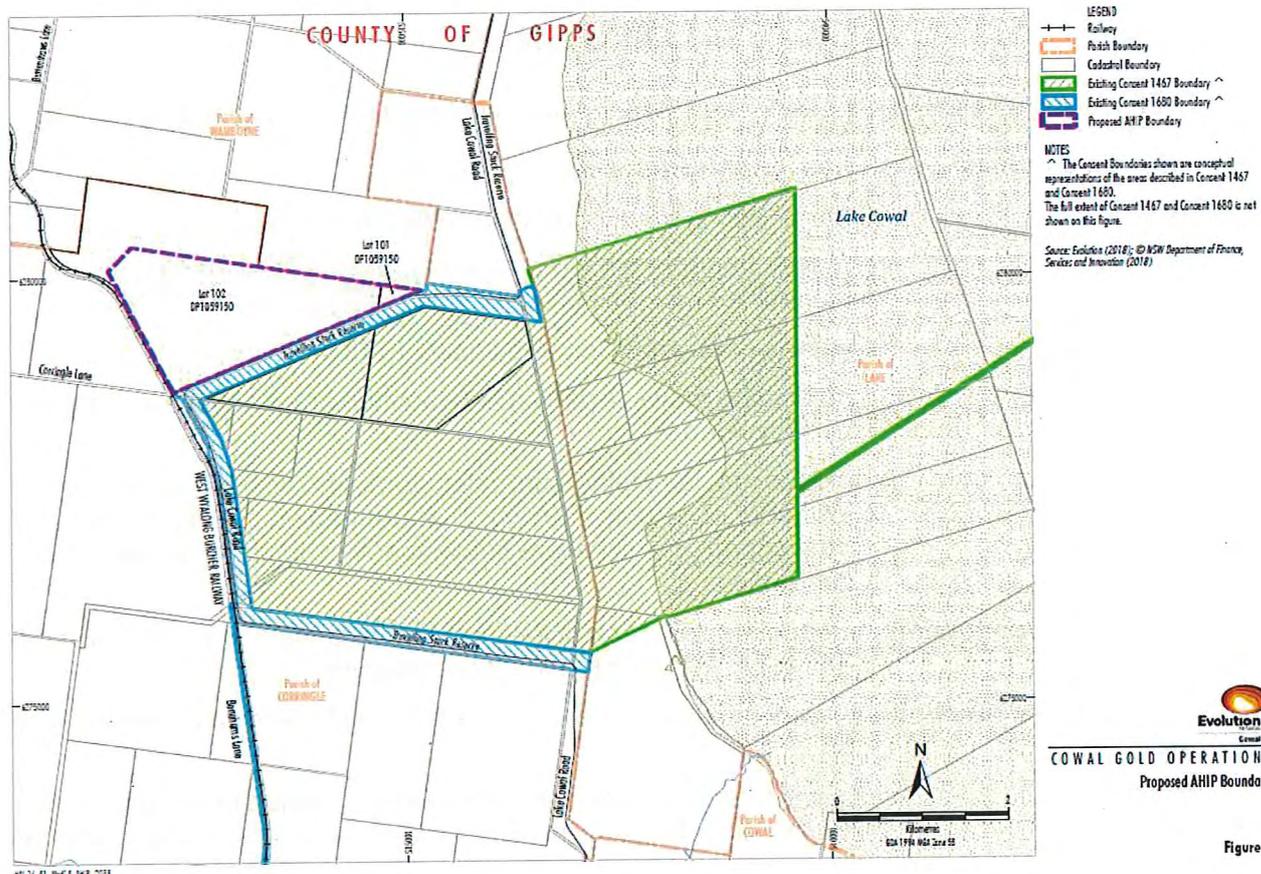
Excluding objects identified in Schedule A, objects may be harmed through the proposed works in the area identified in with a purple boundary 'Proposed AHIP boundary'

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DICTIONARY

In this AHIP, unless the contrary is indicated the terms below have the following meanings:

