

Rasp Project Modification 11

State Significant Development Modification Assessment Report (MP07_0018-Mod-11)

March 2024





Acknowledgement of Country

The Department of Planning, Housing and Infrastructure acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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1 Introduction

Broken Hill Operations Pty Limited (BHOP), a wholly owned subsidiary of CBH Resources, owns and operates the Rasp Project (the project), an underground zinc, lead and silver mine located on Wilyakali traditional land and within the City of Broken Hill local government area. The mine has operated since the 1880s and is surrounded by the town of Broken Hill and other mining operations, including Broken Hill North Mine and Southern Operations (see **Figure 1**).

The mine operates under a Ministerial approval granted in January 2011 and has been modified ten times and allows mining operations until 31 December 2026.

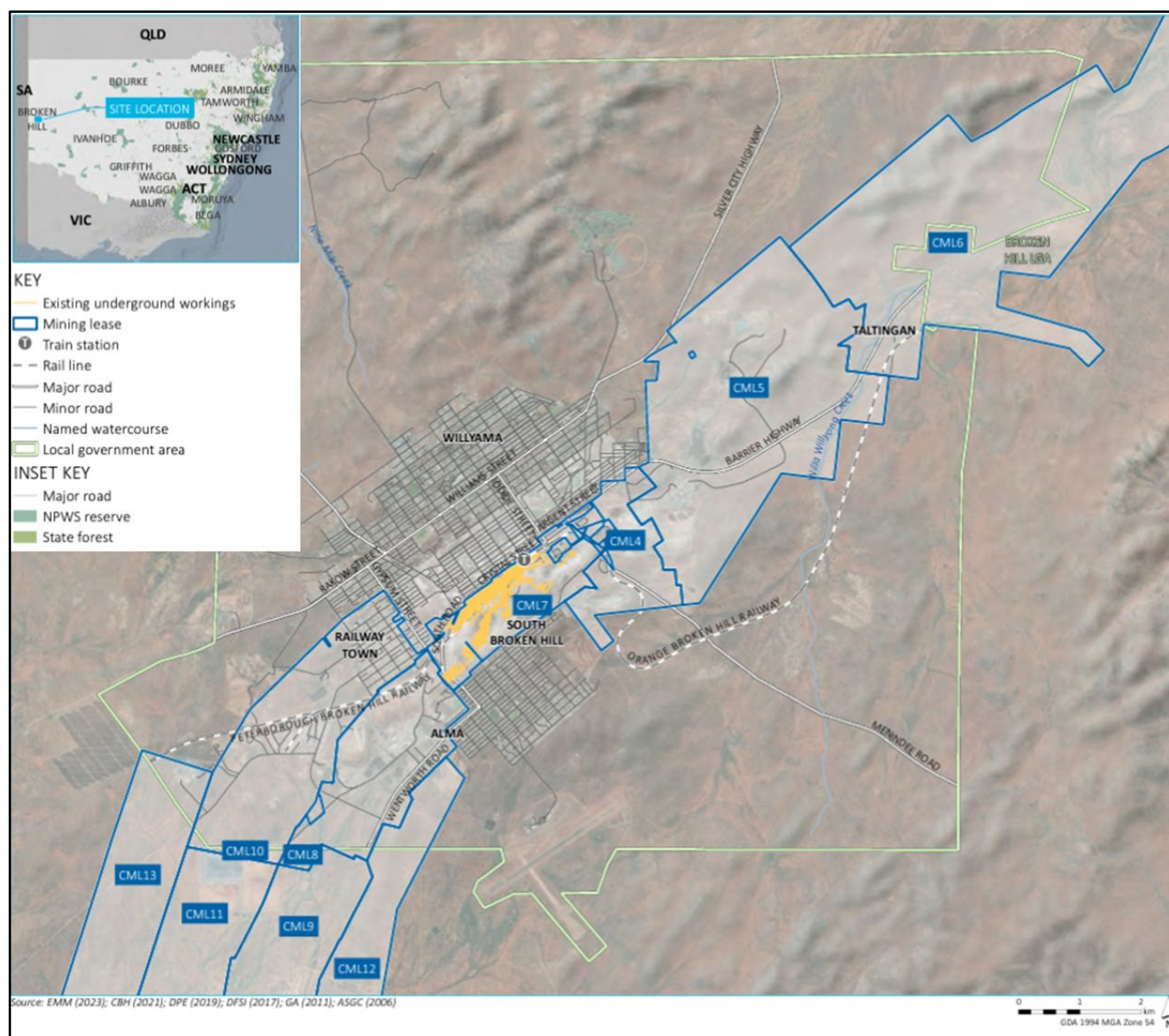


Figure 1 | Site location and regional setting (Source: modified Figure 1.1 - Modification Report, July 2023)

