

INTEGRA UNDERGROUND

GLENCORE



Historical Heritage Management Plan

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1 Background

This Historical Heritage Management Plan (HHMP) is one of a series of Environmental Management Plans that together form the Environmental Management System for the Glencore Integra Underground Mine, herein referred to as Integra Underground.

The Integra Underground is approximately 12 km north-west of Singleton, in the Singleton Local Government Area (**Figure 1**). Underground mining operations are approved at a maximum extraction rate of 4.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until 31 December 2035 under Project Approval 08_0101 (as modified). This approval allows longwall mining of the Hebden, Barrett and Middle Liddell seams to produce high quality, semi-hard coking coal for export.

The Integra Underground was formerly a part of the larger Integra Mine Complex. This complex comprised both underground and open cut operations and operated under a single project approval instrument which combined the project approvals for the Integra Underground (PA 08_0101) and Integra Open Cut (PA 08_0102). In late 2015, HV Coking Coal Pty Ltd (HVCC) (a 100% Glencore-owned company) acquired all assets associated with the Integra Underground, which had been placed in care and maintenance in May 2014. Bloomfield Collieries Pty Limited (Bloomfield) purchased the open cut and surface facilities (subsequently re-named the Rix's Creek North Mine).

Following the separate sale of the underground and open cut, the combined project approval was modified to separate the approvals. Following the separation of the approvals Integra Underground operated under PA 08_0101 as modified.

HVCC recommenced underground operations in 2017, with development resuming in February 2017 and longwall extraction resuming in May 2017 in accordance with the Extraction Plan as required under Condition 20 of Schedule 3 of PA 08_0101. An application for a further modification to PA 08_0101 (MOD 7) and accompanying Environmental Assessment (EA) was lodged with the Department of Planning and Environment (DPE) in June 2017. Subsequently, approval was granted by DPE on 18 September 2017. The modification application was made to facilitate the construction of a water pipeline from Integra Underground to the adjacent Mt Owen Complex and the subsequent use of the pipeline to transfer mine water. The modification enables surplus mine water collected at Integra Underground to be managed at the Mt Owen Complex and within Glencore's Greater Ravensworth Area Water Sharing Scheme (GRAWSS).

An application for Modification 8 (MOD 8) to PA 08_0101 and accompanying EA was lodged with the DPE in November 2017. Approval was granted by DPE on 16 April 2018. MOD 8 allows continuation of longwall mining of the Middle Liddell Seam further to the north of the currently approved longwall panels, along with the construction and operation of ancillary surface infrastructure required to support the mining activities.

1.1 Objectives

This management plan satisfies Schedule 3 Conditions 20(g) and 33 of PA 08_0101, which requires the preparation of an HHMP.

The objectives of this management plan are to:

- a) address the historical heritage and archaeological management issues associated with Integra Underground;
- b) provide a description of the measures to be implemented to manage and protect known heritage values within and in the vicinity of Integra Underground;
- c) identify personnel responsible for the effective implementation of these measures; and
- d) identify a process of review and improvement.

This management plan has been prepared with regards to the principles contained in *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS 1999). It also draws on information provided by the Heritage Division, Office of Environment and Heritage (OEH) with regards to the preparation of Conservation Management Plans (CMPs) and Conservation management Strategies (CMSs), as well as, information within *The Conservation Plan A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance* (Kerr 1996).

The management of Aboriginal cultural heritage at Integra Underground is addressed in the Aboriginal Cultural Heritage Management Plan (AHMP). Together, the AHMP and the HHMP form the overall Heritage Management Plan (HMP) for Integra Underground.

1.1.1 Statutory Requirements

PA 08_0101 stipulates requirements related to this HHMP which are summarised in **Table 1-1**.

Table 1-1 – Relevant Project Approval Conditions

PA 08_0101 Condition	Project Approval Condition Description	Relevant Section of Plan
Schedule 3, Condition 33	The proponent must prepare a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:	This plan
	a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;	This HHMP has been reviewed by Pamela Kottaras of EMM Consulting in accordance with correspondence from the NSW Department of Planning and Environment (DPE) dated 19 December 2016 (refer to Appendix A)
	b) be prepared in consultation with OEH, the Aboriginal community, the Heritage Division, Council, local historical organisations and any relevant landowners;	Section 1.2 and Appendix B.
	c) be submitted to the Secretary for approval;	The HHMP was originally submitted to the Secretary for approval on 8 December 2016 and subsequently approved on 6 April 2017. Revision 2 of the HHMP was submitted to the Secretary for approval on 18 September 2017 and subsequently approved on 28 September 2017 (refer to Appendix C).
	e) include programs/procedures for the following, in accordance with the applicable guidelines of the Heritage Division: - archival recording of any other heritage items to be destroyed by the project; - conserving, managing, monitoring, and where appropriate, relocating any non-Aboriginal sites, objects and deposits on the site; - interpreting the findings of the additional heritage or archaeological investigations carried out on the site; and - managing the discovery of any new non-Aboriginal objects or skeletal remains identified during the project.	Section 3
	The proponent must implement the approved management plan as approved from time to time by the Secretary.	This plan
Schedule 5, Condition 2	The Proponent must ensure that the management plans required under this approval are prepared in accordance with	This plan

PA 08_0101 Condition	Project Approval Condition Description	Relevant Section of Plan
	any relevant guidelines, and include:	
	a) detailed baseline data;	Section 2
	b) a description of: the relevant statutory requirements (including any relevant approval, licence or lease conditions); any relevant limits or performance measures/criteria; and the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;	Section 1
	c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Section 3
	d) a program to monitor and report on the: impacts and environmental performance of the project; and effectiveness of any management measures;	Section 4
	e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 5.2 and Appendix D (Trigger Action Response Plan)
	f) a program to investigate and implement ways to improve the environmental performance of the project over time;	Section 5.1
	g) a program to regularly review management practices to align with contemporary best practice industry standards;	Section 5.1
	h) a protocol for managing and reporting any: incidents; complaints; non-compliances with the conditions of this approval and statutory requirements; and exceedances of the impact assessment criteria and/or performance criteria; and	Sections 3.1, 3.2 and 5.3
	i) a protocol for periodic review of the plan.	Section 5.1

Table 1-2 includes a description of the obligations that are identified in the Statement of Commitments appended to PA 08_0101.

Table 1-2 – Relevant Statement of Commitments

Desired outcome	Existing or proposed actions	Relevant Section of HHMP
Operations are managed such that adverse impacts to significant Aboriginal and Historical Heritage items are avoided, minimised and/or offset.	Infrastructure will be sited to avoid impacts to known heritage sites. Should impacts be unavoidable, OEH and the local Aboriginal community representatives should be consulted.	Section 2.2

Table 1-3 includes all obligations that are identified within the Environmental Assessments for MOD 7 and MOD 8 to PA 08_0101.