Aboriginal object	has the same meaning as in the Act.
Act	means the <i>National Parks and Wildlife Act 1974</i> .
AHIMS	means the Aboriginal Heritage Information Management System maintained by OEH, as defined in s.90Q of the Act.
AHIP	means Aboriginal Heritage Impact Permit
AHIP holder	means the entity or person listed on the cover page under the heading "AHIP issued to".
Application	means the completed application form and all other documents in written or electronic form which accompanied the application when it was lodged or which were subsequently submitted in support of the application.
Community collection	means the collection of Aboriginal objects by one or all Registered Aboriginal Parties or their representatives.
Community collection area	means an area described as a community collection area in Schedule B3
Harm	has the same meaning as in the Act. In relation to Aboriginal objects, harm means the movement, damage, defacement and/or destruction of Aboriginal objects. In relation to an Aboriginal place, harm means the damage, defacement and/or destruction of the Aboriginal place.
Land	means the land described under the heading "Land to which this AHIP applies".
No-harm areas	means those areas described in Schedule A3.
OEH	Office of Environment and Heritage (NSW).
OEH office	means the office listed on the cover page of this AHIP.
Proposed works	means the works described under the heading "D. Proposed Works" at the front of this AHIP.
Public register	means the public register established under s.188F of the Act, that contains details of AHIPs issued by the Chief Executive of OEH, as described under the heading "Information about this AHIP".
Registered Aboriginal Parties	means the Registered Aboriginal Parties listed in the application.
Salvage excavation	means an archaeological excavation carried out in accordance with the methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of salvage excavation is to recover a sample of Aboriginal objects as an archival record of Aboriginal life from a site that will be destroyed.
Salvage excavation area	means any area described as a salvage excavation area in Schedule B2.
Test excavation	means an archaeological excavation carried out in accordance with

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methodology accompanying the application, as modified by the conditions of this AHIP. The purpose of test excavation is to collect a sample of Aboriginal objects, in order to establish the nature and extent of sub-surface Aboriginal objects and to assist in the assessment of management options for the site.

Test excavation area means any area described as a test excavation area in Schedule B2

INFORMATION ABOUT THIS AHIP

Public Register

Under section 188F of the Act, the Chief Executive of OEH is required to keep a public register containing the details of each AHIP issued. The details of this AHIP that will be published on the public register are outlined on the front page of this AHIP.

The public register is available online at www.environment.nsw.gov.au

Appeals

Under section 90L of the Act, the AHIP holder may appeal to the Land and Environment Court if they are dissatisfied with any condition of this AHIP. The appeal must be lodged within 21 days of the date this AHIP was issued.

Penalties for breach of the Act or AHIP condition

Significant penalties can be imposed by the Land and Environment Court for harm to an Aboriginal object or Aboriginal Place other than as authorised by a condition of an AHIP, or for a breach of an AHIP condition. OEH can also issue penalty notices for a breach of the Act or AHIP condition.

Responsibility for obtaining all approvals and compliance with applicable laws

The AHIP holder is responsible for obtaining and complying with all approvals necessary to lawfully carry out the work referred to in this AHIP, including but not limited to development consents.

Other relevant provisions of the *National Parks and Wildlife Act*

Newly identified Aboriginal objects must be notified to the Chief Executive of OEH under s.89A of the Act using the form available online at www.environment.nsw.gov.au

Stop work orders, interim protection orders and remediation directions may be issued in certain circumstances to protect Aboriginal objects or places.

Obligation to report Aboriginal remains under Commonwealth laws

The AHIP holder may have additional obligations to report any discovery of Aboriginal remains under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

Exercise of investigation and compliance powers

Officers appointed or authorised under the Act may exercise certain powers and functions, including the power to enter land.

Duration of AHIP

This AHIP remains in force for the period specified in the AHIP.

Variation of AHIP

The AHIP holder may apply to the OEH office for a variation of any conditions of an AHIP, using the AHIP variation application form available online at www.environment.nsw.gov.au. Requests for significant variations must be accompanied by evidence of further consultation with Registered Aboriginal Parties and may include payment of fees.

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The conditions of an AHIP may be varied at any time by the Chief Executive of OEH in order to correct a typographical error or to resolve an inconsistency between conditions. The AHIP holder may appeal a decision of the Chief Executive of OEH to vary the conditions of the AHIP.

Transfer of AHIP

The AHIP holder may apply to transfer this AHIP to another person by using the AHIP transfer application form available online at www.environment.nsw.gov.au.

Surrender of AHIP

The AHIP holder may apply to surrender this AHIP by using the AHIP surrender application form available online at www.environment.nsw.gov.au. The surrender must be approved by the Chief Executive of OEH and may be subject to conditions.

Suspension and revocation of AHIP

An AHIP may be suspended or revoked at any time at the discretion of the Chief Executive of OEH. Prior to suspending or revoking the AHIP, the AHIP holder will be given notice and an opportunity to make submissions. The AHIP holder will be notified in writing of the final decision. The AHIP holder may appeal a decision to revoke the AHIP.

Entry to land

An AHIP does not automatically entitle its holder to enter land for the purpose of conducting work related to the AHIP. The AHIP holder is responsible for obtaining permission to enter land from the owner and/or occupier of the land.

