



Your reference: PA 07\_0018 MOD 2  
Our reference: EF13/4102; DOC14/12252-02  
Contact: Jason Price 02 6969 0700

The Planner  
Mining and Industry Projects  
Department of Planning and Infrastructure  
GPO Box 39  
SYDNEY NSW 2001

Dear Ms Donnelly

**Re Rasp silver, lead and zinc mine – proposed modification**

Thank you for your electronic mail dated 6 February 2014 to the Environment Protection Authority (EPA) about the application received by the Department of Planning and Infrastructure to modify the operating hours and transport of ore conditions in Project Approval No 07\_0018 issued for the Rasp silver, lead and zinc (Rasp) mine in Broken Hill.

As discussed with you, we have reviewed the information provided in the Environmental Assessment (EA) supporting the modification and have concerns about noise impacts from the current operation of the mine, the assessment presented to justify extending the hours of operation of the crusher, and the proposal to transport 60, 000 tonnes of ore for milling at an off-site location.

We require further information about noise impacts from the Rasp mine on surrounding residential receptors. Our key concerns are as follows.

- The existing operational activities at the Rasp mine appear unlikely to be complying with noise limits assigned to the mine.
- The direct noise measurement figures provided in the EA to qualify the modelled noise impacts of the proposal are based on the filtration plant noise impacts being edited out of the results.
- A road traffic noise assessment is not provided to assess the impacts on receptors along haul routes from the proposed milling of up to 60 000 tonnes of ore off-site.

Attachment 'A' details the additional information required and the justification for our concerns about the noise assessment.

We have contacted Mr Paul Walson from Broken Hill Operations Pty Ltd (BHOP) and advised him of these concerns and our position. He has indicated to the EPA that BHOP will provide the requested information.

Until the requested additional information is provided and we have had an opportunity to review the noise impacts from this proposal inclusive of all activities on site the EPA cannot support the modification.

If you have any further enquiries about this matter please contact Jason Price by telephoning 02 6969 0700.

Yours sincerely

 24/2/14

**DARREN WALLETT**  
Head, Griffith Unit  
Environment Protection Authority

## ATTACHMENT 'A'

Broken Hill Operations Pty Ltd (BHOP) have made application to the Department of Planning and Infrastructure (DoPI) to modify the operating conditions of their Rasp silver, lead and zinc (Rasp) mine at Broken Hill which is subject to conditions of Project Approval No 07\_0018 (PA).

BHOP seek to modify two (2) approval conditions by:

- Increasing the operating hours of the primary crusher at the processing mill to twenty four (24) hours a day, seven (7) days a week (currently approved to operate between 7.00am and 7.00pm each day).
- Allowing 60,000 tonnes of ore per annum to be transported off-site for processing at an undisclosed off-site facility.

### EPA's review of the Environmental Assessment (EA)

#### Modelling

The EA supporting the proposed modification presents noise modelling (EMGA Mitchell McLellan August 2013) which predicts compliance with the PA noise limits under worst case scenario conditions (night time winter temperature inversions).

Actual sound power levels of plant at the Rasp mine were taken for input into the modelling. Reported sound power levels were taken from the following activities:

- Run of Mine (ROM) pad at the primary crusher enclosure opening.
- Rear of the primary crusher enclosure.
- Front End Loader (FEL) loading the primary crusher (loudest sound power activity at 127dB(A) L (maximum)).

From the EPA's review of the EA it appears the sound power levels of the filtration plant and other milling processes were not measured.

#### Night time trial of crusher operations

As the proposal was for the extension of the hours of existing operational activities at the mine, the Environment Protection Authority (EPA) and the DoPI took the opportunity to confirm the results of the noise modelling undertaken by EMGA Mitchell McLellan in August 2013 by requesting a noise assessment be undertaken by BHOP to examine the actual noise levels emanating from the mine.

As part of the modification application BHOP was requested to undertake a seven (7) day trial of night time operations that included noise monitoring at surrounding residential receptors with the primary crusher and all associated activities in operation. Actual noise levels could then be measured and reported against the PA noise limits.

The trial was conducted between 6 and 9 January 2014 and prior to presenting the results the EA reported at section 3.1 Appendix B - 'Night time trial of crusher operations';

*"The measurements identified the process plant's filtration area (filtration shed) as the dominant source from site. Due to the position and orientation of the filtration shed as well as the surrounding terrain, it was concluded that northern assessment locations, including A11 and A12, would experience higher noise levels from the filtration process than southern assessment locations, including A1, A13 and A14.*



*To quantify noise emissions from all other plant and equipment situated within the milling and processing area, the filtration shed was turned off. The subsequent measurement identified a decrease of 7 dB in site noise levels."*

The discussion of noise monitoring results at section 4 of Appendix B - 'Night time trial of crusher operations' advise that the filtration plant noise impacts have been removed from the noise monitoring results at all residential measurement locations because;

*"This was done to simulate likely night-time noise emissions from site since the filtration shed could be modified to reduce its contribution significantly."*

Some noise mitigation options are considered for the filtration plant and a "tyre bund wall" has been established around the plant, however no other information is provided in the EA about the tyre wall structure, what option will actually be implemented and what the potential noise impacts (at residential receptors) will be as a result of any mitigation measures.