Table 1-3 – Relevant Commitments from MOD 7 and MOD 8 Environmental Assessments

EA Commitment	Timing	Relevant Section of Plan
MOD 7 - Integra to Mount Owen Complex Water Pipeline Modification Environmental Assessment (Hansen Bailey 2017a)		
7. The relevant heritage management plans for Integra and MOC will be updated to include the locations of sites MOH13 and MOH14.	Following approval of MOD 7	Section 2.2
8. The 'chance finds' protocols in Integra's and MOC's heritage management plans will be implemented if any previously unidentified heritage items are encountered during construction.	As required	Section 3.2
MOD 8 – Longwall Extension Modification Environmental Assessment (Hansen Bailey 2017b)		
18. The chance finds protocol in the Historical Heritage Management Plan will be followed in a potential historical site or item is identified.	As required	Section 3.2

1.2 Consultation

DPE endorsed the appointment of Pamela Kottaras, of EMM Consulting Pty Limited (EMM) to prepare this HHMP. A copy of the correspondence confirming this endorsement is included in **Appendix A**.

As per condition 33 (b) of Schedule 3 of PA 08_0101, this HHMP has been prepared in consultation with OEH, the Heritage Division, and Singleton Council. A copy of the correspondence between Integra Underground and OEH, the Heritage Division and Singleton Council is provided in **Appendix B**.

Condition 33 (b) of Schedule 3 of PA 08_0101 also requires the HHMP to be prepared in consultation with local historical organisations and any relevant landowners. Accordingly, a copy of this management plan was provided to the Singleton Historical Society & Museum Inc, requesting their review and comment. A copy of this correspondence is included in **Appendix B**.

No private landholders are likely to be affected by the minimal surface disturbances expected as part of Integra Underground's operations.

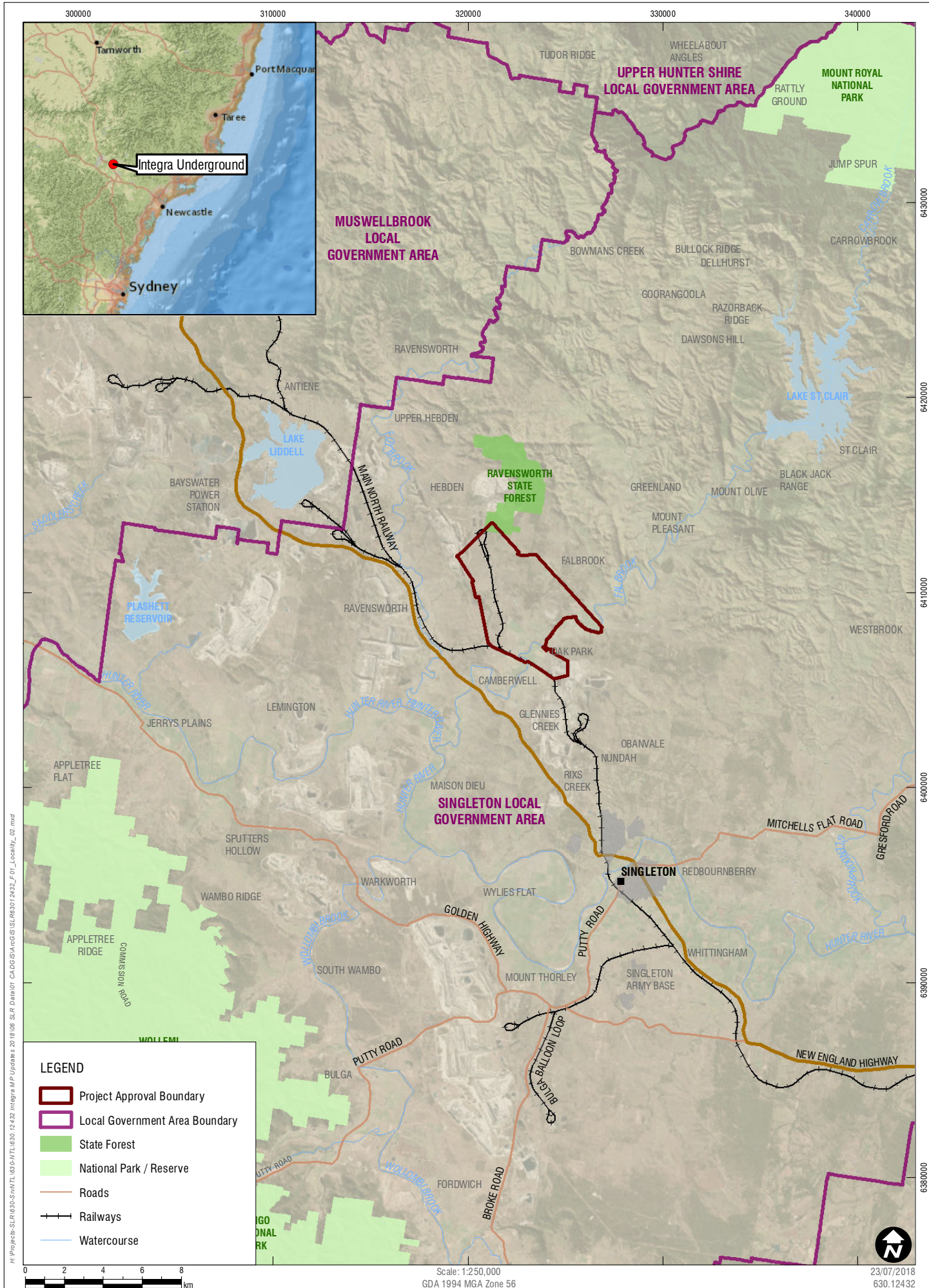
The Mt Owen Complex is adjacent to Integra Underground, with the underground workings underneath the complex in parts. The complex consists of the Mt Owen, Ravensworth East and Glendell open cut coal mines which are owned and managed by Mt Owen Pty Limited (Mt Owen) on behalf of Glencore Coal Australia Pty Limited (Glencore). Mt Owen is a wholly owned subsidiary of Glencore. The project boundary for the Mt Owen Complex overlaps with the Integra Underground project area.

During the development of the extraction plan for Integra Underground's operations, Integra Underground consulted with representatives from the Mt Owen Complex to discuss the potential for minor surface disturbances on land owned and managed by Mt Owen on behalf of Glencore. Given the overlap between the two operations, this HHMP for Integra Underground has been prepared with reference to the HHMP prepared for the Mt Owen open cut and submitted to the DPE on 13 December 2016.

A copy of the DPE approval of the HHMP on 6 April 2017 is in **Appendix C**.

This HHMP has been reviewed and updated following approval of MOD 8 (see **Section 1**). The *Longwall Extension Modification Environmental Assessment* (Hanson Bailey 2017b) contains details of the consultation undertaken in relation to MOD 8.

The management of Aboriginal cultural heritage is addressed in the AHMP. Consultation with the Aboriginal community is detailed within the AHMP.



Locality Plan

FIGURE 1

2 Planning

2.1 Historical Research and Investigations

The *Assessment of Historical Archaeology: Integra Open Cut Project Singleton, NSW* (Nexus 2008) and *Integra Underground Coal Project Heritage Assessment* (ERM 2009a) established the historical context for the Integra Underground project area and its surrounds. These assessments focused on determining the locations of potential archaeological resources identified in previous archaeological investigations. These assessments involved:

- full land title searches of the archaeological investigation area;
- searches of the State Records Authority of NSW;
- searches in the Local Studies Section and the Information and Research Section of the Newcastle Regional Library;
- overlaying early surveyors' plans with current project plans utilising common cadastral and topographical information; and
- ground truthing of results across the archaeological investigation area.

