

Submission
No 167

**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: Ms Fiona Sim
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Partially
Confidential

Submission from Fiona Sim to the Parliamentary 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

I am a voter, taxpayer and landholder in the Mudgee region. I am making this submission to express my concern about the planned **Bowdens Lead and Zinc mine at Lue** that threatens to do irreparable damage to public health and the environment in my region. I am also extremely concerned about the **Cadia gold mine** near Orange, the pollution from old gold mine tailings at **Sunny Corner**, and the pollution from a tailings storage facility that was improperly constructed by a mining company on _____ the property of my friends _____ and _____ near Cowra, and which has had an extremely adverse effect on their property (the property is now so polluted they cannot farm it) and their lives over the past twenty years, as they have struggled to get the miner and the relevant authorities to address the problem. (Please see the details of this in their separate submission to this inquiry.)

The very inadequate government response to the problems recently publicised in the media about the **Cadia mine** is shocking, as is the indifference shown by the relevant authorities to my friends _____ who have been left with what is basically a toxic waste dump, that is now leaking into their farmland. In the absence of action from the relevant authorities, it has taken local citizens at Cadia to test their blood and their drinking water to find elevated levels of toxic materials from the mine to see any substantive action taken. My friends have spent tens of thousands of dollars on legal assistance and independent testing of their land. So far, to no avail. This leaves me with grave concerns for the health of my own community, and that of our land and water. If the Lue lead mine goes ahead, I fear that we and our community will face similar problems to those of the Cadia residents and my friends at Cowra.

I live on a farm with my family in the quiet, close-knit rural community of Running Stream, approximately 40 km from the planned mine site at Lue. We rely on our rainwater tanks for drinking water, water for livestock and for our garden. Like that of Lue and Mudgee residents, our water stands to be poisoned by airborne lead and other toxic substances released by the proposed Lue mine.

Like the fertile and highly productive Orange region, the Mudgee region – which stands to be adversely affected by Lue lead mine – is an extremely valuable and productive agricultural area. Food, clean water and an unpolluted environment are the basics of life for humans and animals alike, and yet mines have been allowed to operate as if these things did not matter.

I would also like to refer you to Lue resident, _____ submission to the inquiry. Like many others in our area, she lives very close to the proposed Lue mine, stands to be directly affected by it, and will be unwilling or unable to continue living there, yet will very likely be unable to sell her property. This is exactly the situation my friends _____ are already facing on their farm near Cowra.

Below I have set out my specific concerns related to the terms of reference of the inquiry.

1. That Portfolio Committee No. 2 inquire into and report on current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales, in particular:

(a) the impact on the health of local residents and mine workers, including through biomagnification and bioaccumulation

If the **Lue lead mine** goes ahead, there is a high risk of lead and heavy metal poisoning to humans and wildlife, in Lue itself and in the surrounding towns of Mudgee, Gulgong, Rylstone, Kandos and the smaller localities such as my own at Running Stream. Dust containing lead particles will be released by mining activity, and toxic materials will inevitably leach into groundwater and streams, and thence either directly into human bodies or into agricultural produce that will be consumed by humans and other animals. There is no safe level of lead in our bodies. Even very low levels can have lifelong deleterious effects. Lead is particularly dangerous for children, and can lead to permanent physical damage and disability.

The Mudgee region is one of tremendous biodiversity and very rich agricultural land. It is a significant wine-producing region and also produces substantial amounts of olives and various food crops such as wheat and canola. Lead and other toxic chemicals accumulate in food crops and then bioaccumulate in livestock and humans who consume them, bioaccumulating again in humans who consume livestock who have ingested toxic substances.

(b) the impact on catchments and waterways, affecting both surface and groundwater destined for local and town water supplies, including rainwater tanks, and on aquatic biodiversity

In relation to the **Lue lead mine**, there is a totally unacceptable risk of groundwater contamination from acid mine drainage. The operators of the planned mine predict that 1.6 megalitres of toxic chemicals will leach into the groundwater system *each day*. Lawson Creek, which feeds the Cudgong River and provides the drinking water for Gulgong, will be contaminated forever. I understand there is no remediation plan for this contamination.

The Lue 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 dramatic loss of flow from the Lawson Creek. This will have a significant impact on all those who rely on this critical water source.

The planned mine at Lue 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 high winds (which we experience regularly) will carry lead particles through the air to contaminate humans, animals, the land, water and agriculture. There were many local submissions opposing the DA for Lue lead mine, which noted the insufficient water for dust suppression, and the fact that the mine would pollute water that Gulgong and Lue residents rely on for domestic use. However, despite this, and despite the fact that Bowdens' DA documents relied upon flawed modelling in relation to water requirements for the mine, the mine was still granted approval. (Please refer to [redacted] submission to this inquiry, which has more details on this failure.)

The planned tailings dam at Lue 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 and zinc sulphate. The dam will also hold 17–20% of the mined lead, zinc and silver that is lost during processing.

The tailings dam is to be built over a major geological fault line above the water table at the headwaters of Lawson Creek, which flows into the Cudgong 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 was the case with the tailings storage dam at Cadia mine – the toxic materials it holds will contaminate the environment for centuries to come. I understand there is no remediation plan for this contamination.

Not only does water draining through the mine area potentially threaten local groundwater, creeks and rivers, contamination of rainwater and the landscape from toxic lead dust is a threat to human health and life, and that of all other animals and vegetation in the immediate area.

