



Broken Hill North Mine

Modification 2 (Truck Movements)

*State Significant
Development
Modification Assessment
(SSD 7538 MOD 2)*

A white rectangular sign with black text and a small logo. The text reads: "PERILYA BROKEN HILL MINE", "NORTHERN OPERATIONS", and "COSMOPOLITAN DECLINE".

PERILYA
BROKEN HILL MINE
NORTHERN OPERATIONS
COSMOPOLITAN DECLINE

July 2019

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Cover photo

Source: Perilya Broken Hill Limited.

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1. Introduction

1.1 Background

The City of Broken Hill has a long history of mining since the 1880s and was developed around the world's largest lead, zinc, and silver ore body, known as the Line of Lode.

Perilya Broken Hill Limited (Perilya) owns the Broken Hill North Mine (North Mine), an existing underground lead, zinc and silver mine located centrally within the City of Broken Hill (see **Figure 1**). Perilya also owns and operates the Southern Operations, consisting of the South Mine and Site D tailings storage facility (TSF) (located within Broken Hill), and Potosi Mine (located approximately 2 kilometres (km) northeast of Broken Hill).

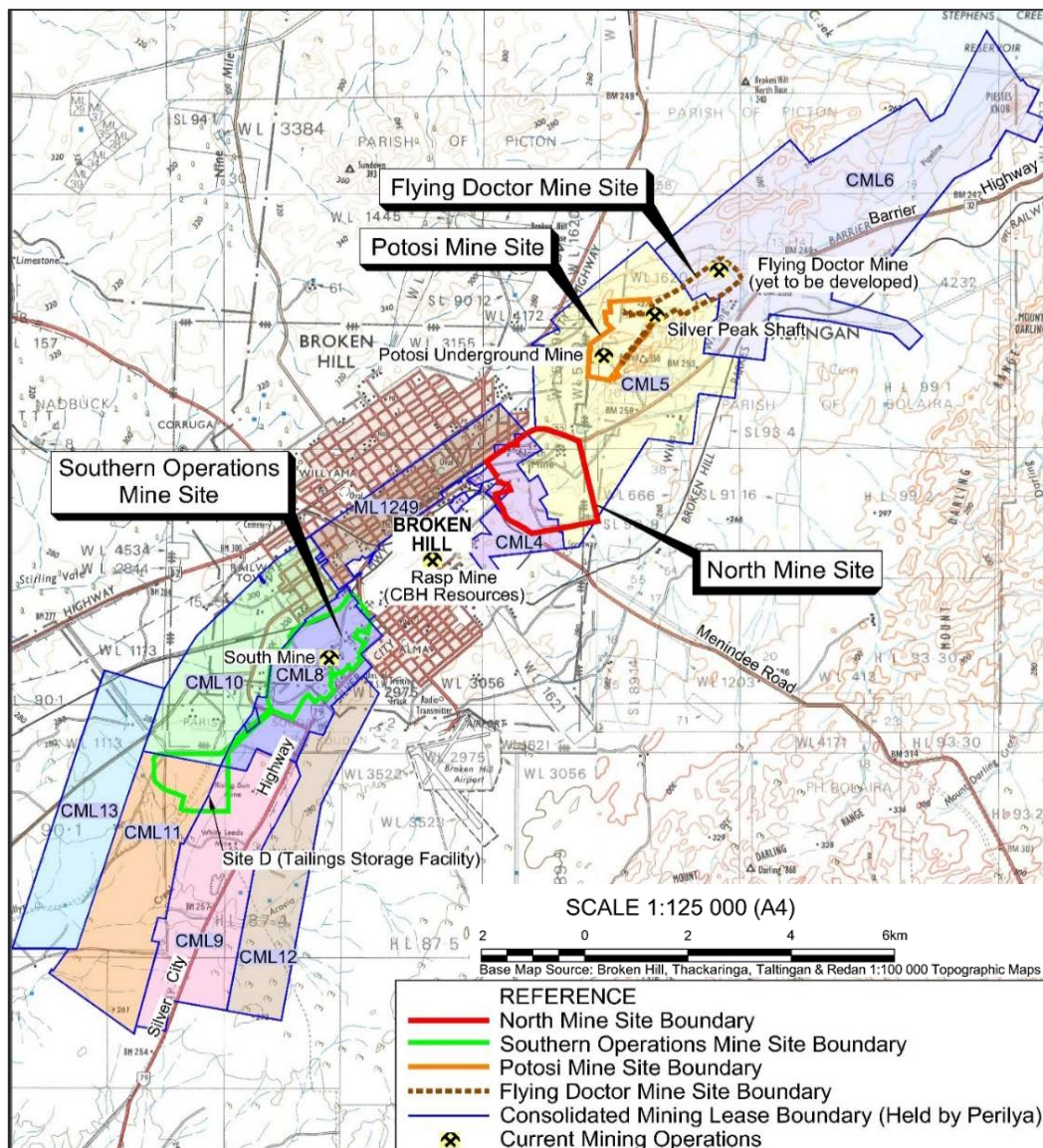


Figure 1 | Local Context - Mining Operations in the City of Broken Hill.

Perilya's mining operations in Broken Hill are under different approvals and continuing use rights. Perilya's operations at North Mine, South Mine and Potosi Mine are undertaken in a holistic manner and the production rate at each of the mines is adjusted, based on changes or shortfalls in production at one or more of the three mines.