The heritage assessment conducted by ERM (2009a) as part of the Environmental Assessment (EA) for the Integra Underground Mine did not identify any sites or items subject to any form of statutory heritage listing within the Integra Underground project area (ERM 2009b).

As part of the more recent Historic Heritage Assessment for the Mt Owen Continued Operations Project (Umwelt 2014), a number of additional potential historical heritage sites/items with no statutory listing were identified within the Integra Underground project area.

No additional historic sites were recorded during the heritage assessment conducted by OzArk (2017b) for MOD 8.

No further archaeological testing or archaeological investigations are warranted with regards to the management of historical heritage within the Integra Underground project area.

2.2 Potential Impacts

2.2.1 Overview

Key operational activities at Integra Underground include:

- longwall development within the Middle Liddell seam using continuous miners;
- longwall mining within the Middle Liddell seam. The approval for MOD 8 allows mining within LW 15 to 20;
- extraction of coal to a maximum of 4.5 Mtpa of ROM coal;
- subsidence monitoring and remediation as per the approved Integra Underground Extraction Plan;
- storage of ROM coal at the pit top and haulage of ROM coal to the Rix's Creek North Coal Handling and Preparation Plant (CHPP);
- operation of workshop and administration areas;
- ventilation and gas management; and
- on site water management as per the Integra Underground Water Management Plan (WMP).

The operation of Integra Underground will require minimal surface disturbance from time to time, with disturbance generally limited to six principal sources, including:

- exploration activities;
- gas drainage works;
- ventilation works;

- construction activities;
- minor subsidence remediation works, if required; and
- implementation of erosion and sedimentation controls associated with the above disturbance activities.

Therefore, with the exception of temporary gas drainage boreholes and some possible exploration, no other direct surface disturbance external to the above areas is proposed at Integra Underground.

During the development of the LW 13 – 14 Extraction Plan for Integra Underground's operations, Integra Underground consulted with representatives from the Mt Owen Complex to discuss the potential for minor surface disturbances on land owned and managed by Mt Owen on behalf of Glencore. This consultation will continue during the development of subsequent Extraction Plans for Integra Underground.

No private landholders are likely to be affected by the minimal surface disturbances expected as part of Integra Underground's operations.

Further information on the key surface disturbance activities is provided below.

2.2.2 Historical Heritage Sites

In 2009, ERM identified a number of potential unlisted historical heritage sites located within the Integra Underground project area. In addition to these items Umwelt, in 2014, and OzArk, in March and November 2017, identified further potential unlisted historical heritage sites located both within and in the immediate vicinity of the Integra Underground project area. A summary of the identified sites is provided in **Table 2–1** and they are illustrated on **Figure 2**. Each of these sites have either been destroyed as part of approved operations at the Mt Owen Complex or are unlikely to be impacted by Integra Underground's underground mining operations.

Sites MOH1, MOH2, MOH3 and MOH4 were destroyed as part of approved works at the Mt Owen Complex (refer to **Table 2–1**).

Sites MOH6, MOH7, MOH11 and MOH12 were photographically recorded as part of the investigations for the Historic Heritage Assessment for the Mt Owen Continued Operations Project (Umwelt 2014). With the exception of MOH11, these sites were assessed as having no significance and no research potential. The underground mining operations at Integra Underground will be progressing further away from MOH11. Subsequently, no management of site MOH11 is required.

Site MOH6 is located directly above LW13, as shown on **Figure 2**. As noted within the Mt Owen Historic Heritage Management Plan, this site is within the approved disturbance area for the Mt Owen Complex and will be impacted as part of works associated with the North Pit Continuation. As described above, the site was photographically recorded as part of the preparation of the Historic Heritage Assessment for the Mt Owen Continued Operations Project (Umwelt 2014). No further management of MOH6 was required as part of the Mt Owen Historic Heritage Management Plan. Main Creek Site 15 is not above the underground panels still to be mined. As part of the *Integra Underground Coal Project Heritage Assessment* (ERM 2009a), Main Creek Site 15 was assessed as being, "in sound condition and unlikely to be impacted by subsidence remediation works."

RE31 was previously destroyed as part of approved mining activities at the Mt Owen Complex.

The original line of road from Singletons Ford to Muscle Creek (now known as Muswellbrook) originally crossed the Integra Underground project area. As part of previous archaeological assessments of the Integra Underground project area, no evidence of the former road was identified (Nexus 2008; ERM 2009a). The *Integra Underground Coal Project Heritage Assessment* (ERM 2009a) concluded that any potential surviving ephemeral evidence would not be impacted by Integra Underground's underground mining operations (ERM 2009a).

A Historic Heritage Impact Assessment was undertaken by OzArk in March 2017 on behalf of HVCC for the pipeline works associated with PA 08_0101 MOD 7. The field survey identified two historical sites within the Assessment Boundary (MOH14 and Main Creek 15) and one historical site in close proximity to the Assessment Boundary (MOH13).

OzArk (2017a) determined that none of the sites (MOH13, MOH14 and Main Creek 15) satisfied any of the criteria for heritage significance stipulated in the guidelines *Assessing Heritage Significance* (Heritage Office, 2001).

MOH13 is situated outside the Assessment Boundary and was not impacted by the pipeline works.

The house ruins associated with MOH14 were not impacted by the pipeline works as the alignment was adapted to avoid traversing the driveway associated with this feature.