2 Proposed Modification

Following underground exploration activities as part of Modification 9, BHOP identified further resource within the northern section of consolidated mining lease 7 (CML7) and is seeking to modify the project approval to:

- extend underground mine development from the approved Main Lode Block 12 into Main Lode Blocks 13, 14 and 15 over approximately 3.5 km; and
- construct a new air ventilation intake to support underground mine development located north of the Blackwood Pit tailings storage facility 2 (TSF2).

The proposed activities would be undertaken 24 hours per day, except for concrete works that would occur during standard construction hours (7 am to 6 pm Monday to Friday, 8 am to 1 pm Saturday and no activities on Sundays or public holidays). Construction of the new air ventilation intake would occur over about 3 months. The key components of the proposal are shown in **Figure 2** and full description of the modification is provided in **Appendix A**.



Figure 2 | Proposed modification components (Source: modified Figure 3.2 – Modification Report, July 2023)

3 Statutory Context

3.1 Scope of Modification and Assessment Pathway

On 31 January 2011, the project was approved under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) under delegation of the then Minister for Planning. Under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the project was transitioned to State significant development by order, which took effect by publication in the NSW Government Gazette on 4 July 2018.

BHOP submitted a modification application to the Department of Planning and Environment (the Department) under Section 4.55(1A) of the EP&A Act on 28 July 2023. The Department has reviewed the modification and considers that the application is substantially the same development as last modified under section 75W of the EP&A Act (Modification 4, approved on 6 September 2017), as it would not significantly increase the environmental impacts of the project as approved, and would not change the key aspects of the approved project, including annual and total ore extraction, processing or transport methods and schedule of land.

Consequently, the Department considers that the proposed modification is within the scope of section 4.55(1A) of the EP&A Act.

3.2 Consent Authority

The Minister for Planning and Public Spaces is the consent authority for the application under Section 4.5(a) of the EP&A Act. However, under the Minister's delegation dated 9 March 2022, the Director, Resource Assessments, may determine the application, as Broken Hill City Council (Council) did not object to the proposal and BHOP has not disclosed any reportable political donations.

3.3 Mandatory Matters for Consideration

The Department has previously conducted an assessment of the approved project against the mandatory matters for consideration. The Department considers that the modification would not result in significant changes that would alter the mandatory matters for consideration under section 4.15 of the EP&A Act and conclusions made as part of the original assessments.

3.4 Objects of the EP&A Act

All decision-making under the EP&A Act is underpinned by objects of the EP&A Act. When determining a development application under the EP&A Act, these principles must be considered by the consent authority. The Department has therefore assessed the modified project against the objects found in Section 1.3 of the EP&A Act.

3.5 Biodiversity Development Assessment Report

Section 7.17 of the *Biodiversity Conservation Act 2016* specifies that if the approval authority is satisfied a modification would not increase the impact on biodiversity values, a Biodiversity Development Assessment Report (BDAR) is not required. The modification does not involve any additional vegetation clearing or any increase in impacts to biodiversity values and therefore the Department considers a BDAR is not required.

4 Engagement

In accordance with Section 4.55 (1A) of the EP&A Act, the Department is not required to publicly exhibit the application. Nevertheless, the Department made the modification application and supporting documents available on its website and sought advice from relevant government agencies, including Council.

Water Group within the Department (Water Group) requested additional information about the project's required maximum annual volume of water take due to aquifer interference activity to demonstrate that the modified project would have minimal impact in accordance with the considerations of the *2012 NSW Aquifer Interference Policy* (AIP). Water Group also requested further information with respect to water take, groundwater entitlements and licencing as well as potential impacts on the water source of nearby users.