Disclosure of information pursuant to lawful requirement

This AHIP does not prevent the disclosure of any information or document in OEH's possession in accordance with any lawful requirement.

Making copies of reports

By providing a report, the AHIP holder acknowledges that OEH can use the information in that report to inform its regulatory functions, note details of that report in AHIMS and include a copy of the report in its library which may be available to members of the public.

OEH is able to make copies of any reports provided to OEH under this AHIP.

Attachment D

CGO BS 1 (43-4-0191) composition

D.1 CGO BS 1 (#43-4-0191) composition

Table D.1 provides a summary of those sites that have been integrated into CGO BS1 and their current status, previous and current significance and existing consent/permits. In relation to mitigation strategies, these sites would currently be managed as outlined in Section 3.3. No mitigation activities for these sites are proposed in EMM (2023) should the project be approved, with a focus on sites of high and moderate significance only.

Table D.1 Previous and current significance of the cultural assemblage

AHIMS #	Site	Site type	Status	Potential impact?	Within existing permit?	Niche's (2018) significance assessment	Niche's (2019) significance assessment	EMM's (2023) significance assessment	Current significance classification
43-4-0191	CGO BS1	Included here to capture EMM's (2023) field survey results of CGO AS1-4, AS6-7 and IF1	Valid	Yes	Consent 1680/Permit 1681, Consent 1467/Permit 1468, AHIP C0004570	-	-	Low	Low
39-4-0286	Lake Cowal 2017-049	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0293	Lake Cowal 2017-039	Low density artefact scatter	Partially destroyed	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0294	Lake Cowal 2017-040	Low density artefact scatter	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0295	Lake Cowal 2017-041	Low density artefact scatter	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0296	Lake Cowal 2017-042	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0297	Lake Cowal 2017-038	Isolated find	Presumed destroyed	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0307	Lake Cowal 2017-028	Isolated find	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0308	Lake Cowal 2017-025	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0309	Lake Cowal 2017-026	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low

Table D.1 Previous and current significance of the cultural assemblage

AHIMS #	Site	Site type	Status	Potential impact?	Within existing permit?	Niche's (2018) significance assessment	Niche's (2019) significance assessment	EMM's (2023) significance assessment	Current significance classification
39-4-0310	Lake Cowal 2017-027	Low density artefact scatter	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0312	Lake Cowal 2017-022	Low density artefact scatter	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0313	Lake Cowal 2017-023	Low density artefact scatter	Valid	Yes	Consent 1467/Permit 1468	High	High	Low	Low
39-4-0314	Lake Cowal 2017-024	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0315	Lake Cowal 2017-003	Low density artefact scatter	Valid	No	AHIP C0004570	-	Low	Low	Low
39-4-0319	Lake Cowal 2017-007	Isolated find	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0320	Lake Cowal 2017-008	Low density artefact scatter	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0321	Lake Cowal 2017-009	Isolated find	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0322	Lake Cowal 2017-010	Low density artefact scatter	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0323	Lake Cowal 2017-011	Low density artefact scatter	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0325	Lake Cowal 2017-013	Low density artefact scatter	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0326	Lake Cowal 2017-014	Isolated find	Valid	No	AHIP C0004570	Low	Low	Low	Low
39-4-0327	Lake Cowal 2017-020	Isolated find	Valid	No	Consent 1467/Permit 1468	Low	Low	Low	Low
39-4-0333	Lake Cowal 2017-001	Isolated find	Valid	No	Consent 1680/Permit 1681	Low	Low	Low	Low

Table D.1 Previous and current significance of the cultural assemblage

AHIMS #	Site	Site type	Status	Potential impact?	Within existing permit?	Niche's (2018) significance assessment	Niche's (2019) significance assessment	EMM's (2023) significance assessment	Current significance classification
43-3-0024	Cowal site LC4	Medium density artefact scatter	Destroyed	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0027	H	Medium density artefact scatter	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0034	L-C-2	Stone quarry, artefact(s)	Presumed destroyed	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0035	L-C-3	Stone artefact component only	Presumed destroyed	Yes	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0045	Wamboyne Back Plain Site 2	Isolated find	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0085	Lake Cowal 2018.050	Isolated find	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0086	Lake Cowal 2018.049	Isolated find	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0087	Lake Cowal 2018.055	Isolated find	Presumed destroyed	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0088	Lake Cowal 2018.056	Low density artefact scatter	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0089	Lake Cowal 2018.054	Low density artefact scatter	Valid	No	Consent 1467/Permit 1468	-	-	Low	Low
43-4-0092	Lake Cowal 2018.051	Low density artefact scatter	Valid	Nil	Consent 1467/Permit 1468	-	-	Low	Low

