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8 September 2021

Submission: Boggabri mine Modification 8.

Thank you for the opportunity to make a submission on this modification.

We object to this modification and consider that the volume of additional coal proposed to be extracted as a result of it is sufficiently large for the modification to be treated as an extension project and new State Significant Development application in its own right. We are also very concerned about the unlawful surface water management system currently in operation at the Boggabri mine and intended to be extended by this modification. Too little information is provided by the proponent on this issue but it appears to us that Boggabri Coal it is not only in breach of its surface water management plan, which has been admitted, but also its development consent and the *Water Management Act 2000*.

For a decade, coal mining has altered and degraded the landscape, the social fabric and the water resources of the rural farming community at Maules Creek. Each of the four large mines in the vicinity has expanded its operations since securing initial approval from NSW authorities, with the number of modifications now topping two dozen. These modifications have cumulatively increased the environmental and social impacts of these mining operations. We appreciate the Department providing opportunity to comment on this proposal, but it is inappropriate for the Department to continue treating these applications, including this one, as modifications and not subjecting these expansion proposals to cumulative impact assessment.

The Department now has cumulative impact assessment guidelines. We are concerned that the cumulative impact of expansion activities, in the form of modifications, of mining in this district on water resources and social values in particular, has not been addressed or considered. Similarly, the assessment offered by Boggabri Coal for this modification does not address the principles of ecologically sustainable development.

With this application, Boggabri mine is seeking approval to mine an extra 61.6 million tonnes of coal and extend its operation for six years to 2039. Mining and burning coal from the extended mine will result in 359 million tonnes of greenhouse gases according to the assessment provided by the proponent and we understand that 152.4 million tonnes of this would be directly attributable to the modification.

We urge the Department to reject this modification.

Surface water

In reviewing this application, we became aware that Boggabri mine is not complying with its current surface water management plan, as admitted in the mine's 2020 Annual Review. The maps for this modification show Nagero Creek, a fourth order stream, and other streams, apparently flowing

directly into the mine pit from the north with no diversion works in place, contrary to the mine's 2010 Environmental Assessment. The assessment states that there were no observed flows in Nagero creek from January 2015 to January 2020, but also that 102mm of rain fell in February 2020. Little is said about subsequent rain events.

The current (2017) Surface Water Management Plan for the mine only commits to using clean water diversion or high wall dams to prevent clean water entering the mine "where feasible." Indeed, the SWMP only shows clean water dams in use in 2033. The SWMP states that,

In other locations it is not feasible to provide diversion drains or highwall dams due to the advancing topsoil stripping and stockpiling. In these circumstances clean water will be allowed to enter the active mining areas and the dirty water diversion system. BCOPL will be required to account for the additional captured water and hold adequate licences or harvestable rights.

Despite this admission that the mine must hold licences for captured water beyond its harvestable right, we are unable to find any evidence that it does so. Furthermore, the mine's 2010 Environmental Assessment indicated that there would be at this time clean water diversions in place at the northern perimeter of the pit to prevent clean catchment water entering the mine site, but these diversions are not in place, and not anticipated by this assessment to be put in place.

It is disappointing that the Department of Planning, Industry and Environment approved the SWMP on above terms, but given this plan is in place, we assume that a proportion of the 2.4GL of water in the site water balance for this project which is estimated in 2026 to originate from sediment dams and contaminated water dams is in fact clean catchment water and water from Nagero Creek that is flowing into the mine's water system for use running the mine. The information available to us does not allow us to estimate with confidence what proportion of this 2.4GL is water taken unlawfully from the Bluevale Water Source, but it seems likely that some of it is. The mine's 2020 Annual Review admits that it is not compliant with that Surface Water Management Plan. The Annual Review states:

The implementation of the currently approved SWMP is non-compliant as the clean water drain presented in Appendix A of the SWMP to the north of the disturbance area has been mined through and has not been reinstated. It is acknowledged that the update to the SWMP (Rev8) has been prepared depicting the absence of the clean water drain and that a report has been prepared by GHD to justify not reinstating this drain and to evidence that the site is not harvesting clean water outside of harvestable rights allowances.

It is clarified in Section 3.4.2 of the Surface Water Impact Assessment for Modification 8 that the company is *not* seeking an exemption to the harvestable right order for the pit or dams that are collecting water from this creek and other streams and that therefore the water entering them "will either need to be licenced or covered by harvestable rights provisions, or other licence exemption."

The company calculates its harvestable right based on a landholding of "about" 10,450 hectares at 680ML and cites WALs entitling it to 450ML giving licenced surface water entitlement of around 1,130ML. However, the claimed entitlement of 450ML is for water in a different water source from that being captured by the mine and, in any case, examination of the Water Access Licences listed and their associated Water Supply Works reveals that these licences would not entitle the mine to take anywhere near this volume of water in most years.

