



Rasp Mine Project Modification 10

Temporary Tailings Placement

State Significant Development Modification Assessment
(MP07_0018 MOD 10)

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Cover image: Conceptual stacked harvest tailing within TSF2 – Rasp Mine Modification 10 Modification Report (pg 10)

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1 Introduction

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

The mine operates under a Ministerial project approval granted in January 2011. This approval has been modified on nine occasions and allows mining until 31 December 2026. The project approval was most recently modified in March 2022 (MOD 6) which allowed the existing Kintore Pit to be used as a third tailings storage facility (TSF) following the development of a new box-cut and portal.

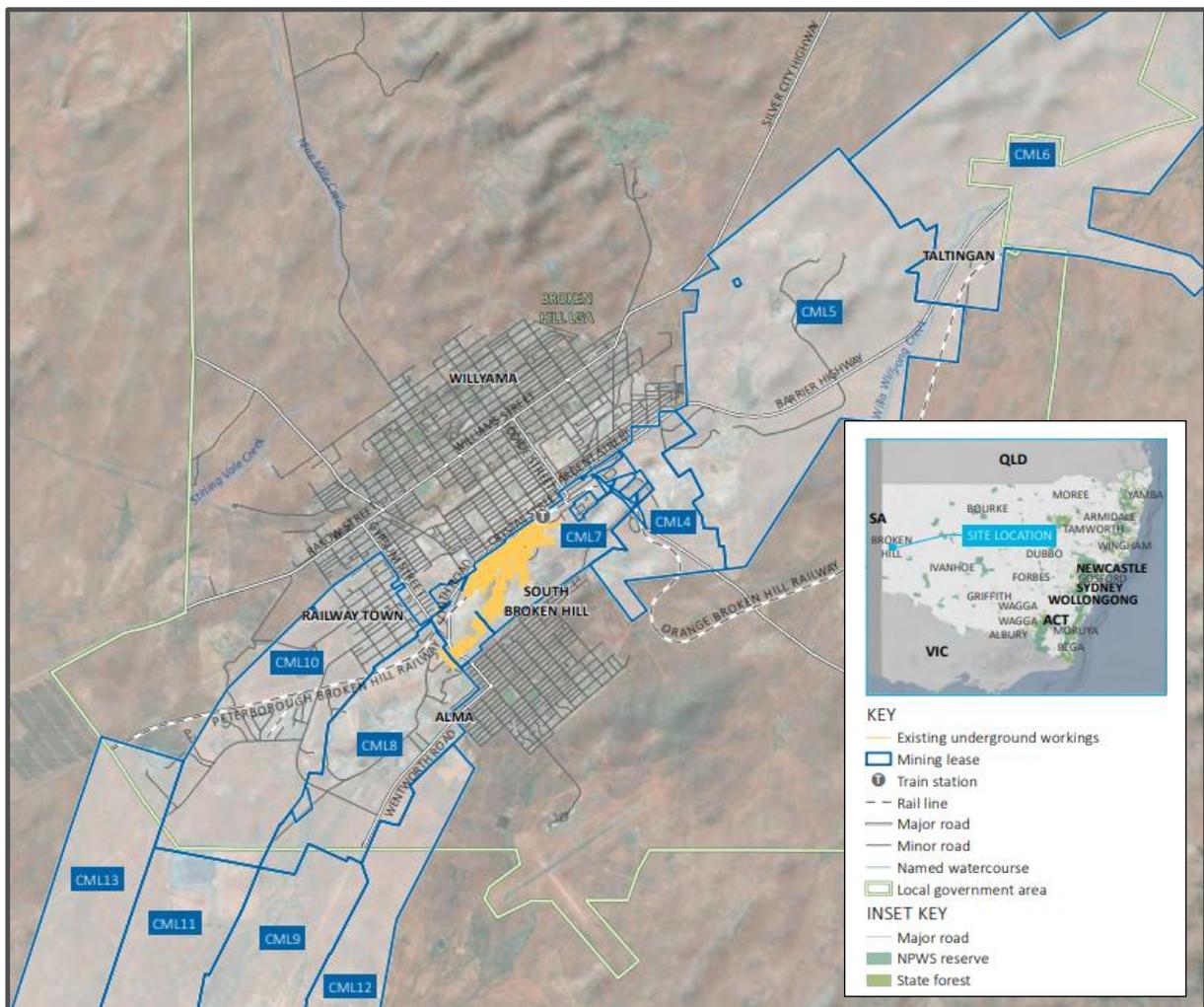


Figure 1 | Regional Context Map (Source: Modification Report, EMM 2022)

2 Proposed modification

BHOP are seeking to modify the project approval to permit the temporary stacking and storage of additional tailings within the mine's TSF2 facility.

