

Submission
No 27

**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**

Name: Dr Anthea Nicholls

Date Received: 30 August 2023

The current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales.

I live, worked & am raising a family in the Mudgee . I am making this submission to express my concern about the planned Bowdens Lead and Zinc (and Silver) mine that threatens to do irreparable damage to the public health and environment of my region.

I live on a 1 acre block on the edge of Mudgee . We were attracted to the area 20 years ago , partly as it allowed us to live in an enviromental conscience way. We use our rainwater tank for drinking water and extensive veggie garden Our water stands to be compromised by airborne lead,- No lead is safe .This is completely unacceptable to me, a person living in a country that purports to care for its citizens in the 21st century.

I have seen the news from Cadia gold mine. The lack of a co-ordinated response from Government is shocking. Many agencies were contacted ,each suggesting that the communities concerns were outside of their jurisdictions- someone else's problem.

It has taken local citizens to test their blood and drinking water to find elevated levels of minerals from the mine to see any genuine action.

My main concerns are:

1. High risk of lead poisoning. There is no safe level of lead in our bodies. Even very low levels can have lifelong effects on multiple organs including the cardiovascular system. It is particularly dangerous for children

The planned mine will rely on water from the site to tamp down the 130 kilotons of disturbed lead. In our drought-prone region, there is not enough water available for this purpose, and a serious wind event (which we experience regularly) can carry lead particles through the air to our bodies, land, animals and agriculture.

2. Water contamination from Acid Mine Drainage. The planned mine operators predict that 1.6 megalitres (about half an Olympic sized pool) of toxic chemicals will leach into the groundwater system each day. Lawsons Creek, which feeds the Cudgegong River. I understand there is no remediation plan for this contamination.

3. Water security and availability. The mine proposes to use roughly 5 megalitres of water (two Olympic sized swimming pools) every day. This amount of water is often unavailable in our drought-prone region. Bowdens' activities will result in a loss of flow from 10.9% of the Lawson Creek. This will have a significant impact on all those who rely on this critical water source.

4. Toxic chemicals in the tailings dam. The planned tailings dam will hold approximately 30 million tons of potentially acid forming tailings, including most of the 43,700 tonnes of chemicals used in ore processing. Many of these chemicals are highly toxic, including sodium cyanide, arsenic, caustic soda, copper sulphate, zinc sulphate, lead and zinc collector. It will also hold 17-20% of the lead, zinc and silver mined that is lost during processing.

The dam will be built over a major geological fault line above the water table at the headwaters of the Lawson Creek, which flows into the Cudgegong River at Mudgee. It is proposed to have a footprint of 112.5 hectares, across uneven ground. If the dam is compromised in any way – as it was in the Cadia mine - these toxins will contaminate our environment for centuries to come. I understand there is no remediation plan for this contamination.

6. Traffic and transport dangers. Under the plan, mined product will be trucked on B-Doubles six days per week, from 7am-6pm, along the Lue Road and through Mudgee. Not to mention trucks carrying dangerous processing chemicals like cyanide, arsenic and antimony will frequently travel through our communities to the mine site. There appears to be no risk mitigation for accidents involving slurry trucks full of lead/zinc and other chemicals. There is absolutely no way to plan for 100% accident-free transport over the life of the mine.

7. Environment and biodiversity impacts. 457 Hectares is proposed to be cleared in what is in essence, an area of natural beauty. This clearing – along with noise and light pollution - will disturb and fragment Critically Endangered Fauna, Box Grassy Woodland and make major changes to ground and surface water flows. The impact on Koalas is not limited to the immediate area due to fragmentation of their habitat and is at odds with the overall objectives of the NSW Koala Recovery Plan to reverse the decline of Koala numbers in NSW. The region is also recognised as home to critically endangered birds like the Regent Honeyeater and Swift Parrot, and the endangered Small Purple Pea (*swainsona recta*).
Offsetting does not work for the local Koalas and other endangered species.

8. Failure in the approval process & enquiry.

The EPA ignored independent & scientific base science but deferred to "inhouse" modelling provided by Bowdens.

The scrutineering of the mine's submission was not robust or rigorous . This undermines its credibility . It is concerning that a quality critical scientific based analysis was not, (could not ?) be undertaken within the Department, I would pose that this is the result of ongoing outsourcing & undervaluing of science & quality & qualified public servants.

Why is it necessary that the local communities of Cadia & now Lue have to provide the science based reports & evidence of harm to their communities ? I did believe that this was a function of Government.

In the IPCC inquiry , the impacts on the Mid western tourism economy was ignored.

Thank you
Anthea Nicholls.