South Mine is the site of all processing activities. Crushed ore from North and Potosi mine are transported by road to South Mine, where ore from the three mines is blended and processed. Lead and zinc concentrates are transported by rail from South Mine to Port Pirie in South Australia for further processing or shipping overseas.

1.2 Approved Project

The Broken Hill North Mine Project (the project) was originally approved on 22 December 2017. The development consent has been modified once and allows Perilya to:

- extract up to 4.2 million tonnes (t) of ore at a maximum rate of 300,000 t per year until 2043;
- crush ore on-site, backfill underground voids and the existing open cut pit with waste rock and tailings material;
- transfer crushed ore to South Mine by road for processing, using a maximum of 32 ore laden truck movements per day (16 movements per day when averaged over a calendar quarter), with a maximum of 4 movements per hour;
- dewater the North Mine workings and transfer the water to an on-site evaporation pond or to South Mine for use at the South Mine processing plant;
- upgrade existing infrastructure, including existing decline, No. 2 and No. 3 Shafts, No. 3 Return Air Rise; and
- construct and operate new ancillary infrastructure, including a new pastefill plant, an enclosed run-of-mine (ROM) pad and crushing facility, a sealed haul road from the mine portal to the ROM pad, an evaporation pond and an amenity bund.

The approved ore haulage transport route between North Mine and South Mine is via North Mine Haul Road (previously called the Potosi Haul Road), Barrier Highway, Iodide Street, Crystal Street/Silver City Highway, Gypsum Street, and into the South Mine site (see **Figure 2**).

Construction work commenced under this consent on 18 August 2018, and operations commenced on 22 December 2018.