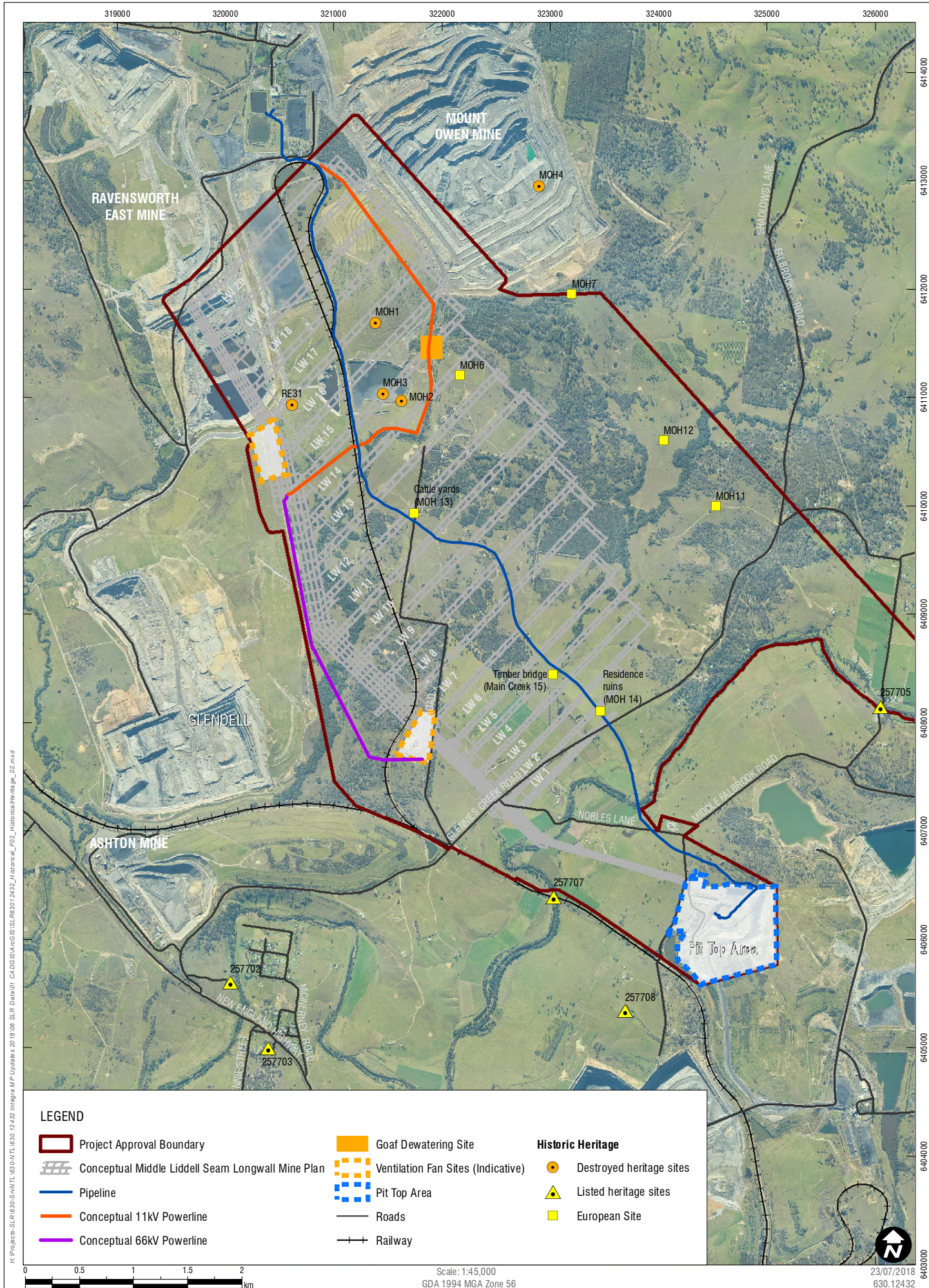
The timber bridge across Main Creek (Main Creek 15) is situated within the Assessment Boundary; however, is a sufficient distance from the alignment of the pipeline that impacts were avoided. Furthermore, during the construction process the bridge was not utilised by personnel to cross the creek line, thus mitigating any potential impacts to Main Creek 15.

OzArk completed another Historic Heritage Assessment in November 2017 for MOD 8, which confirmed that one historic heritage site (MOH6) remains within the underground extraction area. As discussed above, MOH6 was recorded by Umwelt in 2014 and OzArk (2017b) agrees that the site has no heritage values or research potential.

Table 2–1 Summary of potential historical heritage sites – Integra Underground project area

Site	Significance	Location	Management	Current status
MOH1 - Former dwelling	Local	Within Integra Underground project area	Previously approved by Heritage Council of NSW for removal	Destroyed
MOH2 - Former occupation site	Local	Within Integra Underground project area	Previously approved by Heritage Council of NSW for removal	Destroyed
MOH3 - Post and rail fence line	Local	Within Integra Underground project area	Previously approved by Heritage Council of NSW for removal	Destroyed
MOH4 - Former dairy floor, associated cattle yards and dwelling	Local	Within Integra Underground project area	Previously approved by Heritage Council of NSW for removal	Destroyed
MOH6 – Former house/dairy site	No significance	Within Integra Underground project area	No impacts – no management recommended	Present
MOH7 – Timber yards and shed	No significance	Within Integra Underground project area	No impacts – no management recommended	Present
MOH11 – Former house/dairy site	Local	Within Integra Underground project area	No impacts – no management recommended	Present
MOH12 – Former house site	No significance	Within Integra Underground project area	No impacts – no management recommended	Present
MOH13 – Timber cattle yards	No significance	Within Integra Underground project area	No impacts – no management recommended	Present
MOH14 – Ruins of farm house, with fireplace, concrete footings, timber posts, and exotic plantings along driveway.	No significance	Within Integra Underground project area	No impact –the alignment of the pipeline was adjusted to avoid the associated driveway	Present
Main Creek Site 15 – timber bridge	No significant heritage value	Main Creek Crossing	Unlikely to be impacted by subsidence remediation works and was avoided by the pipeline construction – no management recommended	Present
Original line of road from Singletons Ford to Muscle Creek	No significant heritage value	Within Integra Underground project area	No impacts – no management recommended	No evidence of road identified during archaeological surveys
RE31	Unknown	Within Integra Underground project area	Previously approved for removal	Destroyed
Source: ERM 2009a; Umwelt 2014; OzArk 2017				

As evident from the summary in **Table 2–1**, it is not anticipated that Integra Underground's underground mining operations will have any impact on the remaining historical heritage site identified within the Integra Underground project area.



3 Implementation

3.1 Management of Known Sites

All ground disturbance activities, including both exploration and gas drainage, will be carried out in accordance with the Glencore *Ground Disturbance Permit (GDP) Procedure* (CAA HSEC PRO 0002). As part of this procedure, prior to any surface disturbance being undertaken unless otherwise agreed with the Environment and Community Manager or delegate, detailed plans will be developed so that all potential impacts from these works are considered and appropriate mitigation measures are proposed.

If historical heritage sites are located within the disturbance area (including access tracks), these sites will be identified on the plans for the proposed disturbance works. If no historical heritage sites are located within the disturbance area (including access tracks), this will be verified against existing site data prior to the commencement of any surface disturbance works.

3.2 Discovery of New Historical Objects and Sites

If during the course of works any previously unknown historical archaeological material or heritage sites/items are uncovered or identified, all work in the area of the item(s) shall cease immediately and a suitably qualified and experienced archaeologist will be consulted.

If the archaeologist considers the archaeological material uncovered constitutes a 'relic' as defined by the Heritage Act, the Heritage Division, OEH will be consulted, in accordance with Section 146 of the Act (the Heritage Act), to determine an appropriate course of action prior to the recommencement of work in the area of the item.

A 'relic' under the Heritage Act (Part 1) is defined as any deposit, object or material evidence that:

- relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and
- is of State or local heritage significance.

Archaeological investigations, including excavation carried out in order to recover information through the excavation and recording of the archaeological remains, will be undertaken to normal professional standards and accepted best practice procedures in accordance with an archaeological work method statement (following endorsement from DPE).

3.3 Discovery of Skeletal Remains

In the unlikely event that a burial site or suspected human skeletal material is exposed during works, all relevant procedures for excavation and removal will be undertaken in accordance with the *Policy Directive –Exhumation of Human Remains* (NSW Department of Health 2008); *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office 1998) and the *Aboriginal Cultural Heritage Standards and Guidelines Kit* (NPWS 1997).