The surface water WALs listed in Table 2.1 of the Surface Water Management Plan and repeated in Table 2.6 of the Surface Water Impact Assessment for Modification 8 are a mix of Lower and Upper

Namoi entitlements and general security and supplementary licences, most of which have conditions and water supply works approvals attached to them which we believe may not be being complied with. We outline Boggabri Coal's surface water Water Access Licences, associated water supply works approvals and conditions in the table below. Some observations on these licences:

- All of these licences are Regulated River licences, which means the source of water to which they entitle access is to water between the banks of declared regulated rivers in the Lower Namoi – and one for the Upper Namoi – neither of which includes Nagero Creek.
- Nagero Creek is, in fact, in the Bluevale Water Source of the *Namoi and Peel Unregulated Rivers Water Sources Water Sharing Plan 2012*.
- None of these licences are for high security water. WAL2571 and WAL 2595 collectively represent 294 share units of general security water in the Lower Namoi Regulated River. The current available water determination for the Lower Namoi is 0.278ML per unit for general security licences, which means these licences entitle Boggabri coal to 81.732ML of water. These licences have frequently had Available Water Determinations of zero allocation since Boggabri mine began operating.
- In any case, the water use approval for WAL2571 is for irrigation, not mining and the licence condition specifies that water is only to be taken in accordance with the water supply work and its conditions, which require metering.
- WAL2596 and WAL2572 are for supplementary water, which can only be accessed when declared available by the Minister.

Table 1: Surface water licences cited by Boggabri Coal as entitlements

Licence	Water source	Units	Category	Works approval	Licence cond.	Works use
WAL2571	Lower Namoi Regulated River	51	General	90CA801763	Before water is taken under this access licence a water order must be placed and confirmed	Irrigation
WAL2595	Lower Namoi Regulated River	243	General	90CA801819	Before water is taken under this access licence a water order must be placed and confirmed	Irrigation and mining
WAL 2596	Lower Namoi Regulated River	26.5	Supplementary	90CA801819	Only when Class B supplementary water is declared available	Irrigation and mining
WAL2572	Lower Namoi Regulated River	5.6	Supplementary	90CA801763	Only when Class B supplementary water is declared available	Irrigation
WAL37067	Upper Namoi Regulated River	128	General	None specified		-

Greenhouse gas emissions

The assessment provided by Boggabri Coal shows a significant leap upward in onsite greenhouse gas emissions as a result of this modification. Onsite emissions reported in 2020 in the mine's Annual Review were 174 kilotonnes. The assessment for this modification shows that volume increasing to 740kt and 800kt in the coming years. This is a huge increase in greenhouse emissions, both in overall volume and in the intensity of emissions released per volume of coal mined.

Furthermore, the Modification Report makes false claims about this impact, stating that “This assessment identified the annual Scope 1 and 2 emission rates for MOD 8 will be **essentially equivalent** to those generated from existing operations continuing for a further six years from 2033 to 2039” (our emphasis). On the contrary, annual onsite greenhouse emissions are expected to triple as a result of this modification, as well as continue for six additional years of mining.

This is an unacceptable intensification of the mine’s greenhouse impact. It is a contravention of the requirement to minimise greenhouse emissions and warrants further examination from the Department and mitigation by the proponent. If the proponent is unable to prevent this impact, then it is clear that this modification would have an unacceptable impact on current and future generations and is at odds with New South Wales’ intended goal of decarbonisation by 2050.

The greenhouse assessment indicates that, “Boggabri Coal Operations Pty Ltd has committed to commissioning a Greenhouse Gas Minimisation Study to assess the existing measures and to identify any further reasonable and feasible measures to further minimise direct greenhouse gas emissions from the site.” Given the tripling of Scope 1 emissions expected as a result of this proposed modification that study should have been commissioned as part of this assessment and the Department needs to obtain further information from Boggabri coal and establish expectations around the generic requirement to “minimise” onsite greenhouse emissions.

The proponent also offers that where actual emissions are identified to be greater than forecast Boggabri Coal would offset the additional emissions only. In the absence of a meaningful plan to firstly minimise predicted emissions from this substantially larger footprint such a meagre commitment is not appropriate and not commensurate with the impact.

Groundwater

This modification will result in an initial 33% increase in groundwater inflow compared to approved mining, according to the groundwater assessment and the 2020 version of the groundwater model for the three mine complex in Leard forest. Groundwater inflow would continue to remain relative high throughout the 2030s if the modification were approved.

Already, the cumulative impact on regional groundwater from the three mines has been greater than anticipated in their original assessment material and that impact will be intensified with this modification.

Furthermore, the groundwater assessment identifies that the modification will cause more than 2m drawdown, up to a maximum of 5m in zone 4 of the Namoi alluvium, a productive groundwater source relied on by the farming community. The assessment shows a significant escalation in the volume of annual take from Zone 4 of the alluvium as a result of this modification – in most years over 80ML per year and in some over 100ML. This impact extends to the Namoi River itself, with a predicted 2ML per year loss of baseflow. The assessment notes that this is a small volume in years and periods when the river is in flow, but the region has just been through its worst drought on record during which the river experienced no flow at all for an extended period. During such times, water take by bores and pumps can be ordered to cease, but this is not the case for groundwater inflow to mining pits and resulting baseflow loss. For this reason, the Department must treat this degree of groundwater impact and its potential social, environmental and economic impact on the district as unacceptable. Certainly, the environmental assessment provided by the proponent fails to adequately engage with the environmental impacts of this drawdown in dry years.

For the reasons outlined above, we urge the Department to reject this modification.