Section 4 further advises that the decibel level results have been adjusted to exclude the filtration plant areas impact on the results;

*"The noise monitoring results presented in Table 2 for northern assessment locations A11, A12 and Iodide Street are adjusted to determine noise levels without the filtration shed. The noise monitoring results for southern assessment locations A1, A13 and A14 are not adjusted as the filtration shed was not operating at the time of monitoring."*

Discussion about the decibel level results with the filtration plant operating indicated that the Rasp mine is currently in non-compliance with the PA noise limits;

*"The monitoring results at northern assessment locations A11, A12 and Iodide Street show that the majority of mine noise contributions recorded were above the PA noise limits."*

A further concern is that the loudest activity on site (FEL loading the primary crusher) was not in operation on the one (1) night that noise monitoring was conducted at residential receptors A1, A13 and A14 who are located nearest to the primary crusher. This does not allow for a complete assessment of the potential night time sleep disturbance impacts (L maximum) or whether the PA limits over a fifteen (15) minute period are being met.

#### Transport of ore off-site for processing

The EA proposes that 60,000 tonnes of ore will be transported off-site for processing. References are made to off-site processing options however the EA is simply seeking the following modification:

*"The Proponent is permitted to transport up to 60,000 tonnes per annum of ore by road for processing at off-site facilities."*

The condition does not nominate the premises which will process the ore taken off-site and any premises that does receive 60,000 tonnes of ore per annum will need to have a valid development consent or equivalent and a licence from the EPA.

The two options nominated in the EA potentially cannot lawfully receive the ore and the EPA seeks more certainty around the appropriate handling, storage and processing of 60,000 tonnes of ore per annum generated from the Rasp mine before we could support such a proposal.

A road noise impact assessment has not been completed in accordance with the EPA's guideline the 'New South Wales Road Noise Policy'. The potential noise impacts from the proposed haulage of 60,000 tonnes of ore off-site per annum are not quantified or measured against relevant criteria.

The Policy applies to all new traffic generating developments and there is insufficient justification in the EA as to why the cumulative impacts from this proposal and those from the existing Rasp operations on road traffic noise are not assessed and reported.

### **Information required to be included in the Noise Impact Assessment**

To enable an appropriate assessment of the impacts from the proposed Rasp mine modifications the EPA requires the following additional information.

- A short term noise impact assessment must be conducted which measures the actual noise impacts of the proposed modification.

The assessment must include night time noise monitoring measurements taken at each of the nearest sensitive receptor locations (known as A1, A11, A12, A13, A14 and Iodide Street) that representatively captures the actual activities that will occur in the proposal and includes but is not limited to;

- haul truck movements,
  - the Front End Loader undertaking loading activities at the primary crusher,
  - the primary crusher operating, and
  - all associated mill processing activities in operation, including the filtration plant.
- The reported measurement results presented in the noise impact assessment and that are attributed to the Rasp mine activities must include;
    - all activities that are nominated above and any other Rasp mine related activities,
    - measurements taken with wind speeds measured up to five (5) metres per second at the noise monitoring microphone location (microphone height).
    - discussion about what these actual measured levels may translate into during a winter night time inversion event.
    - discussion about why the sensitive receptor A3 is modelled for this proposal to have night time noise impacts up to 38dB(A) LAeq (15 minute) but is not included in the night time trial noise impact assessment.

### **EPA Position**

Based on the information presented in the EA the EPA cannot determine if the proposed modification will comply with the noise limits that are currently identified in the Project Approval (PA) for the Rasp mine development.

Furthermore, it appears the current operation of the Rasp mine is not complying with these same noise limits assigned in the PA and the Environment Protection Licence (EPL).

There is no information in the EA that details what mitigation measures will be implemented on the filtration shed and its associated infrastructure or what noise reductions can potentially be achieved.

The noise monitoring of the night time trial at the southern receptors (A1, A13 and A 14) did not include the filtration plant operating and did not include the noisiest activity at the primary crusher (FEL loading the crusher).

The night time trial results indicated that even with the omission of the filtration plant noise, the noise impact at various residential receptors can be either equivalent to or just below the noise limits nominated



in the PA and EPL. The trial weather conditions did not represent worst case scenario conditions (night time winter temperature inversions) and this factor also needs to be included in the assessment.

The Industrial Noise Policy (INP) at section 5.3.2 states that an upper limit wind speed of five (5) metres per second at the microphone position is commonly applied during noise measurements. The EPL does include a condition that when wind speeds are over three (3) metres per second measured at a height of ten (10) metres the EPL limits do not apply. Given there is no demonstration that gradient winds or other meteorological features (other than temperature inversions) apply to this location the EPA will seek to vary this condition in the EPL so that standard INP criteria apply.

A further night time trial with all noise mitigation measures in place and all primary crusher and associated activities operating is required for the EPA to undertake a complete and objective assessment of the potential impacts of this proposal.

Also, the EPA cannot support the off-site processing of 60,000 tonnes of ore from the Rasp mine where a road traffic noise assessment has not been undertaken and details are not provided about the destination or information that the premises can lawfully receive the ore material.