The following process is to be followed:

- as soon as remains are exposed, work will cease within a 10 m radius around the remains and temporary fencing will be erected to restrict access and allow assessment and management;
- contact local police, OEH and the Heritage Division;
- a physical or forensic anthropologist will inspect the remains in-situ, and make a determination of ancestry (Aboriginal or historical) and antiquity (pre-contact, historic or forensic);
- if the remains are identified as forensic the area is deemed as crime scene; or
- if the remains are identified as Aboriginal, the site is to be secured and the OEH and all registered Aboriginal parties are to be notified in writing; or

- if the remains are non-Aboriginal and historical in nature, the site is to be secured and the Heritage Division is to be contacted.

The above process functions only to appropriately identify the remains and secure the site. From this time, the management of the remains is to be determined through liaison with the appropriate stakeholders (NSW Police Force, forensic anthropologist, OEH, Heritage Division, DPE, registered Aboriginal parties, DPE endorsed archaeologist, etc.) and in accordance with the NSW *Public Health Act 1991*.

Any human skeletal remains uncovered during the course of works will be removed in a sensitive and dignified manner. Approval from NSW Health, under the NSW *Public Health Act 1991*, will be required prior to removing/exhuming any skeletal remains. Controlled excavation and removal by the site archaeologists and other appropriate specialists (forensic anthropologist, registered Aboriginal parties, NSW Police Force, as appropriate) will be undertaken in accordance with relevant guidelines and any requirements of the OEH, DPE and NSW Health.

Prior to removal, a site specific management plan for the removal of any potential human skeletal remains uncovered will be developed in consultation with a physical anthropologist, the Heritage Division, OEH, registered Aboriginal parties and other relevant stakeholder groups. The management plan would need to consider the issues detailed in *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office 1998). These issues include but are not limited to:

- excavation issues - including personnel who may be required, Occupational Health and Safety and recording.
- access issues - including limited access, security and stakeholder participation.
- management issues – including management of excavation and analysis, publicity, interpretation, location of interim resting place ongoing curation of recovered materials and professional access to data.
- re-interment and commemoration.

Locations of interim resting places and final re-interment/repository (as appropriate) for any human skeletal remains will depend on the nature of the remains and outcome of consultation. Interim resting places could comprise the Coroner's Office or Department of Forensic Medicine (if remains forensic), local undertakers or appropriate research facility (if historic) or an appropriate interim keeping place as indicated following consultation (if Aboriginal).

3.4 Training and Communication

A Historical Heritage Induction will be included as part of any inductions undertaken by site personnel and contractors through the GCAA *Generic Surface Induction* and the *Site Familiarisation*. The inductions will include (but not necessarily be limited to) the following:

- the nature and location of the potential archaeological sites;
- the significance of the potential archaeological resource;
- the nature of the management strategies being undertaken;
- procedures for contacting the Environment and Community Manager if previously unknown historical heritage items and/or artefacts are uncovered during works; and
- information related to the relevant legislation for the protection of historical heritage sites/items (particularly the provisions of Section 139 and 146 of the Heritage Act) and the penalties which may arise if sites/items are disturbed/destroyed.

4 Measurement and Evaluation

4.1 Monitoring

As no listed historical heritage sites/items have been identified within the Integra Underground project area, and the potential for historical archaeological items to be present is considered to be very low, no specific monitoring measures are required.

As described in **Section 2.2.4**, of the 12 unlisted historic heritage sites discovered in the Integra Underground project area through previous investigations conducted for both Integra Underground and the Mt Owen Complex, four have previously been destroyed as part of approved works at the Mt Owen Complex (MOH1, MOH2, MOH3 and MOH4) and six have been assessed as having no significance and no research potential (MOH6, MOH7, MOH12, MOH13, MOH14, Main Creek 15). MOH11, which was assessed as having local significance and low research potential, is not anticipated to be impacted by Integra Underground activities, with mining progressing further away from this item.

Site MOH6 is the only extant site located directly above the longwall panels to be mined (LW13). This site was photographically recorded as part of the preparation of the Historic Heritage Assessment for the Mt Owen Continued Operations Project (Umwelt 2014). Given that this site has been previously assessed as having no significance and no research potential, no further management or monitoring of MOH6 is considered necessary.

Notwithstanding the above, if any heritage items or potential archaeological resources are identified during the course of works, additional assessments may be required to be undertaken in accordance with professional standards and guidelines.

5 Review and Improvement

5.1 Plan Review

This HHMP will be reviewed (and revised if necessary) in accordance with the requirements of Schedule 5 Condition 6 of PA 08_0101.

5.2 Contingency Plan

The procedures to be implemented when unexpected finds are encountered during surface disturbance activities are documented in **Section 3.2**.

In the event that subsidence is greater than predicted, resulting in unexpected impacts to heritage sites, the procedures documented in the Trigger Action Response Plan provided in **Appendix D** will be followed.

6 Accountabilities

The general roles and responsibilities of staff at Integra Underground in respect of this HHMP are presented in **Table 6-1**.

Table 6-1 – Accountabilities

Role	Accountabilities for this document
Operations Manager	Provide adequate resources for the implementation of this management plan.
Environment and Community Manager or delegate	Coordinate the day to day implementation of this management plan, spanning both conservation and salvage activities. Include historical heritage induction component for all relevant mine personnel. Contact a suitably qualified and experienced archaeologist, the Heritage Division and OEH as appropriate should previously unknown historical archaeological material/ heritage sites/items be uncovered or identified. Contact all appropriate stakeholders in the event that human skeletal material is exposed during works. Maintain data for potential archaeological sites within the mines survey records. Coordinate reporting of results at the completion of any archaeological testing/investigation undertaken is completed. Coordinate the reviews of this management plan.
All personnel	Comply with all requirements of this management plan.

7 Document Information

Relevant legislation, standards and other reference information will be regularly reviewed and monitored for updates and will be included in any future revisions to this HHMP. Related documents listed in **Section 7.1** below provide the linkage and source to develop and maintain compliance information relevant to the HHMP.

7.1 Related Documents

Related documents, listed in **Table 7-1** below, are documents directly related to or referenced from this document. Internal procedures have not been reviewed or endorsed by DPE and Glencore is responsible for verifying these procedures are in accordance with this management plan and generally in accordance with the PA 08_0101.

Table 7-1 – Related documents

Number	Title
GCAA	
CAA-625378177-10266	11.21 – Aboriginal Cultural Heritage NSW Protocol
Integra Underground	
INTUG-263795162-23	Aboriginal Cultural Heritage Management Plan
INTUG-793190785-151	Extraction Plan – Longwalls 13 and 14

7.2 Reference Information

Reference information, listed in **Table 7-2** below, are directly related to or referenced in this document.