Following its review of the additional information provided by BHOP, including a review of the project's water balance and entitlement by EMM Consulting, the Water Group requested undertaking an analytical assessment to support minimal impacts, and recommended conditions to require development of a numerical groundwater model for the project in accordance with the AIP and that sufficient water entitlements are obtained. BHOP provided further response and the Department's consideration of these matters is discussed in **section 5** of this report.

The Environment Protection Authority (EPA), Resources Regulator and Council did not raise any concerns or recommended conditions. The EPA and Resources Regulator noted that BHOP would be required to comply with the requirements under the *Protection of the Environment Operations Act 1997* and mining authorisations prior to commencing the proposed activities, should they be approved, including a variation to the sites' Environment Protection Licence 12559 and rehabilitation requirements.

The government agency advice and BHOP's responses to the government agencies and the Department's requests for further information are available in **0**.

5 Assessment

The Department considers the potential impacts associated with the proposed modification relate to geotechnical stability associated with the proposed underground development workings and amenity impacts related to the proposed new air ventilation intake. The Department's consideration and assessment of issues related to the modification are summarised in **Table 1** below.

Table 1 | Assessment of Issues

Issue	Findings and conclusions	Recommended conditions
Geotechnical stability		
	<ul style="list-style-type: none"> The proposed air ventilation intake would be constructed using a raise boring machine and located about 40 m away from TSF2 embankment wall and away from any known historical mining. Geotechnical review of the proposed air intake location made recommendations to ensure the integrity of the TSF2 embankment would not be impacted by the proposed raise bore drilling for construction of the new air intake, including relevant monitoring and periodic camera surveys. Furthermore, the review recommended installation of surface evase to ensure safety of the underground workings in an unlikely event of a TSF2 embankment wall break. Resources Regulator raised no issues regarding mine safety or geotechnical stability, and safety aspects of mining operations are regulated under the relevant Work Health and Safety legislation. The Department considers that geotechnical stability risks could be safely managed by implementation of appropriate protocols, including requirements under the relevant Work Health and Safety legislation. 	None
Water		
	Water take and supply: <ul style="list-style-type: none"> The project's water licence allows up to 370 megalitres (ML) per year of groundwater take. The modified project would result in a total groundwater take of 254.5 ML in the year that the proposed construction would occur, comprising of 4.5 ML of groundwater inflows into the excavation area associated with the new ventilation intake and 250 ML inflows into the underground workings for the existing/ approved underground mine development. BHOP proposes to source the required 19.7 ML of water for construction of the air ventilation intake from Broken Hill town water supply. The Department notes that Council did not raise concerns and under the existing conditions, BHOP must ensure sufficient water is available for the project and adjust its operations to match the water supply, as well as review, and if necessary, revise the management plans following any modification to the project. 	Revise the Water Management Plan.

Issue	Findings and conclusions	Recommended conditions
	<p>Surface and groundwater impact assessment:</p> <ul style="list-style-type: none"> • The water assessment concluded that surface water risks of the proposal would be minimal, as the opening of the air ventilation intake would be located above the TSF2 embankment height and therefore unlikely to become inundated, and that any contribution to surface water runoff from the air intake could be contained within the existing water management system and surface water management practices. • There are no high priority groundwater dependent ecosystems (GDEs) within the project's mining lease. Within a 5 km radius of the mining lease area/ approved operations, there are 51 registered third-party groundwater bores and basic rights work approvals, and high priority GDEs located along ephemeral creek lines southwest of the Perilya Broken Hill Operations Pty Ltd South mining. Most of the bores are for monitoring and 11 have the potential to provide water supply. • In response to the Water Group advice, BHOP provided a review of the groundwater impacts of the proposal against the minimal impact consideration of the <i>NSW Aquifer Interference Policy (2012)</i> (AIP) and an assessment of the groundwater drawdown over time in the regional aquifer using an analytical groundwater modelling and groundwater levels at four shafts surrounding the proposed underground development as a proxy for the regional groundwater levels within the bedrock aquifer (see Appendix A – Additional Information). • Following a request for more information from the Department about the dept of groundwater levels at Thompson's Shaft (located next to workings), BHOP undertook further hydrogeological investigations. This included observations of the historic 1480 drive, which is 1,480 feet below ground level extending through the Line of Lode from the Broken Hill North Mine to the Perilya South Mine and has connections with the Thompson's shaft within the project site. • BHOP found that the 1480 drive was dry with no visible groundwater flows along the drive that connects to the current project's underground mine workings with levels in the shafts near the Thompson's Shaft being more than 500 metres below ground level (mbgl) (about 1,000 mbgl in Broken Hill North Mine and 590 mbgl in project's Shaft 7). These indicate that Thompson's shaft is dry to 480 mbgl. • As such, BHOP provided an addendum to their response to the Water Group to advise that the predicted drawdowns are no longer valid, as they were based on water level of 225 mbgl in Thompson's shaft and therefore, the proposed underground mine development which would extend to 270 mbgl at the deepest would not result in drawdown of the regional groundwater table (see Appendix A – Additional Information). <p>Summary:</p> <ul style="list-style-type: none"> • The proposed underground mine development would not change the approved extraction and processing rates, dewatering and water management but would extend the existing underground mine development, located in the vicinity of the existing workings and within the same rock mass/aquifer but located at a higher elevation. Dewatering activities are 	