Attachment E

Additional archaeological investigations

E.1 Hearth investigations

E.1.1 Approach and methods

EMM conducted archaeological investigations at 15 hearth sites across the Project disturbance footprint with the assistance of Aboriginal participants from 6–9 November 2023 (inclusive). These works were undertaken in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010) and consisted of localised intensive surveys to re-identify registered hearth sites prior to the excavation of small manually dug test pits centred on each hearth site, where applicable. The excavation was directed by Cameron Neal (EMM Archaeologist), with the archaeological team consisting of Mikhaila Chaplin (EMM Archaeologist) and Amber Morgan (EMM Graduate Archaeologist). Aboriginal participants included Richard Coe and Eugene Coe (Wiradjuri Condobolin Corporation). Linton Howarth (West Wyalong LALC) was also scheduled to participate, but informed EMM on the morning of 7 November he was unable to attend for the week.

The primary aims of the investigation were to:

- identify the existence and assess the extent of any remnant archaeological remains associated with previously registered hearth sites in the proposed disturbance footprint
- make an assessment as to the cultural or natural origin of previously registered hearth sites in the proposed disturbance footprint
- assess the condition of remnant archaeological remains associated with previously registered hearth sites in the proposed disturbance footprint
- identify and assess the age of remnant hearth features through post-excavation analysis
- better assess the significance of the 13 hearth sites to inform and direct future Aboriginal heritage management measures.

Archaeological investigations were implemented in accordance with the *Code of Practice for the Investigation of Aboriginal Objects in NSW* (DECCW 2010). In summary, the following methods were adopted for the investigation:

- Each registered hearth site was re-identified using the Fieldmaps application for ArcGIS (Esri© software) in conjunction with a handheld Garmin GPS unit.
- A localised intensive survey was carried out at the registered coordinates of each site. An area of at least 25 m² was cleared at sites where long grass obscured ground surface visibility.
- Re-identified hearth features (i.e. heat retainers) were recorded and photographed.
- Following re-identification of hearth features, an initial test pit measuring 0.25 m² was excavated at the registered coordinates of a given site. Further test pits were excavated in a contiguous grid where doing so was deemed possible to expose further archaeological features. All excavation pits were spatially located using digital site recording forms created by EMM on the Survey123 application for ArcGIS (Esri© software). These had a location accuracy of up to ± 3 m which is similar to hand-held non-differential GPS units (~ 5 m).
- Excavation of units in 5 cm spits or according to stratigraphic units, whichever was smaller.
- Manual excavation continued to either: i) the base of the cultural deposits; or ii) the depth of the underlying geology.

- Dry sieving of all excavated material through a 3 mm sieve.
- Soil profiles and archaeological features were recorded in accordance with the Code of Practice including scaled drawings, photographs, and written descriptions.

Assessing the condition of each site was a key objective. In doing so, EMM followed methods set out in Fanning et al (2009: 16-17) who define six categories of increasing disturbance: buried, partially exposed, intact, disturbed, scattered, and remnant (see Table E.1).

Lastly, it is important to note that investigation efforts were dependant on AHIMS site cards, which contained brief site descriptions and often omitted important information such as detailed site characteristics and photographs.

Table E.1 **Hearth definitions**

Category	Type	Description
1	Buried	Undisturbed buried hearths that have only the tops of the heat retainers visible above the surface.
2	Partially exposed	Hearths where most heat retainers are buried, with some exposed above ground surface.
3	Intact	Completely exposed hearths that remain undispersed.
4	Disturbed	Hearths roughly circular in shape and featuring somewhat dispersed heat retainers.
5	Scattered	Hearths lacking a distinguishable regular shape and centre, and heat retainers are unevenly dispersed across the ground surface.
6	Remnant	Hearths featuring a circular form around a centre area lacking heat retainers.

E.1.2 Results

At the onset of the investigations, it was promptly identified that three sites has been destroyed by mining activities associated with the expansion of the tailings dam, including #39-4-0273, #39-4-0274 and #39-4-0277A. This resulted in 12 targets proposed for investigation, including #39-4-0275, #39-4-0276, #39-4-0284, #39-4-0288, #39-4-0289, #39-4-0290, #39-4-0291, #39-4-0292, #39-4-0301, #39-4-0302, #39-4-0305, and #39-4-0328.