Table 7-2 – Reference information

Reference	Title
Australia ICOMOS 1999	The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance
ERM 2009a	<i>Proposed Integra Underground Coal Project Environmental Assessment</i>
ERM 2009b	<i>Integra Underground Coal Project Heritage Assessment</i>
Hansen Bailey 2017	Integra Underground Mine Longwall Extension Modification Environmental Assessment for HV Coking Coal Pty Ltd
Hanson Bailey 2018	Integra Underground Mine Longwall Extension Modification Response to Submissions for HV Coking Coal Pty Limited
Kerr 1996	<i>The Conservation Plan: A Guide to the Preparation of Conservation Plans for Places of European Cultural Significance</i>
Nexus 2008	<i>Assessment of Historical Archaeology: Integra Open Cut Project, Singleton NSW</i>
NPWS 1997	<i>Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1997).</i>
NSW Department of Health 2008	<i>Policy Directive –Exhumation of Human Remains</i>
NSW Heritage Office 1998	<i>Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977</i>
NSW Heritage Office 2006	<i>Photographic Recording of Heritage Items Using Film or Digital Capture</i>
SCT 2017	<i>Integra Underground Mine: Subsidence Assessment for LW13 and LW14 Extraction Plan</i>

Reference	Title
Umwelt 2014	<i>Historic Heritage Assessment – Mt Owen Continued Operations Project</i>
OzArk Environmental & Heritage Management 2017a	<i>Aboriginal and historic heritage impact assessment, water pipeline modification, Integra Underground</i>
OzArk Environmental & Heritage Management 2017b	<i>Aboriginal and Historic Heritage Impact Assessment, Longwall Extension Modification, Integra Underground Mine</i>

7.3 Change Information

A summary of the document history is provided in **Table 7–3** below.

Table 7-3 – Change information

Version	Date	Review team (consultation)	Change Summary
1.0	February 2017	Pamela Kottaras (EMM) Nicole Armit (EMM) Mark Robinson (Integra Underground) Chloe Piggford (Integra Underground)	New document for Integra Underground
2.0	September 2017	Chloe Piggford (Integra Underground) Andrew Crisp (EMM) Pamela Kottaras (EMM) Nicole Armit (EMM)	In accordance with Schedule 5 Condition 6 of PA 08_0101 MOD 6, this HHMP must be reviewed, and if necessary revised, following the approval of a modification of this consent. MOD 7 was approved on 18 September 2017.
3.0	June 2018	Sophie Nicholas and Chris Jones (SLR) Chloe Piggford (Integra Underground)	Update to reflect Modification 8 of PA 08_0101

Appendix A – Endorsement of Appointment of Consultant



**Planning &
Environment**

**Planning Services
Resource Assessments**
Contact: Thomas Watt
Phone: 9274 6375
Email: thomas.watt@planning.nsw.gov.au

Mr Mark Robinson
Environment and Community Manager
Integra Underground
PO Box 320
Singleton NSW 2330

Mark
Dear Mr Robinson,

Approval of Experts – Integra Underground Coal Mine

I refer to your letters dated 16 November 2016 requesting the Secretary's approval of experts to prepare management plans, as required under conditions 20, 33 and 41 of Project Approval (PA) 08_0101.

The Secretary has reviewed the nominations and is satisfied that the following persons are suitably qualified and experienced and has approved their appointment, as follows:

- Mark Robinson of Integra Underground mine (project coordinator), Chris Jones of SLR Global Environmental Solutions, Ken Mills of SCT Operations Pty Ltd and Andrew Dawkins of GeoTerra Pty Ltd to prepare the Extraction Plan, required under condition 20 in Schedule 3;
- Pamela Kottaras of EMM Consulting to prepare the Heritage Management Plan, required under condition 33 in Schedule 3; and
- Nicole Armit of EMM Consulting to prepare the Exploration Activities and Minor Surface Infrastructure Management Plan, required under condition 41 in Schedule 3.

If you wish to discuss this matter, please contact Thomas Watt on 9274 6375.

Yours sincerely,

Howard Reed
Howard Reed 19-12-16
Director
Resource Assessments
as nominee of the Secretary

Appendix B – External Consultation Records



Level 6, 10 Valentine Avenue
Parramatta NSW 2150

Locked Bag 5020
Parramatta NSW 2124
DX 8225 PARRAMATTA

Telephone: 61 2 9873 8500
Facsimile: 61 2 9873 8599

heritage@heritage.nsw.gov.au
www.heritage.nsw.gov.au

File No: SF16/52722
Job ID: DOC16/568628

Mr Mark Robinson
Environment and Community Manager
Middle Falbrook Road
SINGLETON NSW 2330

Dear Mr Robinson

RE: Recommencement of Integra Underground Coal Project (PA 08-0101 MOD 5)

I refer to your email dated 8 November 2016 referring to the change in the ownership and proposed recommencement of mining operations at Integra Underground Mine (Integra) and seeking feedback on the updated management plans for the development and extraction of LW13-14 in 2017-2018.

As delegate of the Heritage Council of NSW, I provide comments below on the document entitled *Non-Aboriginal Heritage Management Plan*, prepared by Integra Underground, Glencore, dated 4 November 2016.

In late 2015, HV Coking Coal Pty Ltd (HVCC) (a Glencore-owned Company) acquired all assets associated with the Integra Underground Mine. Prior to HVCC's purchase of the mine, it formed part of the larger Integra Mine Complex, comprised of both underground and open cut operations. Following separate sale of the underground and open cut, the combined project approval was modified and now operates under PA 08-0101 MOD 5. A management plan was required to satisfy Schedule 3 Condition 33 of project approval (PA) 08-0101 MOD 5, which provides in part:

33. The Proponent must prepare a Heritage Management Plan for the project to the satisfaction of the Secretary.

This plan must:

- (a) be prepared by a suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;*
- (b) be prepared in consultation with OEH, the Aboriginal community, the Heritage Division, Council, local historical organisations and any relevant landowners;*
- (c) be submitted to the Secretary for approval;*

and;

- (e) include programs / procedures for the following, in accordance with the applicable guidelines of the Heritage Division:*
 - archival recording of any other heritage items to be destroyed by the project;*
 - conserving, managing, monitoring, and where appropriate, relocating any non-Aboriginal sites, objects and deposits on the site;*
 - interpreting the findings of the additional heritage or archaeological investigations carried out on the site; and*
 - managing the discovery of any new non-Aboriginal objects or skeletal remains identified during the project.*

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

The *Non-Aboriginal Heritage Management Plan* (the Management Plan) referenced the heritage assessment conducted by ERM in 2009 as part of the Environmental Assessment (EA). The heritage assessment indicated that no sites or items were identified in the project area as being subject to statutory heritage listing, however, five potential non-listed non-Aboriginal heritage sites were identified within the Integra project area. The Management Plan noted that three of five potential archaeological sites were approved for removal (MOH1, MOH2 and MOH3), whilst the two remaining sites (MOH4 and Main Creek Site 15) are not above the underground panels still to be mined.

The Management Plan indicated that the Main Creek Site 15 was assessed as being, 'in sound condition and unlikely to be impacted by subsidence remediation works.' Archaeological investigations found no evidence of the former road from Singletons Ford to Muscle Creek which originally crossed the Integra project area. The Management Plan relied upon the findings from the assessment and indicated that any potential surviving ephemeral evidence would not be impacted by Integra's underground mining operations. Based on these findings, the assessment provided that no further archaeological testing or investigations are warranted with regard to the management of non-Aboriginal heritage within the Integra project area.