Issue	Findings and conclusions	Recommended conditions
	<p>currently in place for the current mining activities which are expected to reduce the dewatering requirements for the proposed activities.</p> <ul style="list-style-type: none"> Due to the scale of the proposed activities, the associated impacts on the high priority GDEs and third-party production bores are not expected to exceed the minimal impact consideration of the AIP and therefore any residual risks are considered low. The Department notes Water Group advice and BHOP's obligations under the <i>Water Management Act 2000</i>, and considers that the proposed modification would not significantly increase the project's impacts beyond those permitted under the existing approval and would be appropriately managed under the existing conditions and revision of the Water Management Plan. 	
Noise		
	<ul style="list-style-type: none"> Construction of the new air ventilation intake would occur over about 3 months and the closest receiver location (A12) would be approximately 340 m north of the new ventilation intake. Modelling of the noise impacts of the proposed construction works combined with the project's existing operation predicted that the 24/7 raise boring operation associated with construction of the air ventilation intake would result in exceedances to the project's evening and night noise management levels (NMLs) by 4 dB(A) at A12. To mitigate these impacts, BHOP committed to using a generator with a lower noise output, installing a temporary physical noise barrier in the direction of receiver location A12 and a temporary enclosure around the generator. That is, with the implementation of these measures the noise levels during evening and night time period would comply with the NML's. The noise assessment concluded that the noise impacts of the proposed underground mining would be negligible and that the modified project would be able to comply with the project's noise criteria by implementing the proposed noise mitigations measures, as the new air intake would operate based on passive ventilation and would not be mechanised. The EPA did not raise any concerns with the noise impacts of the proposed modification. The Department considers the noise impacts associated with the modification would be short-term and can be appropriately managed through the proposed mitigation measures and the revised conditions, including revision of the Noise and Blast Management Plan. 	<ul style="list-style-type: none"> Construction of the new air ventilation intake to be permitted 24-hours per day, 7 days per week. Update the Noise and Blast Management Plan to include the identified noise mitigation measures during construction of the ventilation intake.
Traffic		
	<ul style="list-style-type: none"> Concrete required for construction of the air ventilation intake would be sourced from the Mawsons Broken Hill Concrete & Landscaping Supply Centre, located adjacent to the mine site. 40 concrete trucks would be required for construction of the air ventilation intake. The truck movements would occur in one day and use local roads through Holten Drive, Menindee Road, Crystal Street and Iodide Street, which have limited local traffic. 	<p>Update the Traffic Management Plan.</p>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> BHOP proposes to implement appropriate traffic control signage and controllers to avoid traffic impacts. Council did not raise any issues associated with the proposed activities. The Department considers that any likely risks of the proposal to the local traffic can be appropriately managed by the existing conditions of approval, including revision of the Traffic Management Plan. 	
Waste Rock and Rehabilitation		
	<ul style="list-style-type: none"> The proposed underground development would generate about 227,500 tonnes (t) of waste rock over 18 months. The annual waste rock generation from the existing operations has been under 300,000 t since 2021 and under 453,000 t between 2018 and 2020 (see Appendix A – Additional Information). The Department considers generation of the additional waste rock to be consistent with the current operations. Waste rock generated through the proposed extension of the underground mining would be managed consistent with the existing approval. These include keeping material containing 0.5% or more lead underground or stockpiling for potential future backfilling and processing and using material with less than 0.5% lead for rehabilitation purposes, such as capping the free areas. Resources Regulator raised no issues relating to rehabilitation. 	None
Air Quality		
	<ul style="list-style-type: none"> Installation of the concrete raised bore pad and surface works associated with construction of the air ventilation intake would occur over up to two days and have the potential to generate dust. The EPA did not raise concerns and the Department considers that the proposal's air quality impacts would be short-term and can be mitigated and managed under the existing conditions of approval and requirements of the site's environment protection licence, regulated by the EPA. 	None
Visual		
	<ul style="list-style-type: none"> The surface evase associated with the proposed air ventilation intake would be 8 m high behind a raised embankment surrounding the mine site and coloured in silver or grey. The proposal would not change the local landscape character and the associated visual impacts would be negligible. 	None
Administrative		
	The Department recommended administrative changes including updates to the definition table, relevant figures in the Appendices of the project approval.	Administrative changes