Of these 12 sites, seven were successfully re-identified and five were unable to be found (Table E.2). Of the latter, two sites (#39-4-0305 and #39-4-0328) were situated in areas with low to nil visibility due to the presence of long grass. In these instances an area of approximately 25 m² was mechanically cleared to increase visibility (as described in Section E.1.1 above; Plate E.1). After ground clearance at these two sites, visibility improved and the area was inspected thoroughly by the field team. Despite good visibility and intensive survey efforts, #39-4-0305 and #39-4-0328 could not be re-identified. The remaining three sites unable to re-identified were #39-4-0275, #39-4-0288 and #39-4-0289. These sites were located in areas exhibiting good levels of visibility, as vegetation cover was sparse and ground surface exposures were relatively common (Plate E.2). Given this and extensive survey efforts to re-identify these sites, it is possible these sites represent a misidentification of burnt clay and charcoal occurring naturally across the Project area, and which have since eroded away. If they were of cultural origin, it is considered unlikely that they remain extant, and may be presumed destroyed.

The seven sites re-identified include #39-4-0276, #39-4-0284, #39-4-0290, #39-4-0291, #39-4-0292, #39-4-0301 and #39-4-0302 (Table E.3). These were situated in locales exhibiting varying levels of visibility (Plate E.3 to Plate E.5) and all were considered to be of cultural origin. One new hearth site was identified and was labelled “CGO 2023 Hearth 1” and registered on AHIMS as #43-4-0197 (Table E.3). This site was located in the vicinity of #39-4-0291, but was defined as a separate site due to being located 40 m to the south-east.

Five sites consisted of a single heated clay ball or heat retainer fragment scattered on the ground surface (defined as a ‘heat retainer’ by Niche 2019b), considered to be a fragment of a hearth or campfire (see Table E.3 for site descriptions) (Plate E.7 and Plate E.8). One site is described as consisting of four heat retainers and another as consisting of seven (#39-4-0291 and #39-4-0292, respectively), however only one heat retainer fragment was able to be re-identified at both sites.

Six test pits were manually excavated across five sites; a single test pit was excavated at four sites and two test pits were excavated at one site, totalling an excavated area of 1.5 m². Across all seven sites test excavations revealed a shallow soil profile (<20 cm) consisting of sandy clay loam overlying hard-setting brown clay (Plate E.8 to Plate E.11). Test excavations largely did not reveal any sub-surface hearth features or deposits. One small clay ball was recovered from excavations at #39-4-0302, but no further cultural materials such as ashy or charcoal deposits, or circular concentrations of burnt clay, were encountered. Test pits were not excavated at #39-4-0290 and #39-4-0292 as these sites were situated on the surface of a truncated subsoil (Plate E.12), and it was therefore considered that any cultural deposit in those locales had already been lost or destroyed.

Following definitions set out by Fanning et al. (2009: 16-17), the condition of each re-identified hearth site was visually assessed and defined according to the definitions listed in Table E.1. According to these criteria, wholly or almost wholly undisturbed hearth sites may be defined as ‘Buried’, ‘Partially exposed’, or ‘Intact’. Such sites may be identified on the basis of low levels of disturbance and the presence of hearth features (e.g. in situ clay balls, charcoal deposits and extensive lithic scatters) partially buried or exposed in a consolidated, circular or semi-circular arrangement. None of the seven re-identified hearth sites can be defined as such. Instead, their condition was defined as ‘Scattered’ as they consisted only of heavily eroded individual burnt clay fragments lying on the ground surface, and thus not part of a larger consolidated array of hearth features, nor were they associated with extensive lithic scatters or charcoal deposits.

A total of six stone artefacts were recovered during excavations. All artefacts were quartz. The cultural status of these objects is uncertain, as quartz is commonly difficult to identify as artefactual or natural, however if they were of cultural origin they would be considered debitage, reflective of background scatter and not comparable to lithic scatters recorded by Pardoe near more intact hearths (EMM, 2023; Pardoe 2003, 2009a, 2009b, 2013).

Table E.2 List of hearth sites attempted for re-investigation

AHIMS ID	Site features	Re-identified Y/N
39-4-0275	One heat retainer	N
39-4-0276	One small heat retainer	Y
39-4-0284	One medium heat retainer	Y
39-4-0288	One medium heat retainer	N
39-4-0289	Two oven stone fragments, one isolated quartz flake	N
39-4-0290	Two oven stone fragments	Y
39-4-0291	Four oven stone fragments	Y – partial re-identification
39-4-0292	Seven oven stones	Y – partial re-identification
39-4-0301	One heat retainer	Y
39-4-0302	One heat retainer	Y
39-4-0305	One intact hearth and one heat retainer	N
39-4-0328	One hearth stone	N

Table E.2 List of hearth sites attempted for re-investigation

AHIMS ID	Site features	Re-identified Y/N
43-4-0197	One heat retainer	N/A

Note: The 'Site Features' column is derived from information contained in AHIMS site cards, which often provide only brief details and may omit important information.