To mitigate future impact on potential archaeology, the Management Plan provided that should previously unknown or historical material or heritage sites/items be uncovered or identified, all work would cease in the area of the item(s) and a suitably qualified and experienced archaeologist will be consulted. Additionally, measures are proposed including monitoring in accordance with professional standards and guidelines if any heritage items or potential archaeological resources are identified during the course of works.

Based on the current information reviewed in this letter, the Management Plan adequately addresses the potential impact on archaeological sites as well as providing appropriate measures to mitigate that impact.

If you have any questions regarding the above matter please contact Anna Foroozani, State Heritage Assessment Officer at Anna.Faroozani@environment.nsw.gov.au or on 9985 6479.

Yours sincerely



28/11/2016

Katrina Stankowski
A/Manager Conservation
Heritage Division
Office of Environment and Heritage
As Delegate of the Heritage Council of NSW



Office of
Environment
& Heritage

DOC16/574014-1

Mr Mark Robinson
Integra Underground
Glencore
mark.robinson@glencore.com.au

Dear Mr Robinson

Integra Underground Recommencement - Review of Management Plans

I refer to your email dated 8 November 2016 notifying the Office of Environment and Heritage (OEH) of a change in ownership and proposed recommencement of mining operations at Integra Underground Mine. Your email sought feedback from OEH on the approved management plans for Integra which have been updated in line with the ownership changes and proposed development and extraction of LW13-14 in 2017/18.

As I indicated to you in a follow up email (10 November 2016), the Hunter Central Coast Region Planning Team has a significant workload at present. I had hoped to be able to provide a review of the following plans within the time frames provided: Rehabilitation – Mine Operations Plan, Aboriginal Heritage Management Plan, Biodiversity Management Plan and Water Management Plan. Unfortunately, it has not been possible to review these plans in the short time frame provided.

As I previously advised, the Non Aboriginal Heritage Management Plan was forwarded to OEH Heritage Division for review. I understand Heritage Division will provide advice on behalf of OEH and the Heritage Council of NSW in separate correspondence.

If you require any further information regarding this matter please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely

 28 NOV 2016

RICHARD BATH
Senior Team Leader Planning, Hunter Central Coast Region
Regional Operations

Locked Bag 1002 Dangar NSW 2309
Level 4/26 Honeysuckle Drive Newcastle NSW 2300
rog.hcc@environment.nsw.gov.au
ABN 30 841 387 271
www.environment.nsw.gov.au

From: Ihlein, Mark <mihlein@singleton.nsw.gov.au>
Sent: Tuesday, 15 November 2016 10:45 AM
To: Robinson, Mark (Integra Underground - AU)
Subject: Re: Integra Underground

Hi Mark

Apologies for the delay - the documents are satisfactory from Singleton Councils perspective.

Regards
Mark

Sent from my iPhone

On 15 Nov 2016, at 9:50 am, "Mark.Robinson@glencore.com.au<<mailto:Mark.Robinson@glencore.com.au>>"<Mark.Robinson@glencore.com.au<<mailto:Mark.Robinson@glencore.com.au>>> wrote:

Hi Mark,
Could you provide a response so we can progress the plans to Department of Planning for their review?

Kind regards
Mark Robinson
Integra Underground
Glencore
Telephone: +61 2 65774205
Mobile: 0439 131 585

From: Robinson, Mark (Integra Underground - AU)
Sent: Tuesday, 8 November 2016 3:33 PM
To: 'Ihlein, Mark'
Cc: Smith, Kelly (Integra Underground - AU)
Subject: RE: Integra Underground

Hi Mark,

As discussed last week, the Integra Underground Project Approval requires consultation with Council on the development management plans.
The approved management plans for Integra have been updated to account for the change in the ownership and proposed recommencement of operations for the development and extraction of LW13-14 in 2017-2018. Development is planned to commence 1 January 2107 with longwall extraction planned to commence in May 2017. The updated management plans to be developed in consultation with Council under the Integra Project Approval are attached for Councils review i.e.

- Heritage (Aboriginal and Non Aboriginal)
 - Water Management Plans
 - Rehabilitation (MOP) – (the appendices for Rehabilitation Cost Estimate and plans, are too large a file size to send by email and can be sent by file transfer if requested).
- Could you please provide any feedback by 15 November 2016?

Kind regards
Mark Robinson
Integra Underground
Glencore
Telephone: +61 2 65774205
Mobile: 0439 131 585

INTEGRA UNDERGROUND

GLENCORE

9 February 2017

Singleton Historical Society & Museum Inc
PO Box 120
Singleton NSW 2330

Dear Sir/ Madam

Glencore Integra Underground is required to prepare a Heritage Management Plan in accordance with Project Approval 08_0101. Schedule 3 Condition 33 of this approval requires that the Heritage Management Plan be prepared in consultation with Office of Environment and Heritage (including the Heritage Division), Singleton Shire Council, local historical organisations and any relevant landowners.

Please find enclosed a copy of the final draft Non-Aboriginal Heritage Management Plan for your review and comment.

If you have any queries or concerns, please contact Chloe Piggford, Environment and Community Manager, via email at Chloe.Piggford@glencore.com.au or phone at 02 6577 4241.

Yours sincerely



Chloe Piggford
Environment and Community Manager

PO Box 320, Singleton, NSW 2330
640 Middle Falbrook Road, Glennies Creek, NSW 2330
T + 61 2 6570 0880 F + 61 2 6576 1643 www.glencore.com
HV Coking Coal Pty Ltd ABN 45 605 492 804

From: Crawford, Mary-Anne <mcrawford@singleton.nsw.gov.au>
Sent: Wednesday, 11 July 2018 8:05 PM
To: Piggford, Chloe (Integra - AU)
Cc: Ihlein, Mark
Subject: RE: Integra Underground mine - Management Plans - for comment

Hi Chloe

Thank you for the opportunity to comment on the revised management plans.

Council has no comment on these plans at this time.

Could you please direct any future correspondence to myself and the standard Singleton email address, ssc@singleton.nsw.gov.au in the first instance, thanks

Regards,



MARY-ANNE CRAWFORD
**Manager Development and Environmental
Services**
T 02 6578 7337
M 0400 403 550
E mcrawford@singleton.nsw.gov.au
W singleton.nsw.gov.au

Appendix C – HHMP Approval



**Planning &
Environment**

Planning Services
Resource Assessments
Contact: Matthew Sprott
Phone: 8217 2054
Email: matthew.sprott@planning.nsw.gov.au

Chloe Piggford
Environment and Community Manager
Integra Underground
PO Box 320
Singleton NSW 2330

Dear Ms Piggford

Integra Underground Mine (PA 08_0101) – Management Plans

I refer to your letter of 8 December 2016 requesting the Secretary's approval of a number of management plans required under the conditions of approval for PA 08_0101, prior to the recommencement of operations at the Integra Underground Mine.

The Department notes that Glencore is seeking to pursue the staged recommencement of operations at the mine, commencing with the development of first workings for Longwalls 13-14 in February 2017 and progressing to longwall extraction in May 2017.

