

## **Submission to EIS on Bowden Silver mine, Project SSD-5765**

Thank you for the opportunity to comment on the proposed Bowden's Silver Lead Mine Application Number SSD-5765. This project should not be approved due to the significant threat to water resources, substantial health risks to the Mudgee region and impact on local tourism.

### **Water Impacts**

1. The water demands of the proposed Bowdens Mine are dependent on the transfer of water from the eastern Hunter- Goulburn Catchment to the western Cudgegong- Macquarie River catchment (Murray Darling Basin). Water Sharing Plan Trading Rules (WaterNSW) for the Upper Goulburn Water Source does not permit any trading out of this water source. Ulan and Moolarben coal Mines intercept both surface and groundwater in their operations.
2. The project proposes to transfer up to 5.5 ML/day of water from coal mines on the headwaters of the Goulburn River via a 60km pipeline disrupting productive farmland, endangered woodlands, breaching creeks and intersecting main roads. The targeted water is not "waste mine water" but valuable groundwater and surface flows intercepted and extracted by Moolarben and Ulan Coal mine operations from the Goulburn/Hunter (eastern catchment). This water includes fresh groundwater sources that provide baseflows that maintain the health and viability of the Goulburn (Imrie, 2019); all of this water is indispensable during drought periods when water is most scarce and in demand by all parties. The highest priority use for this east catchment water must be to maintain environmental flows in the Goulburn River to offset the loss of baseflow due to the water take by mining operations. Maintaining baseflows is of critical importance during extended dry periods, when maximum pressure is on water access. Sending treated eastern fall high quality water across the range cannot be permitted.
3. The Surface Water Assessment for this proposal makes scant mention of any construction or operational controls nor does it show how impacts to threatened and endangered species and habitat will be avoided along the pipeline easement. Planning and landholder consultation are deferred to a subcontractor and future work. The proposed pipe line easement is also not consistent with Mid-Western Regional Council LEP which prohibits water supply works on Large Lot Residential Lands - RU5 zoned land.
4. Water demands to operate this Zinc Lead Silver mine requires up to 5 Million litres per day. The proponent's investigation and monitoring of water sources and modelling of water impacts is insufficient to ascertain the full impact of groundwater drawdown on base flows in

Lawson Creek and surrounding private bores. The interception and mining drawdown of groundwater levels and associated loss of baseflows to 3<sup>rd</sup> order streams have not been fully investigated or quantified.

5. The proponents preferred option is for the eastern catchment water to be treated before transfer, with disposal of brine and other waste to remain in the eastern catchment under Coal mines existing approvals. This is unacceptable; Ulan Coal and Moolarben Coal Mines project approvals should require a formal planning Modification if intercepted surface and groundwater water take is to be used for this new purpose.
6. Bowdens intention is to store contaminated water in a tailings dam less than 1 km from Lawsons Creek. The proposal underestimates both the ongoing threat of acid mine drainage<sup>1</sup> (EA, 2019) and the long term risk of leaving a toxic void and capped tailings dams in the landscape<sup>2</sup>. The EIS has not provided sufficient information on how much cadmium is present in the ore oxide or the actual risk of contamination by *Acidithiobacillus*, a common bacterium that causes acid mine drainage. The predicted median concentration of zinc, cadmium, copper and nickel exceeds the Australian and New Zealand Guideline values (WRM report). The accumulation of such heavy metals in the void lake over time has not been adequately investigated, any seepage or breach from these permanent structures will flow towards Lawson Creek which joins the Cudgegong at Mudgee, and flow on into the Macquarie River to Burrendong Dam - part of the Murray Darling Basin.
7. There is no guarantee that the EPA will have the resources to adequately monitor water pollution from the Bowden Silver mine over time if approved. The polluting history of heavy metal mines plus the uncertainty of a changing climate with extreme storm events becoming more likely for this region (CSIRO, 2015) demonstrates that downstream water quality pollution is likely to represent a significant risk for decades post mining when Bowden Silver ceases to become legally responsible for the mine. The Mudgee region and NSW government will thus be left to deal with environmental costs of polluted waterways due to the Bowden Lead mine operation. This is unacceptable for Australia in the year 2020.

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<sup>1</sup> Pyrite (iron sulphide) is the most wide-spread sulphide material found throughout the ore and waste rock within the mine site

<sup>2</sup> One of the most under-publicized problems facing environmental health in Australia is that of toxic waste emissions or acid mine drainage (AMD) from abandoned mining sites. It threatens the quality of the surface and ground water supply with contamination of toxic heavy metals and high levels of acidity. Current examples of closed heavy metal mines that continue to pollute include Sunny Corner Mine (Portland), Captain Flat (Canberra)

## **Health and Tourism Impacts on the Mudgee region**

1. Lue Primary School is less than 2km from the mine site - there is no safe limit for lead dust exposure (WHO, 2019), the risks of health effects are highest in unborn babies, infants and children - local families and school children will be placed at risk.
2. Bowdens plan to transport the ore on B-double trucks using our regional roads, including through the middle of Mudgee town and past local schools. They are to use the narrow, winding dangerous Lue Road to get to Mudgee and if some ore is transported to Newcastle port will use the Ulan Cassilis Road which is already heavily congested at peak times by coal mine traffic. These roads are major tourism routes through the Mudgee area used extensively by visitors to our area. B-Double trucks are a significant danger to road users and will be at the detriment of the local tourism industry on which the region depends.
3. This lead mine will undoubtedly compromise the clean green image and reputation of the Mudgee -Rylstone area as an excellent healthy family friendly holiday destination in the bush.
4. The project will destroy 381.7 ha of native vegetation including 182.3 ha of the critically endangered Box-Gum Woodland. Our native animals are under great pressure from climate change and over clearing. This ecological community provides habitat for a large number of endangered species listed under NSW and Federal environmental legislation. Koalas have been sited beside the project site.

**Yours sincerely,**

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25 July 2020

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