Due to an unforeseen delay in construction timeframes, the new box cut and portal is not yet completed and the Kintore Pit is not yet ready for tailings emplacement. BHOP are therefore predicting a tailings storage deficit in the absence of alternative temporary measures.

BHOP are proposing to introduce a temporary stockpile on the western end of TSF2, to accommodate approximately 265,000 m³ of harvested tailing over a 12-month period. Upon completion of the outstanding construction activities, BHOP propose to prioritise the re-emplacement of the temporary stockpile into the Kintore Pit. A full description of the proposed modification can be found in BHOP's Modification Report (see **Appendix A1**).

Figure 2 depicts the location of the temporary stockpile within the TSF2 footprint.

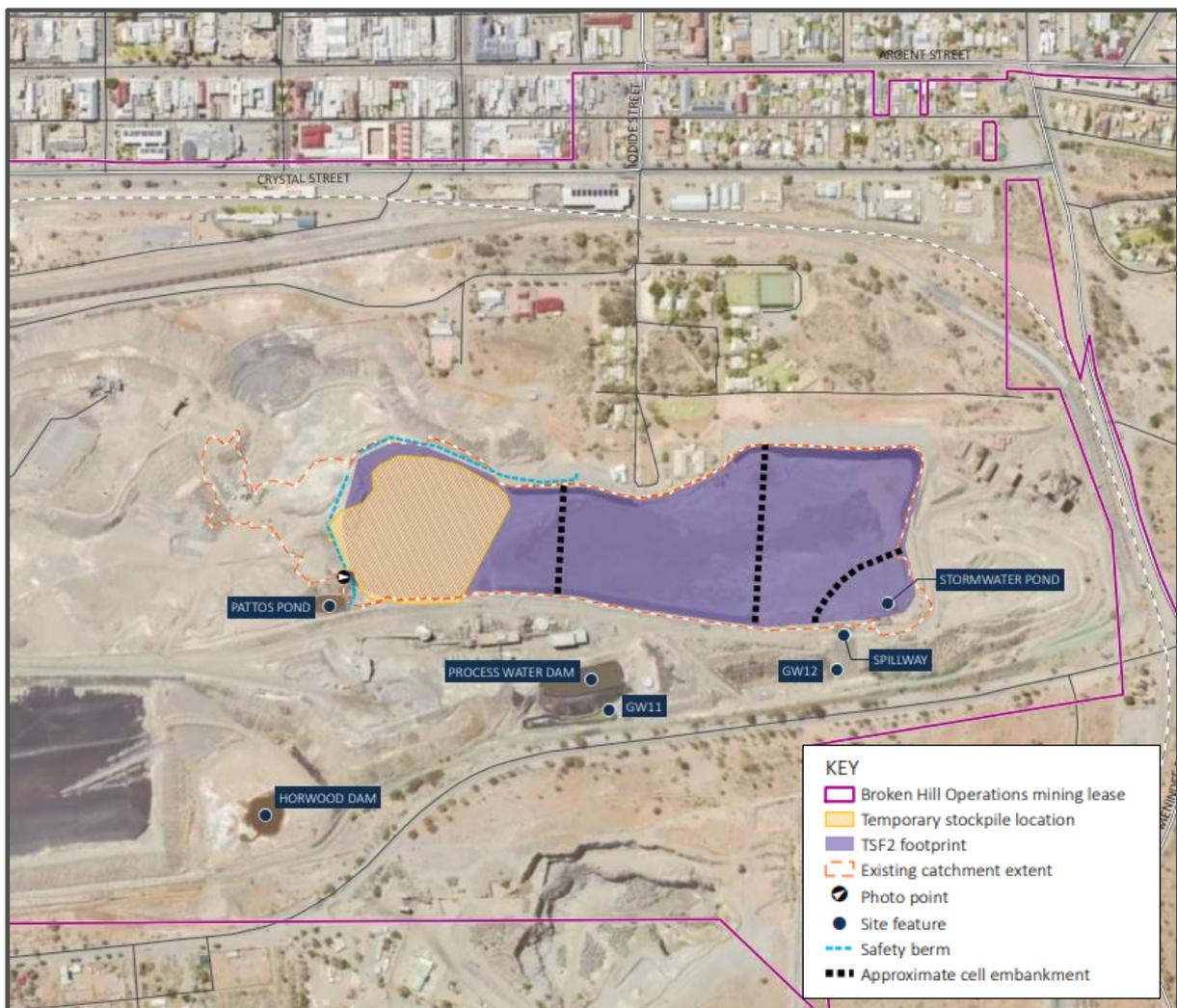


Figure 2 | Temporary stockpile location (*Modification Report, EMM 2022*)