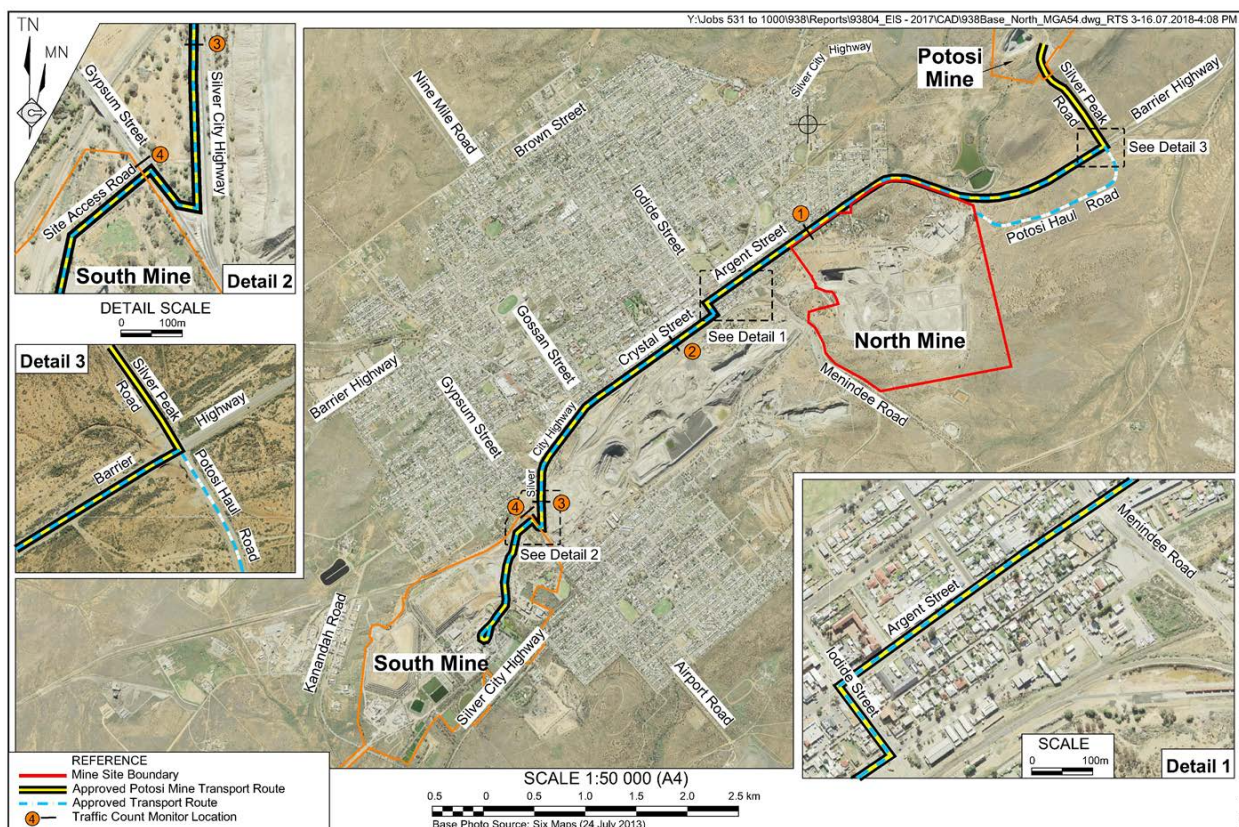


Figure 2 | Approved ore haulage route between the North and South mines.



2. Proposed Modification

Perilya is proposing to modify condition 8(c) of Schedule 2 of the existing consent to allow for 16 laden truck movements per day when averaged over a calendar year, instead of the approved averaging period over a calendar quarter without changing the existing conditions of consent for the maximum hourly and daily limits on the truck movements.

Perilya's production at North Mine was at a total of about 140,000 t between January and June 2019, which was higher than forecast. However, ore production at South and Potosi mines was less than forecast and at a lower grade during this period.

North Mine original production forecast for the July to December 2019 period was 140,000 t. Perilya's revised forecast to recover from the losses at South and Potosi mines in the 1st half of 2019 demonstrated a required increase of 20,000 t to the North Mine production in the 2nd half of 2019. This would sum up North Mine production to approximately 160,000 t for the 2nd half of 2019.

However, the restriction on averaging period over a calendar quarter would not allow the additional product to be transported from the North Mine to the South Mine in the 2nd half of 2019.

A full description of the proposal is provided in Perilya's Modification Report available in **Appendix B**.



3. Statutory Context

3.1 Scope of Modification

The project was originally approved on 22 December 2017 under Section 4.38 (previously Section 89E) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). As such, any modification to this consent must be made under Section 4.55 of the EP&A Act.

A modification application to the existing development consent under section 4.55(1A) of the EP&A Act for a modification involving minimal environmental impact was submitted to the Department of Planning, Industry and Environment (the Department) on 10 July 2019.

The Department considers that the application can be characterised as a modification involving minimal environmental impact, as it is substantially the same development as originally approved in 2017, would not significantly increase the environmental impacts of the project as approved, and would not change the approved mining, processing and transport methods, extraction rate, or schedule of the 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 (the Minister) is the consent authority for the modification application. However, under the Minister's delegation of 11 October 2017, the Director, Resource Assessments, may

determine the application. This is because no public objections were made, Broken Hill City Council did not object to the proposal and Perilya has not made any reportable political donations.



