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Attention: Rose-Anne Hawkeswood

EPA Advice on Environmental Impact Statement

Dear Ms Hawkeswood,

Thank you for the request for advice from Public Authority Consultation (PAE-25647096), requesting the review by the NSW Environment Protection Authority (EPA) of the Environmental Impact Statement for the proposed Modification Application to increase in depth of mining (MP09_0182-Mod-8) at Boggabri Coal Mine, 386 Leard Forest Road, Boggabri NSW 2382.

The EPA has reviewed the following documents:

- *Boggabri Coal Mine MOD 8 Modification Report Parts 1 - 4* – Hansen Bailey for Boggabri Coal Operations Pty Limited – July 2021, inclusive of all appendices but particularly:
 - Appendix F – Noise & Blasting Assessment;
 - Appendix G – Air Quality and GHG Impact Assessment;
 - Appendix H – Groundwater Impact Assessment;
 - Appendix J – Surface Water Impact Assessment;
 - Appendix K – Traffic Assessment

The EPA understands the proposal is for:

- Increasing the approved maximum depth of mining down to the Templemore Coal Seam; and,
- The construction of a fauna movement crossing over the existing haul road between the overburden emplacement area and the western side of a regional biodiversity corridor.

The EPA also understands that the modification report requests that Schedule 3, Conditions 9 and 10 of SSD 09_0182 either be deleted or modified.

The EPA has the following additional comments and recommendations:

1. Matters to be addressed prior to determination

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a. Noise & Blasting Impact Assessment – annoying characteristics of noise and modification factors

The EPA recommends that the proponent provide a quantitative demonstration that modification factors in Fact Sheet C of the *Noise Policy for Industry 2017* (NPfI) are not relevant.

The Noise and Blasting Impact Assessment (NBIA) qualitatively considers the annoying characteristics of noise in Sections 2.4, 3.4 and 5.5.

However, given that the mine is active and there has been numerous compliance assessments undertaken, the assessment is insufficient without a demonstration that the modification factors above are not relevant.

b. Air Quality Impact Assessment requires revision – expected change in emissions and impacts due to the proposed variation is unclear

The EPA recommends that the proponent revise the Air Quality Impact Assessment (AQIA) to:

- a) Include a modelling scenario representative of the proposed ROM coal production (i.e. 9.1 Mtpa).
- b) Include incremental ground level concentrations predicted from the modelling scenario representative of Approved (8.6 Mtpa) and Proposed (9.1 Mtpa) Operations.
 - i. Specify the total number of exceedances at each receptor for approved and proposed operations.
 - ii. Provide detailed analysis and discussion regarding the significance of the change in emissions and impacts due to the proposal, and how the change of impacts will be managed.
 - iii. Discussion of additional controls strategies that could be implemented should adverse air quality impacts arise once operating at an increased capacity.
- c) Clearly specify the number of years during which the ROM production is expected to increase from 8.6 to 9.1 Mtpa of ROM coal.

The EPA notes that the key aspects of the proposed modification that could impact air quality include:

- Increasing the maximum depth of mining allowing to recover an additional 61.1 Million tonnes (Mt) of ROM within the currently approved Mine Disturbance Boundary. The changes to the mine plan will result in an increase to the approved mine life by six years.
- ROM coal production will generally remain within the approved rate, however, an increased production rate from 8.6 to up to 9.1 Mtpa of ROM coal is proposed to accommodate the proposed mine plan schedule. This represents an increment of approximate 6%.

None of the selected modelling scenarios is representative of the maximum proposed ROM coal production of 9.1 Mtpa.

Noting that there are already predicted additional exceedances of the 24-hr PM10 criterion at 4 different receptors (R48, R140, R147, 165), when operating at a ROM coal production of 8.6 Mtpa, additional information is required to understand:

- The significance in the potential change in emissions and impacts due to the proposal;
- How the risk for additional exceedances can be minimised by the diligent implementation of the specific existing control strategies and mitigation measures;
- Any further mitigation measures or control strategies that could be implemented should adverse air quality impacts arise once operating at an increased capacity.

c. Clarify the proposed life of the mine

The EPA recommends that the proponent clarifies the proposed end year of operations.

Based on the modification report, a mine life extension of 6 years is being proposed. The EPA understands that, if approved, the mine could operate up to 2039. However, it is noted that the assessment of Greenhouse Gases has assumed that the operations will be undertaken until 2042.

d. Air Quality Impact Assessment – Water availability

The EPA recommends that the proponent confirms the design of the project has adequately accounted for the water demand associated with the implementation of the mitigation measures and rehabilitation targets as assumed in the AQIA.

Table 23 in the AQIA presents a summary of the emission reduction factors assumed to estimate emissions. It is noted that the adopted controls heavily rely on water availability for dust suppression purposes for activities such as drilling, hauling, stripping, material handling (loading and unloading), dozers operations on stockpiles and dumping stockpiles. Further, additional water will be required for land rehabilitation works.