3 Statutory context

3.1 Scope of modification

The modification application was lodged under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as a modification involving minimal environmental impact. The Department has reviewed the scope of the modification and considers that it meets this requirement as:

- there would be no change to key aspects of the project, including annual and total ore extraction, mine life or extraction methods;
- there would be no additional surface disturbance outside areas already approved for disturbance.
- impacts of the proposed modification would be similar to the approved environmental impacts of the project.

On this basis, the Department considers 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 is the consent authority for the modification application under Section 4.55 of the EP&A Act. However, under the Minister's delegation dated 9 March 2022, the Director, Resource Assessments, may determine the application. This is because BHOP has not made any reportable political donations, there were no objections from members of the public and Broken Hill City Council (Council) did not object to the proposal.

4 Engagement

4.1 Department's engagement

In accordance with Section 4.55 (1A) of the EP&A Act, the proposal was not required to be publicly exhibited. However, the Department made the modification application and modification report available on its website and sought advice from relevant government agencies (including Broken Hill City Council). Agency advice can be accessed on the Department's website (see **Appendix A2**).

4.2 Summary of advice received from Government agencies

The **Resources Regulator** advised that it had no specific comments regarding mine rehabilitation matters and noted that BHOP would be required to comply with requirements under the *Mining Act 1992* and relevant work, health and safety obligations.

The **Environment Protection Authority** (EPA) advised it had no objections to the proposal and noted that all noise and air quality limit and monitoring conditions in the consent would remain unchanged.

Dam Safety NSW noted that the TSF2 facility is a declared dam with a Consequence Category of "High A" and that the Modification Report concluded that the temporary stacking of tailings would have no meaningful impact on the integrity of the perimeter embankments.

Broken Hill City Council (Council) acknowledged the urgency of the proposed modification and advised it had no objections. Council recommended that existing noise and air quality mitigation measures should be adhered to and that the water management plan is updated to reflect installation of the extended TSF2 sprinkler system.

5 Assessment

In assessing the merits of the modification application, the Department has considered the:

- modification application and supporting documentation;
- existing conditions of consent for the project; and
- requirements of the EP&A Act.

The Department considers that the potential impacts associated with the proposed modification relate to geotechnical stability, surface water and amenity. These matters are considered in **Table 1** below.

Issue	Findings	Recommendation
Geotechnical Stability	<ul style="list-style-type: none"> • The Modification Report included a comparative assessment to determine which configuration would be most safe and suitable for the proposed tailings stockpile. • The assessment concluded that a factor of safety of 1:4 could be achieved subject to specific design configuration including: <ul style="list-style-type: none"> ○ a crest of up to RL 336 metres (m) on the west slope and RL 338 m on the north-eastern slope; ○ a footprint of approximately 28,000 m³; and ○ limited outer slopes to 2H:1V. • The assessment also recommended additional measures to maintain stability, installing a spoon drain to direct runoff on the stockpile slope, utilising suitably dried tailings and specific emplacement techniques. • Dam Safety NSW noted that no adverse effects on the TSF embankment are predicted as a result of the proposed stockpile. • The Department considers that geotechnical stability of the tailings stockpile has been appropriately considered and notes that implementation of stability measures and overall safety of the facility is regulated under other legislation, including the <i>Dam Safety Act 2015</i>. 	No additional conditions necessary.

Issue	Findings	Recommendation
Surface Water	<ul style="list-style-type: none"> • The proposed modification has the potential to affect the surface water management at the mine, particularly in relation to drainage, freeboard and water quality. • The Modification Report included a surface water review which concluded that the surface water management system of the mine could be slightly modified and managed to control any offsite or downstream water-related impacts. Specifically, the surface water review concluded that: <ul style="list-style-type: none"> ○ minor modifications to diversion drains and bunding surrounding the TFS may be required to manage any increase in drainage capture points within the stockpile; ○ whilst containment freeboard may reduce in some areas of the TSF, it would be balanced by the harvesting of tailing in other areas; ○ water collected from the TSF would continue to be reused on site and not permitted for discharge; and ○ the risk of seepage as a result of the proposed stockpile is low; • BHOP advised that it would continue to manage water in accordance with its site water management plan, which includes both a surface and groundwater monitoring program. • The Department considers that potential impacts on surface water could be appropriately managed under existing of consent. 	<p>No additional conditions necessary.</p>
Air Quality and Human Health	<ul style="list-style-type: none"> • The proposed modification has the potential to increase particulate matter and lead emissions from the site. • The Modification Report included an air quality assessment which compared estimated emissions resulting from dry stacking to emissions approved under the latest modification (ie Modification 6). The assessment concluded that: <ul style="list-style-type: none"> ○ there would be an increase between 0.2 and 1.9 % of relevant air quality emissions. ○ the closest receiver would experience minor incremental increases in emissions exposure; 	<p>The Department has recommended a condition requiring the temporary stockpile to be prioritised for re-emplacment as soon as the Kintore Pit becomes available.</p>