Table E.3 Summary of re-investigated hearth sites

AHIMS ID	Condition	Excavated extent (m ²)	Further features identified (Y/N)	Site description
39-4-0276	Scattered	0	N	Single heat retainer identified by Niche. Not excavated due to no visible subsurface archaeological features and situation of heat retainer on clay subsoil exposure.
39-4-0284	Scattered	0.25	N	One heat retainer located in the vicinity of #39-4-0284. Due to lack of documentation unclear whether this feature is the one originally recorded by Niche.
39-4-0290	Scattered	0	N	Single heat retainer re-identified in wash out erosion scar. Heat retainer is situated on subsoil exposure and was not considered to be associated with subsurface hearth features. Therefore it was not excavated.
39-4-0291	Scattered	0.25	N	Hearth originally identified by Niche. Four stone artefacts found in same location. One banded chert, one coarse volcanic core fragment, one fine-grained volcanic flake and one fine grained volcanic flake, potentially horseshoe. Some cortex present. One heat retainer identified of four originally recorded. Sample taken and one 0.25m pit excavated. No further features identified.
39-4-0292	Scattered	0	N	One heat retainer identified along fenceline, considered to be associated with 39-4-0292. Original recording by Niche states 7 heat retainers are present but systematic searching could identify only one. Brief documentation in site cards suggests original recording of 7 retainers may be erroneous. No excavation carried out here due to heat retainers location on a subsoil exposure in area previously disturbed by fenceline.
39-4-0301	Scattered	0.25	N	Singular heat retainer approximately fist-sized identified on flat grassland. One test pit placed on top of registered location, excavated to 15 cm before hitting subsoil. No other hearth features identified. Heat retainer considered to be cultural.

Table E.3 Summary of re-investigated hearth sites

AHIMS ID	Condition	Excavated extent (m ²)	Further features identified (Y/N)	Site description
39-4-0302	Scattered	0.50	Y – small clay ball	One clay heat retainer identified by Niche. No observable charcoal on exterior. One further potential heat retainer identified. This was labelled and bagged. One potential quartz artefact identified. Pit expanded to south following identification of these features. No further features identified.
39-4-0305	Scattered	0	N	Could not be re-identified. Site card describes site as 'one intact hearth and one heat retainer in long grass.'
39-4-0328	Scattered	0	N	Could not be re-identified. Site card describes site as 'one hearth stone'.
43-4-0197	Scattered	0.25	N	Single clay heat retainer identified by Eugene Coe (WCC) in vegetation rehabilitation area west of Geology offices. Heat retainer is ~4.5 cm wide at widest point and is rubified at base, brown / black / grey towards top. One 0.25 m ² pit excavated at hearth location. No further archaeological features identified.



Plate E.1 View west showing the registered location of AHIMS #39-4-0328. Despite improved visibility this site was not re-identified



Plate E.2 View south showing registered location of AHIMS #39-4-0289. Despite good visibility this was not re-identified



Plate E.3 View north showing good ground visibility at registered location of AHIMS #39-4-0276



Plate E.4 View north showing improved ground visibility at registered location of AHIMS #39-4-0301