The Department has now completed its assessment of the final draft versions of the following management plans submitted via email on 10 February 2017:

- Air Quality and Greenhouse Gas Management Plan (condition 15, Schedule 3);
- Noise Management Plan (condition 9, Schedule 3);
- Biodiversity Management Plan (condition 32, Schedule 3);
- Heritage Management Plans for Aboriginal and non-Aboriginal heritage (condition 33, Schedule 3); and
- Exploration Activities and Minor Surface Infrastructure Management Plan (condition 41, Schedule 3).

The Department is satisfied that the above plans include appropriate management measures and adequately address the requirements of the project approval, for the purposes of developing first workings for Longwalls 13-14 of the Integra Underground Mine. However, the Department considers that these plans would benefit from further refinement to the description of the approved longwall layout, clarification of the flora and fauna species and vegetation communities overlying the project area and additional specificity around the measures that would be implemented through trigger action response plans to address the likely impacts of the development.

Consequently, I wish to advise that the Secretary conditionally approves the above plans for the purposes of developing the first workings for Longwalls 13-14. Glencore is required to consult further with the Department regarding the refinement and subsequent approval of these plans prior to the commencement of longwall extraction at the site.

Please ensure the effective date on the cover page of the above plans is revised to reflect the date of this letter. Once finalised please place a copy of the approved plans on your website.

If you wish to discuss this matter further, please contact Matthew Sprott at the details listed above.

Yours sincerely


Howard Reed 17.2.17
Director Resource Assessments
as the Secretary's nominee

Department of Planning and Environment
Level 22, 320 Pitt Street Sydney NSW 2000 | GPO Box 39 Sydney NSW 2001 | T 1300 305 695 | www.planning.nsw.gov.au



Planning Services
Resource Assessments
Contact: Robyn Skinner
Phone: 6575 3409
Email: robyn.skinner@planning.nsw.gov.au

Ms Chloe Piggford
Environment & Community Manager
Integra Underground
PO Box 320
Singleton NSW 2330

Dear Ms Piggford,

Integra Underground Mine (PA 08_0101) – Management Plans

This letter refers to the following site-wide management plans for Integra Underground Mine that were submitted to the Department for approval:

- Biodiversity Management Plan, submitted 3 April 2017 (condition 32 of Schedule 3); and
- Heritage Management Plans for Aboriginal and non-Aboriginal heritage, submitted 27 March 2017 (condition 33 of Schedule 3).

The Department notes these revised plans were submitted after the Department issued a conditional approval on 17 February 2017. The Department has since reviewed the revised plans and considers they now adequately address the full requirements of the relevant conditions. Consequently, the Secretary approves the above plans.

Once finalised please place a copy of the approved plans on your website and forward a copy to the Department.

If you wish to discuss this matter, please contact Robyn Skinner on 6575 3409.

Yours sincerely,


Howard Reed 6.4.17
Director Resource Assessments
as nominee of the Secretary



Planning &
Environment

Planning Services
Resource Assessments
Contact: Megan Dawson
Phone: 9274 6391
Email: megan.dawson@planning.nsw.gov.au

Ms Chloe Piggford
Environment & Community Manager
Integra Underground
PO Box 320
Singleton NSW 2330

Dear Ms Piggford,

**Integra Underground Mine (PA 08_0101)
Updated Management Plans following Modification 7**

I refer to your correspondence of 26 September 2017, submitting five updated management plans for Integra Underground Mine to the Department for approval. I understand that these plans have been updated to address the new activities and requirements approved under modification 7 on 18 September 2017.

The Department has reviewed the following plans and is satisfied that they meet the relevant requirements under PA 08_0101:

- Noise Management Plan (condition 9 of Schedule 3);
- Water Management Plan (condition 31 of Schedule 3);
- Biodiversity Management Plan (condition 32 of Schedule 3);
- Aboriginal Heritage Management (condition 33 of Schedule 3); and
- Historic Heritage Management (condition 33 of Schedule 3).

Consequently, I wish to advise that the Secretary approves the above plans. Please provide final (untracked) versions of these plans to the Department at your earliest convenience and place a copy of them on your website.

If you wish to discuss this matter further, please contact Megan Dawson on 9274 6391.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'M Sprott'.

28/09/17

Matthew Sprott
A/Director Resource Assessments
as nominee of the Secretary

Department of Planning and Environment
320 Pitt Street Sydney NSW 2000 | GPO Box 39 Sydney NSW 2001 | T 1300 305 695 | www.planning.nsw.gov.au



Planning &
Environment

Planning Services
Resource Assessments
Contact: Jack Murphy
Phone: 8217 2016
Email: jack.murphy@planning.nsw.gov.au

Ms Chloe Piggford
Environmental and Community Manager
Integra Underground

Email: chloe.piggford@glencore.com.au

Dear Ms Piggford,

**Integra Underground Project (08_0101)
Environmental Management Plans**

I refer to your email dated 7 September 2018, submitting a revised environmental management strategy and revised environmental management plans for the Integra Underground Project. The Department has reviewed the following documents:

- Heritage Management Plan dated September 2018 (condition 33, Schedule 3);
- Air Quality and Greenhouse Gas Management Plan dated September 2018 (condition 15, Schedule 3);
- Biodiversity Management Plan dated September 2018 (condition 32, Schedule 3);
- Environmental Management Strategy dated September 2018 (condition 1, Schedule 5);
- Water Management Plan dated September 2018 (condition 31, Schedule 3);
- Construction Traffic Management Plan dated September 2018 (condition 42, Schedule 3);
- Noise Management Plan dated September 2018 (condition 9, Schedule 3); and
- Exploration Activities and Minor Surface Infrastructure Management Plan dated September 2018 (condition 41, Schedule 3).

The Secretary has approved the above documents. Please ensure finalised copies of these documents are made available on the company's website.

Should you have any enquiries in relation to this matter, please contact Jack Murphy.

Yours sincerely,

Howard Reed
Director
Resource Assessments
as nominee of the Secretary

10.9.18

Appendix D – Trigger Action Response Plan

Characteristic	Trigger	Action	Response
Minor surface disturbance areas	Inadvertent disturbance or damage occurs to known and/or unknown historical heritage sites as a result of project-related activities, such as installation of gas drainage surface infrastructure.	Work will cease immediately and the area will be inspected by a qualified archaeologist to assess the level of impact on the site/s.	The Heritage Division, OEH will be notified. Work will not recommence until the required clearances are obtained. Remediation measures, if required, will be implemented in consultation with the Heritage Division. Any newly discovered historical heritage sites will be managed in accordance with the procedures outlined in Section 3.1 of the HHMP.
Subsidence	Subsidence induced surface cracking is greater than predicted and disturbs known historical heritage sites.	Known historical heritage sites will be inspected by a qualified archaeologist to assess the level of impact and to identify remediation measures, if required.	The Heritage Division, OEH will be notified. Remediation measures, if required, will be implemented in consultation with the Heritage Division.
	Earthworks required to remediate subsidence-induced erosion; surface cracking and/or ponding disturb historical heritage sites.	Work will cease immediately and the area will be inspected by a qualified archaeologist to assess the level of impact on the sites and to identify remediation measures, if required.	The Heritage Division, OEH will be notified. Remediation measures, if required, will be implemented in consultation with the Heritage Division. Re-profiling works will be undertaken in accordance with the landform presented in the MOP.