Issue	Findings	Recommendation
	<ul style="list-style-type: none"> ○ no exceedances of particulate matter or lead deposition criteria are predicted at any sensitive receivers. ● To mitigate impacts associated with the temporary stockpile, BHOP propose to extend the existing TSF2 sprinkler system and continue implementing air quality management practices, including use of water carts and chemical suppressants, and real time trigger action response monitoring. ● EPA raised no concerns regarding potential air quality impacts. ● However, to ensure that exposure pathways are minimised as much as possible, the Department has recommended a condition requiring the temporary stockpile to be prioritised for re-emplacment as soon as the Kintore Pit becomes available. ● Overall, the Department considers that the air quality impacts of the proposed modification are minor in the context of the approved project and can be appropriately managed under existing condition of consent, including through the site's Air Quality Management Plan. 	
Noise	<ul style="list-style-type: none"> ● The Modification Report included a noise review which analysed existing and proposed noise sources associated with the proposed stockpile area. ● The report concluded that total sound power levels associated with the proposed modification would not exceed maximum sound power levels of the approved project. ● On this basis, no additional offsite noise emissions are predicted. ● BHOP advise that the proposed stacking activities would be undertaken within the approved hours of operation for tailings harvesting works in TSF2 (ie 7am to 7pm on any day) and that the site's existing noise monitoring network would continue to be implemented. ● EPA raised no concerns in relation to noise and the Department considers that the noise impacts of the proposed modification can be appropriately managed under existing conditions of consent. 	

Issue	Findings	Recommendation
Visual	<ul style="list-style-type: none"> • The proposed stockpile would be located within an existing disturbed area and would not appear substantially visually different to other mining activities. • The proposed stockpile would be temporary in nature. • The Department considers that visual impacts associated with the proposed stockpile would be negligible. 	No additional conditions necessary.

6 Evaluation

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act and advice from government agencies.

The modification would facilitate a temporary tailings management procedure in an existing storage facility which would allow for the continuation of ore processing and tailings emplacement at the mine whilst construction of the new Kintore Pit facility is finalised.

The Department acknowledge that this approach is a temporary solution and is critical in facilitating the ongoing operation of the mine. The Department has assessed the environmental impacts of the proposed modification and considers that it could be undertaken in a manner that would have minimal environmental impacts. The proposed stockpile areas would be located within the TFS2 Pit, in areas previously approved for disturbance, and associated impacts could be appropriately managed through existing and proposed conditions of consent.

Overall, the Department considers that the modification is in the public interest and should be approved, subject to the recommended conditions.

7 Determination

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

- **considers** the findings and recommendations of this report
- **determines** that the application MP07_0018 MOD 10 falls within the scope of section 4.55(1A) of the EP&A Act
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification
- **modify** the consent MP07_0018 MOD
- **signs** the attached approval of the modification (**Appendix B**).

Recommended by:



12/12/2022

Rachelle Abou Saleh

Environmental Assessment Officer
Resource Assessments

Recommended by:



12/12/2022

Gen Lucas

Team Leader
Resource Assessments

The recommendation is **Adopted / ~~Not adopted~~** by:



13/12/2022

Steve O'Donoghue

Director

Resource Assessments

as delegate of the Minister for Planning

Appendices

Appendix A – List of Documents

A1- Modification Report: Refer to folder 'Modification Application' on the Department's website at <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-temporary-tailings-placement-tsf2>

A2 – Agency advice: Refer to folder 'Agency Advice' on the Department's website at <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-temporary-tailings-placement-tsf2>

Appendix B – Consolidated Approval

<https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-temporary-tailings-placement-tsf2>

Appendix C – Notice of Modification

<https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-temporary-tailings-placement-tsf2>