6 Evaluation

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act, including the relevant matters for consideration.

The Department notes that the proposal would not change the project's disturbance footprint, approved extraction and processing rates, dewatering and water management and rehabilitation outcomes. The proposal would allow access to further ore reserve by extending the existing underground mine development in the vicinity of the existing workings and ensure safety of underground mining by construction and use of a new air ventilation intake.

Based on this assessment, the Department considers that the impacts of the proposed activities on groundwater resources and high priority GDEs would be unlikely and amenity impacts could be managed through implementation of the existing limits and proposed mitigation measures.

Resources Regulator, EPA and Council did not raise concerns provided compliance with the existing conditions of project approval and control measures. The Department has considered BHOP's response to the Water Group advice and notes BHOP must comply with the relevant mining and environmental legislation, including the water entitlements and AIP's minimal impacts considerations under the *Water Management Act 2000*. If approved, BHOP would be required to review and revise the relevant studies, strategies and plans, including the Environmental Management Strategy and management controls, and comply with the relevant limits.

The Department considers that the proposed modification can be undertaken without any significant environmental and social impacts beyond those already assessed and approved. The Department also recognises the social and economic benefits of the modified project to local community and the State by enabling continued employment and further resource recovery.

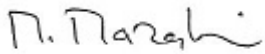
Consequently, the Department recommends the modification be approved, subject to the recommended revised conditions of approval (**Appendix B**), as outlined in the Instrument of Modification (**Appendix C**).

7 Determination

It is recommended that the Director, Resource Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **accepts and adopts** the findings and recommendations in this report as the reasons for making the decision to approve the modification;
- **modifies the approval for the modification application** for the Rasp Project (MP07_0018-Mod-11), subject to the conditions in the attached instrument of modification; and
- **signs** the attached instrument of modification (**Appendix C**).

Recommended by:



15/03/2024

Mandana Mazaheri

Principal Planning Officer
Resource Assessments

The recommendation is **adopted/not adopted** by:



15/3/2024

Steve O'Donoghue

Director
Resource Assessments

Appendices

Appendix A– List of Documents

A1 – Modification Report: Refer to the ‘Modification Application’ folder under the ‘Assessment’ tab on the Department’s website: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>

A2 – Agency Advice: Refer to the ‘Agency Advice’ folder under the ‘Assessment’ tab on the Department’s website: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>

A3 – Submissions Report: Refer to ‘Response to Submissions’ folder under the ‘Assessment’ tab on the Department’s website: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>

A4 – Additional Information: Refer to ‘Additional Information’ folder under the ‘Assessment’ tab on the Department’s website : <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>

Appendix B – Consolidated Approval

Refer to ‘Consolidated Consent’ folder under the ‘Assessment’ tab on the Department’s website: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>

Appendix C – Instrument of Modification

Refer to ‘Determination’ folder under the ‘Assessment’ tab on the Department’s website: <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-ventilation-intake-and-underground-exploration>