

## Moolarben OC3 Extension Project SSD-33083358 EXH-50540708

Thank you for the opportunity to object to the latest Moolarben Coal Complex (MCC) expansion proposal, equivalent in scale to a new coal mine development. The limited exhibition period and substantial bulk of the EIS has made it difficult to assess all relevant information. There are major problems and significant concerns with the proposed Project. These include the loss of biodiversity from the valley floor with the clearing of CEEC ecosystems, cumulative impacts on the surface and groundwater water system and the mines contribution to greenhouse gases fuelling destructive climate change. The scientific advice is clear; we need to urgently transition from coal if we are not going to exceed 1.5C global warming. To do this we cannot continue to open new coal resources or expand existing coal mines<sup>1</sup>. The immense scale and extent of coal mining across the headwaters of the Goulburn catchment already has severely compromised the natural systems for centuries to come, this EIS does not genuinely assess the cumulative impacts of these mining operations past, present or future.

### Water Impacts

The EIS has narrowed and minimised predicted impacts of the Project on groundwater resources. For example:

- The loss of catchment flow *“would be indiscernible”* and thus *“excision of catchment from Project operations is considered negligible”*. *Indiscernible* in that the MCC already has major impacts on the catchment? This indicates a failure to understand cumulative impacts of mining on baseflows and water quality or understand Euclid axiom ‘the whole is greater than the part’ and death by 1000 cuts.
- The proposed backfilling of open cut pits would result in a free-draining landform with *no resulting loss of catchment post-mining*. The predicted groundwater ‘*mounding*’ assumed to have no consequences on water quality or flow.
- Clean water drains and dams will be used *“where reasonable and feasible”* to divert runoff from undisturbed catchments around mined areas.
- MCC water modelling predicts *“less than a 1% annual probability of uncontrolled spills of mine-affected water from the Project”* to the receiving environment with overflows only occurring during extreme rainfall events would have no measurable downstream impact.

The last point disregards the MCC recent emergency discharge of 65ML/day (2,851 ML total) of untreated mine water exempt from approved water quality conditions and monitoring requirements of the source or downstream flows. Downstream salinity levels have trebled since these discharges commenced negating the ecological advantage of the recent fresh rainwater flush through the river. The discharge of mine water by MCC (~1000-2500  $\mu\text{S}/\text{cm}$ ) equates to approximately 2,500-4,000 tonnes of salt released into the upper Goulburn/ Hunter River system. There was no consultation or consideration of downstream landholders. Emergency Discharge Licences were requested and granted three times since 2010 demonstrating the failure of mine water modelling to control and

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<sup>1</sup> The recent 26th and 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 26 & 27) have decisively warned Australia coal mining must be phased out by 2030 if the world is to avoid catastrophic climate change.

manage water contaminated by mining operations. The predicted increase in the frequency and variability of extreme rainfall events due to climate change further exacerbates the risk.

The Project proposal fails the test for *Coal seam gas and large coal mining developments— impacts on water resources*<sup>2</sup>. The hydrological integrity and hydrogeological connections in this valley are poorly assessed and directly threatened by open cut mining. The increasing scale and cumulative impacts on water resources significantly reduces the utility of the water resource for third party users (future generations) and the surrounding environment (Munghorn Nature Reserve flora and fauna).

The groundwater monitoring network and available data does not adequately represent the project area and lacks sufficient information on groundwater flows and variable water sources to fully inform the assessment. The nine groundwater monitoring sites used to assess the Project area are located in the north-west, with none in the southern project area (EIS p.14 & App.A Fig 5.1). Triassic water quality was provided as an estimate (900 mg/l) with no apparent sampling data collected from within the Project area or included from the potable springs that ring the valley. The role of the numerous freshwater springs and groundwater that act as a dilution factor reducing stream salinity is disregarded<sup>3</sup>. Fresh springs and groundwater emanating from the foot-slopes of the Munghorn where they meet the valley floor contribute irreplaceable freshwater flows to the Moolarben creek as baseflow. The interception and 'mounding' of fresh groundwater flows within spoil filled pits as predicted in the modelling, requires thorough scrutiny. The subsequent increase in rock-water interaction from the delayed flow would contaminate and degrade water quality.

GDE Atlas (BOM) mapping of the upper Goulburn River catchment including the Moolarben Valley is by remote means only and thus contains no detailed information on High-priority Groundwater Dependent Ecosystems. Only one is currently listed for the whole of the upper Goulburn catchment (Wild Bull springs in the south east). The absence of detailed GDE Atlas mapping allows the mine EIS to devalue the significance of the Triassic springs that ring the valley and support dry rainforest plant communities. In addition the stygofauna assessment targeted only nine bores in the already disturbed northern section of the Project area; there was no survey of creek alluvium, springs or Triassic groundwater.

The MCC EIS totally fails to account for the evolving cumulative impact from the already approved and expanding mining footprint that will over time seriously degrade water quality and exacerbate the loss of flow in Goulburn River National Park and on into the Hunter. A way to offset or mitigate the mounting impacts is to cease the expansion of coal mining and relinquish EL6288. This should include withdrawing from UG4 LWs panels 9-14 that are yet to be mined and pose the greatest threat to the viability and ecology of the River corridor or Sacred Country *Ngayirr Ngurrambang* including The Drip and Corner Gorges, Goulburn River National Park.

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<sup>2</sup> Significant Impact Guidelines for Water Resources (Department of the Environment, 2013)

<sup>3</sup> Imrie, J., 2019. 'Changing land use in an uncertain climate: impacts on surface water and groundwater in the Goulburn River NSW - PhD Thesis', Fenner School of Environment and Society, Australian National University, ACT.

## **Loss of Biodiversity**

The unacceptable level of biodiversity decline and loss of native flora and fauna species in Australia is well documented. A biodiversity offset scheme must clearly show how it will maintain and improve biodiversity to fully compensate for the removal of critical ecosystems and fauna habitat. Detail in the EIS of how the necessary biodiversity offsets to compensate for the impact on threatened flora and fauna will achieve 'no net loss' from the proposed MCO coal mine expansion is ill-defined and poorly described.

The proposed clearing total of 624.18 ha of native vegetation including 477.75 ha of Box-Gum and Slaty Gum Woodland CEEC listed under the BC and EPBC Act requiring 15,624 ecosystem credits to offset loss of ecosystem biodiversity and fauna habitat is unacceptable. As is the impact on 22 threatened fauna species in the study area including an emerging population of Munghorn Gap Koalas, the Large-eared Pied Bat and Eastern Cave Bat, and a range of threatened woodland birds - requiring a combined 56,501 species credit to offset this species loss.

## **Project Design**

The location of haulage roads and infrastructure including mine dams and over burden dumps within the so called 200 metre buffer cannot be permitted. This zone should be expanded and managed as a conservation corridor, to encourage native vegetation and wildlife linkage across the valley. The remaining southern portion of the Moolarben Valley and current Project area should have been included in the offset area for the existing mining complex.

## **Green House Gases**

This project will contribute Scope 1 emissions of 600,000 t CO<sub>2</sub>-e and Scope 2 GHGs of 190,000 t CO<sub>2</sub>-e to the NSW GHG inventory between 2025 and 2034. There is no evidence that condition 20 (b) Stage 1 Development Consent requiring MCO to "implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site" is being followed. Cumulative Scope 1 and 2 emissions have increased at the existing Moolarben mine over the last 4 years while emissions intensity per tonne of ROM coal mined has increased for the last 3 years.

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