4. Engagement

In accordance with the requirements for 4.55(1A) modification involving minimal impact, the proposal was not formally exhibited. Nevertheless, the Department has consulted with the key agencies and made it publicly available on its website from 17 July 2019.

Perilya has also consulted with the key agencies and provided their formal advice to the Department (see **Appendix C**). A summary of the agency advice is provided below.

Broken Hill City Council (Council), **Roads and Maritime Services** (RMS) and **Environment Protection Authority** (EPA) raised no concerns and made no recommendations to the proposed modification.

Both RMS and Council noted that the modification would only change the averaging period from over a calendar quarter to a calendar year for the approved maximum 16 laden truck movements per day without changing the approved maximum number of hourly or daily laden truck movements. Council was satisfied that the proposal is unlikely to impact the local traffic and amenity of City of Broken Hill or its Voluntary Planning Agreement (VPA) with Perilya. The EPA noted that additional impacts as a result of this modification would be unlikely.



5. Assessment

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act, including the matters for consideration, as set out in section 4.15(1) of the EP&A Act. A list of the key documents that informed the Department's assessment are provided in **Appendix A**.

The Department considers that the key issue concerning the proposed modification relates to potential impacts on the local traffic. The Department has also considered a range of other potential impacts associated with the proposed modification activities in **section 5.2**.

5.1 Traffic

Truck movements associated with the project ore haulage from North Mine to South Mine during the 1st and 2nd quarters of 2019 were below the approved limit of 16 truck movements per day when averaged over a calendar quarter, with an average of 15.6 movements per day in the first quarter (Q1) 2019 and 11.4 movements in Q2 2019.

The Department notes that the existing conditions does not allow Perilya to meet its production target in transferring the 160,000 t of product ore from North Mine to South Mine in the 2nd half of 2019, because of the current restrictions on daily maximum laden truck movements when averaged over a calendar quarter.

Perilya is required to comply with the relevant conditions for ore transportation between the North and South mines, including maximum ore laden truck movements of 32 per day and 4 per hour (conditions (a)-(b) of Schedule 2) during the approved ore transportation hours of 8 am to 6 pm, 7 days a week (condition 9 of Schedule 2). Other requirements under existing consent include:

- minimising the traffic impacts of the development on public roads;
- requiring the drivers to comply with the Driver’s Code of Conduct; and
- keeping records of the number of daily ore truck movements.

Under the existing consent, Perilya is required to review and update the project’s management plans, including the Transport Management Plan, following approval of any modifications and the existing management and mitigation measures would continue to apply.

Consistent with the exiting consent, Perilya has entered into a VPA with Council in 2017, which includes contribution of funds for road upgrades and maintenance associated with the approved haulage route. Council has confirmed that the proposal would not change any terms of the existing VPA.

Based on this assessment, the Department, RMS and Council are satisfied that the proposed modification would not result in any significant impacts on road traffic and safety.

Therefore, it is recommended that condition 8(c) of Schedule 2 of the existing conditions be modified to “16 ore laden truck movements per day when averaged over a calendar year”.

5.2 Other Issues

The Department has summarised its assessment of a range of other matters in **Table 1**.

Table 1 | Other Issues.

Issue	Consideration	Recommendation
Air Quality, Greenhouse Gas (GHG) Emissions, and Human Health Risks	<ul style="list-style-type: none"> • The proposed modification would not change any approved mining or dust-generating activities associated with operation of the North Mine. • Relevant requirements in the existing consent would remain unchanged, which include minimising the release of GHG emissions from the site, ensuring trucks entering and leaving the site pass through an effective wheel wash, managing dust emissions from use of sealed and unsealed roads, and ensuring that haulage trucks cover their loads at all times. • Under the existing consent, Perilya must assess and manage development-related risks to ensure that there are no exceedances of the approved criteria and/or performance measures. • The incremental increase in GHG emissions from this proposal would not be significant, since it does not change the hourly and daily ore laden truck movements limits in the existing consent. • The development’s dust and air quality monitoring are also regulated by the EPA under its EPL. • The Department considers that any potential incremental impacts on air quality and GHG emissions and associated human health risks from the proposed modification can be managed and mitigated through the existing development consent and required monitoring and management plans. 	<ul style="list-style-type: none"> • Comply with existing conditions.
Noise	<ul style="list-style-type: none"> • The approved project included a noise impact assessment, including assessment of the associated road noise and relative increase in noise against the <i>NSW Road</i> 	<ul style="list-style-type: none"> • Comply with existing conditions.