Plate E.5 Overview of AHIMS #39-4-0302 as encountered by the field team



Plate E.6 Overview of AHIMS #39-4-0301 as encountered by the field team



Plate E.7 Detail photograph of AHIMS #39-4-0290



Plate E.8 Detail photograph of AHIMS #39-4-0292



Plate E.9 Overview of test pit excavated at AHIMS #43-4-0197



Plate E.10 Overview of test pits excavated at AHIMS #39-4-0302

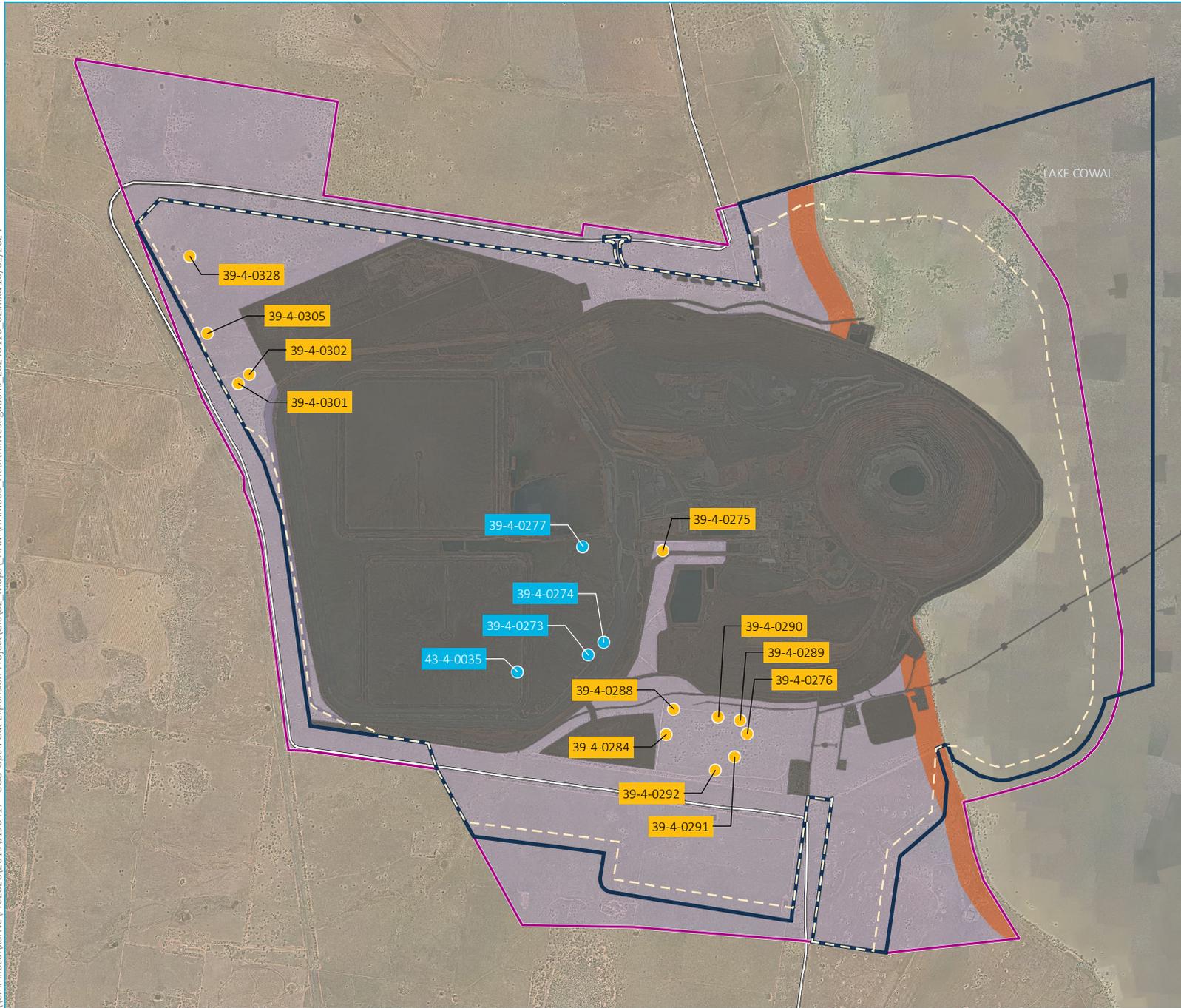


Plate E.11 Section photograph of test pit excavated at AHIMS #39-4-0302



Plate E.12 View north showing location of AHIMS #39-4-0290, situated on a clay subsoil exposure

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- KEY
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
 - Proposed hearth excavation
 - Hearth destroyed
 - Lake edge zone (43-4-0189)
 - Background scatter (43-4-0191)

