

**Submission
No 156**

**INQUIRY INTO CURRENT AND POTENTIAL IMPACTS OF
GOLD, SILVER, LEAD AND ZINC MINING ON HUMAN
HEALTH, LAND, AIR AND WATER QUALITY IN NEW
SOUTH WALES**

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SUBMISSION TO THE PARLIAMENTARY INQUIRY ON THE CURRENT AND POTENTIAL IMPACTS OF GOLD, SILVER, LEAD AND ZINC MINING ON HUMAN HEALTH, LAND, AIR AND WATER QUALITY IN NEW SOUTH WALES

My background

I have been a resident of Rylstone, a small town about 20 km from Bowden's Silver Mine at Lue, for around 20 years. I moved here because it is a beautiful area with a strong community. In the past few years, I have become increasingly concerned about the impact the Bowden mine will have on the health of residents and the environment.

My main concerns are:

1 Impact on the health of residents

The mine will be an open cut silver, lead and zinc mine, situated about 2 kilometres from Lue and its primary school. Although Bowden calls it a silver mine, it will produce 50 times more lead than silver. The plan is to excavate 95,000 tonnes of lead. This will lead to airborne lead polluting the water in creeks, dams and water tanks and contaminating the soil.

There is no safe level of exposure to lead (WHO). The close proximity of the mine to the school could have a detrimental impact on the development of the children's brains leading to a reduction in IQ and academic achievement. Lead can also cause long-term harm in adults, including increased risk of high blood pressure, cardiovascular problems and kidney damage (WHO).

It is unacceptable to allow the mine to go ahead if there is any risk of it jeopardising the intellectual development of Lue's children or the health of the local adult population. Assurances from Bowden's is not enough.

Recommendation

A rigorous independent scientific analysis of the health impacts of the mine needs to be undertaken. Then, based on this analysis, the mine should only be allowed to go ahead if conditions can be put in place that will ensure no adverse effects on the health of either children or adults living nearby.

2 Impact on catchments and waterways

The mine will have an impact on local catchment and waterways through airborne lead pollution and acid mine drainage (AMD). Acid mine drainage is the second largest environmental problem after climate change according to the United Nations. The discharge of acid drainage into water bodies can have a significant impact on the environment and contaminate drinking and irrigation water. With the Lue silver mine, there is a risk of long-term contamination of Lawson Creek, which flows into the Cudgegong River. Drinking water, stock water and irrigation systems will be contaminated downstream from the mining site.

According to an expert on AMD, the acid mining drainage risks have not been adequately assessed or controlled. He listed several concerns including a lack of accurate classification of PAF and NAF material, which is fundamental to basic mine design, and an unproven and substantially problematic design of the waste rock emplacement area (WRE). Such critical issues should have been addressed and resolved at the EIS stage of the project. 'Because robust and proven technical solutions to AMD and water quality are not included as part of the EIS then the IPC must refuse this Project.' (Michael White, supplementary submission on SSD-5765 to the Independent Planning Commission, 23 February 2023 (part of the Lue Action Group submission).

Recommendation

The IPC should not approve this mine because Bowdens have not included 'robust and proven technical solutions' to AMD and water quality in their EIS.

3 Impact on the quality and security of ground water

The mine is expected to use 1000 megalitres of water each year from the Lawson Creek catchment. Yet there is no accurate information on where this water will be sourced, the effect on water availability of prolonged dry periods and the significant impact on downstream users whose water security could be threatened. Furthermore, no peer review has been conducted on the risks of groundwater contamination from chemicals such as cyanide and heavy metals such as lead.

Recommendation 1

Bowdens 'must ensure that it has sufficient water supply for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply' (DPE Recommendations, Water Supply B36).

Recommendation 2

The risk of chemical contamination of the groundwater needs to be rigorously assessed and peer reviewed.

4 Impact of the tailings dam

Bowdens plans to build a large tailings dam over 117 ha across a major geological fault line at the headwaters of Lawson Creek. The dam will contain cyanide, arsenic, copper sulphate and lead, all highly toxic chemicals. To prevent leakage, Bowdens proposes to construct a geosynthetic impermeable liner base over 117 ha in order to provide full permeability in the centuries ahead. Bowdens has no experience in building or operating such a dam and there is no evidence that such a design will work. Several things could go wrong: the liner could break down in the years ahead leading to leakage and damage to the environment; the dam wall could collapse releasing toxic dust particles into the air and over the landscape, as happened with the Cadia mine near Orange in 2018. This would cause immense damage to the surrounding ecosystems and threaten the health of humans, wildlife and livestock. It would also contaminate the soil, pastures and crops.

Recommendation

The location of the tailings dam is problematic and its design not proven. The IPC should not approve the mine because the risks to the environment and local population posed by the dam are too substantial.