Noting that a mine life extension is proposed and that failing to implement these controls will increase the risk of adverse air quality due to the on-site operations, it is important for the proponent to clearly and transparently demonstrate the design of the project has accounted for the expected water demand associated with the implementation of these control strategies (i.e. land rehabilitation and dust suppression).

e. Surface Water Impact Assessment – Reporting of clean water catchments

The EPA recommends that clean water catchments must not report to the mine pit or mine water dams. The EPA recommends that the proponent clarify or revise the Water Balance Model Schematic at Figure 2.2 to reflect this.

Figure 2.2 indicates that clean water catchments would report to MW3 and the mine pit. This has the potential to overwhelm the mine water store and reuse systems during floods, potentially resulting in the need for mine water discharges from the premises. The EPA notes that this issue has occurred historically at Boggabri Coal Mine.

f. Surface Water Impact Assessment – catering for revised operational scenarios

The EPA recommends that the proponent clarify whether existing mine water and sediment control structures can cater for revised operational scenarios, including increased groundwater make.

In the Water Balance Report, it appears that the proponent has not specifically addressed the ability of the existing structures to manage revised operational scenarios. The Report notes that uncontrolled discharges of sediment laden waters are expected to decrease as rehabilitation areas expand, but there is little detail as to when this would begin to take effect.

It must be ensured that the site will continue to comply with design discharge frequencies.

2. Minor matters

a. Noise & Blasting Impact Assessment – failure to model against G class inversion conditions

The EPA recommends that Planning consider that the proponent must adhere to noise limits in all inversion conditions, as required in Schedule 3, Condition 10 of SSD 09_0182.

The EPA notes that Schedule 3, Condition 10 of SSD 09_0182 requires that noise limits apply under all inversion strength conditions, including atmospheric stability category G. At the time of the SSD determination, the then applicable *NSW Industrial Noise Policy* did not require that noise limits apply under G class inversions. While the SSD approval included a provision allowing the proponent to request the requirement for G class condition to be reviewed, it appears the proponent has not pursued this option.

The NBIA in this Modification Application has been undertaken against the noise limits applied in the consent and Environment Protection Licence (EPL) No. 12407. However, the meteorological conditions applied in the modelling do not include G class inversions (as would be required in the SSD condition discussed above). It is noted that G class conditions for non-arid regions means 4 degrees/100m inversion and drainage flow. Drainage flow was not included in the modelling.

The EPA considers that not including G class inversions is reasonable under the current noise guidelines, that is, the NPfI and the NSW Voluntary Land Acquisition and Mitigation Policy (VLMAP). However, it also means that unless the proponent pursues a review under the SSD to remove G class inversions from modelling requirements, the proponent will need to continue to satisfy these levels under all inversion conditions.

b. Noise & Blasting Impact Assessment – change in voluntary acquisition and mitigation rights

The EPA recommends that Planning should consider the implications for noise levels exceeding LAeq,15 min 35dB at receivers 8 and 158, with respect to the SSD 09_0182 Schedule 3, Condition 6 requirements.

Receiver 48 is currently subject to voluntary acquisition/mitigation upon request and hence should continue to be managed via the planning approval.

Under the current project approval, voluntary acquisition rights were assigned to all receivers predicted to exceed LAeq,15 min (day, evening, night) 35dB. This was contrary to current practice and to the now applicable VLMAP.

The current planning approval assigns voluntary acquisition and mitigation rights to 14 receivers under Schedule 3, Condition 4. Schedule 3, Condition 6 could also be read to assign voluntary acquisition/mitigation rights to any subsequent receivers that exceed 35 dBA. Schedule 3, Condition 5 assigns noise limits of LAeq,15 min(day, evening, night) 35dB to all other residential receivers.

The noise modelling (which did not include drainage flow, as above) has demonstrated that exceedance of currently applied limits will occur at 3 locations as identified below:

Location	Exceedance	Comment
48	+1dB at night resulting in a noise levels of LAeq,15min 39 dB	This location is currently subject to voluntary acquisition in SSD 09_0182 and hence has not been further considered.
8	+1dB at night resulting in a noise levels of LAeq,15min 36 dB	This location was assessed as compliant with LAeq,15min 35/35/35dB in the original assessment
158	+1dB at night resulting in a noise levels of LAeq,15min 36 dB	This residence was constructed after the mine was determined and was not considered in the original assessment.

The EPA notes that sleep disturbance levels in the consent and the EPL are predicted to be satisfied. Under the NPfI and VLAMP, these exceedances are not significant and represent an imperceivable difference in terms of human hearing acuteness.

The EPA also notes that the assessment of road noise traffic levels indicates that increases are not unreasonable and are within NSW Road Noise Policy guidelines. The NBIA has also modelled the construction noise associated with the proposed fauna crossing.

As the EPA is an outcomes focussed regulator, our primary measure of compliance is that the applied noise limits are met, not how they are met. For that reason, the EPA does not recommend the impositions of Schedule 3, Conditions 9 and 10. Therefore, Planning should solely consider the proponent's request to remove or amend those conditions.

If you have any questions about this request, please contact Lindsay Fulloon on (02) 6773 7000 or via email at info@epa.nsw.gov.au.

Yours sincerely



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