Hearth investigations

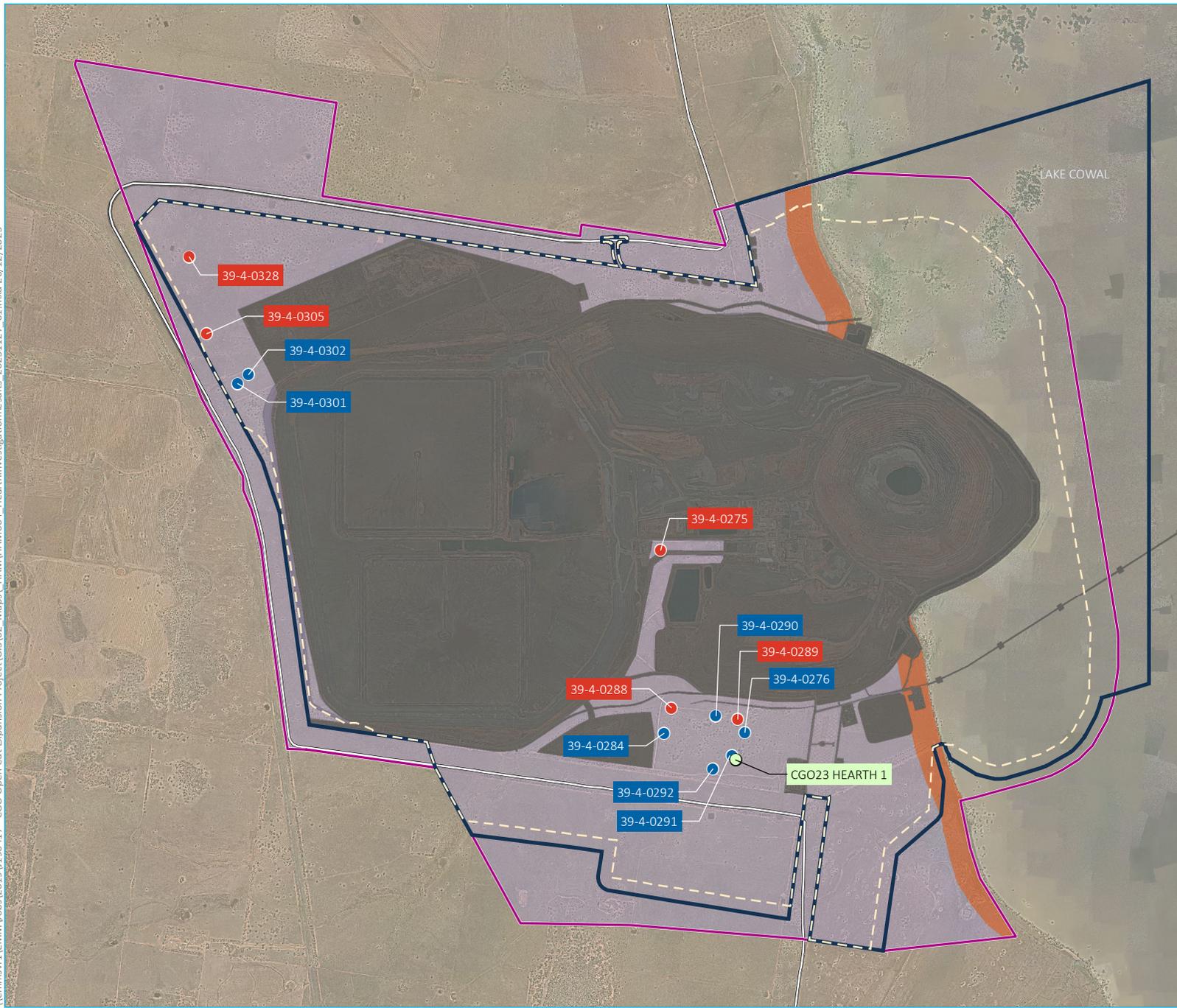
Evolution Mining
Cowal Gold Operations
Open Pit Continuation Project
ACHA Addendum
Figure E.1



Source: EMM (2024); Evolution (2023); DFSI (2017); OEH (2023); Nearthmap (2023)



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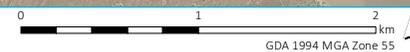
- KEY**
- EIS study area
 - Project area
 - Proposed OPC disturbance footprint
 - DA14/98 approved surface disturbance
 - Major road
 - Lake edge zone (43-4-0189)
 - Background scatter (43-4-0191)
- Hearth investigation results**
- Re-identified
 - Could not be re-identified
 - Newly identified site

Hearth investigation results

Evolution Mining
 Cowal Gold Operations
 Open Pit Continuation Project
 ACHA Addendum
 Figure E.2



Source: EMM (2023); Evolution (2023); DFSI (2017); OEH (2023); Nearmap (2023)



E.2 Photographic log

Photo 1: N	Photo 2: Overview	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Photo 1: NE	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Site name: 39-4-0284

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

Photo 1: S	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Site name: CGO23 Hearth 1

Photo 1: N	Photo 2: E	Photo 3: S	Photo 4: W
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:
			

Site name: 39-4-0276I

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

Site name: 39-4-0289

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

Site name: 39-4-0305

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

Site name: 39-4-0328

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

Site name: 39-4-0275

Photo 1:	Photo 2:	Photo 3:	Photo 4:
			
Photo 4:	Photo 5:	Photo 7:	Photo 8:

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