Issue	Consideration	Recommendation
Biodiversity	<p><i>Noise Policy</i> day-time (7 am – 10 pm) criteria for residential land uses.</p> <ul style="list-style-type: none"> The proposed modification would not change the approved maximum hourly or daily number of truck movements or the approved ore transportation hours of 8 am to 6 pm. The modified project would therefore continue to comply with the day-time road noise limit of L_{Aeq} (15 hour) 60 dB(A). Noise impacts would be managed through an approved Noise Management Plan, which includes requirements for monitoring and noise mitigation measures to be applied to ensure compliance with noise limits. The Department considers that the requirements of the existing consent would mitigate any potential incremental noise impacts due to truck haulage between the North and South mines. 	<ul style="list-style-type: none"> Comply with existing conditions.



6. Evaluation

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

The Department notes that the only change to the existing development consent would be to amend the averaging period from over a calendar quarter to a calendar year for the approved maximum truck movements per day and that the proposal would not change any other existing conditions, including maximum hourly or daily limits on the truck movements, hours of truck haulage, maximum annual ore production, or disturb areas containing heritage items or vegetation.

The proposed modification would substantially increase Perilya’s flexibility in managing current and future unplanned variations in its production across the three mines by allowing Perilya to optimise its operation and account for its production losses in the first half of 2019 or potential losses in the future by using additional haulage trucks per day between North Mine and South Mine, when the movements are averaged over a calendar year. The Department also notes the beneficial economic impacts of the proposal on Perilya’s overall operation, which would reduce uncertainties for its employees, contractors and customers. Furthermore, there have been no complaints about the noise associated with the project’s truck movements since the North Mine operation has commenced.

Under the existing condition of consent, Perilya is required to review and revise its environmental monitoring program and environmental management plans, in consultation with the relevant agencies, following any modifications to its existing consent.

With the existing monitoring, management and mitigation measures, the Department considers that the proposed modification can be undertaken with minimal incremental impact on the environment or surrounding residences, compared to the approved project.

The Department has recommended the following changes to the development consent:

- inclusion of the modification proposal in the project description;
- administrative changes to definitions due to government agency, legislative changes and related definitions, including definition of “non-compliance”; and
- revise condition 8(C) of Schedule 2 of the existing development consent to “16 ore laden truck movements per day when averaged over a calendar year”.

Consequently, the Department considers that the proposed modification is in the public interest, and recommends that it should be approved, subject to the revised conditions.



7. Recommendation

The Department has drafted a Notice of Modification (see **Appendix D**) for the proposed modification, as well as a consolidation version of the development consent as modified (see **Appendix E**).

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

- **considers** the findings and recommendations of this report;
- **determines** that the application (SSD 7538 MOD 2) 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 grant consent to the application;
- **modifies** the consent for SSD 7538; and
- **signs** the attached approval of the modification (**Appendix D**).

Recommended by:

M. Mazaheri 30/7/19


Mandana Mazaheri

Senior Environmental Assessment Officer
Resource Assessments



8. Determination

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

 31/7/19

Steve O'Donoghue

Director

Resource Assessments



Appendices

Appendix A – List of Documents

Environmental Impact Statement for the Recommencement of Mining Operations at the Broken Hill North Mine. RW Corkery & Co Pty Limited, February 2017.

Statement of Environmental Effects for the Re-alignment of the Ore Transport Route and Construction and Operation of a Single Evaporation Pond Area Broken Hill North Mine SSD 7538. RW Corkery & Co Pty Limited, July 2018.

Appendix B – Modification Report

Appendix C – Agency Advice

Appendix D – Notice of Modification

Appendix E – Consolidated Development Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14451>