In relation to **Cadia mine**, toxic dust from the mine has polluted drinking water and affected the health of residents in the area. The failed tailings dam at Cadia has also spilled toxic material into the local landscape and waterways.

My friends [redacted] it [redacted] near Cowra are currently dealing with the effects of toxic mine materials released from an inadequate tailings storage facility on their property. They have found extremely high levels of harmful chemicals, including heavy metals such as cadmium, in groundwater that has flowed onto their property from the tailings storage facility that was not constructed properly. This toxic runoff has meant that they can no longer grow crops or produce livestock on their once highly productive land.

(c) the impact on land and soil, crops and livestock, including through biomagnification and bioaccumulation

As noted above, in response to point 1(b) of the inquiry, the tailings storage dam at the proposed **Lue lead mine** will be built over a major geological fault line above the water table at the headwaters of Lawson Creek, which flows into the Cudgegong River at Mudgee. If the dam is compromised, which could easily occur due to an extreme weather event, toxic tailings will contaminate the environment for centuries to come.

Near **Cadia**, residents are already concerned that dust from the mine site and leaking water from the breached tailings storage facility has polluted the air, land and soil, crops and livestock.

In relation to my friends' property, [redacted] near Cowra, toxic seepage from a tailings storage facility constructed by a mining company on their land (which was built to contain dry material, but is now actually a dam full of toxic sludge and polluted water) has now poisoned their formerly highly productive land, where once they produced crops such as wheat and canola and raised cattle and sheep. No farming is possible on their land now, and because of the long-lasting nature of the toxic pollution, this is likely to remain the case for hundreds of years. Poisoned water from this site now leaches into the surrounding creeks, which form part of the Murray-Darling system. If crops were to be grown on this land, they would risk poisoning humans or animals that consumed them, and livestock grazing on this land would risk poisoning anyone who consumed them because of bioaccumulation of highly toxic chemicals.

(d) the adequacy of the response and any compliance action taken by the regulatory authorities in response to complaints and concerns from communities affected by mining activities

In relation to **Lue lead mine**, the overwhelming majority of responses from individuals to the mine DA opposed the mine because of its ill-considered and unsatisfactory plans for storage of toxic by-products, its excessive demand for water in an environment that is often drought-affected and where water is precious and needed for human consumption, and for the livestock and agriculture on which the people of New South Wales depend for food. There is also the issue of mining activities possibly polluting river and rain water that currently sustains several large local towns.

Despite the huge negative response to the proposed mine, and the very high possibility of mining activities contaminating air and water, and using more water than is sustainable in a dry environment, the mine was approved. This would appear to reflect a failure by the regulatory authorities to carefully analyse the DA, to listen to the people who will be directly affected by the mine, or to think about the health of people throughout the state who consume agricultural produce from this highly productive area.

Even a casual perusal of the recent media coverage of the problems at **Cadia** reveals that the response from regulatory authorities has been inadequate, if not downright negligent, and certainly displays a lack of concern for the health and wellbeing of local residents, and the landscape they live on.

At my friends' property, [redacted] near Cowra, their submission to this inquiry enumerates the many times that regulatory authorities – from the local council to the NSW Mines Department, the NSW EPA, the Resources Regulator and the former NSW Minister for the Environment Matt Kean – have failed to ensure the safety of the mine tailings storage facility on the property, and have failed to consider the interests of my friends, the landholders on whose property this facility is built. [redacted] are now faced with a permanently polluted property which they cannot farm and cannot sell, and so far they have received no compensation from government authorities or the mining company.

(e) the effectiveness of the current regulatory framework in terms of monitoring, compliance, risk management and harm reduction from mining activities

Events at **Cadia** recently exposed in the media reveal the extent to which the current regulatory framework has failed to monitor mining company compliance. The current framework, in which mining entities are supposed to 'self-monitor', is a travesty.

At **[redacted]** near Cowra, the systematic failures of the regulatory authorities to monitor the mine on my friends' property, and the lack of regulatory action after very toxic materials leaked onto highly productive farmland and into surrounding waterways, also illustrates the failure of the current system.

It is not only people's physical health that has been damaged by failures and inadequacies of the current regulatory framework, but lack of action from the authorities that are supposed to protect the rights of landholders and local residents near mines has grave effects on individuals' mental health. When people have had their physical health damaged and their livelihoods wrecked by mining, yet have been unable to obtain legal redress, there have been suicides, instances of family violence and myriad other mental health consequences.

(f) the effectiveness of current decommissioning and rehabilitation practices in safeguarding human health and the environment

Recent media reports by the *Sydney Morning Herald* on the **Sunny Corner** toxic tailings dump illustrate the ineffectiveness of current mine decommissioning and rehabilitation practices, as do events at my friends' property, **[redacted]** near Cowra. Decommissioning and rehabilitation of coal mining operations in my local area have also been inadequate at best and non-existent at worst. Mining companies appear to be able to simply walk away from the toxic mess and environmental destruction they have wrought. I don't believe the people of New South Wales have confidence in the regulatory authorities' ability to enforce any kind of remediation or proper and safe decommissioning practices on miners. In both cases I mention here, the miners and the regulatory authorities have failed to adequately safeguard human and environmental health.

(g) the effectiveness of New South Wales Government agencies to regulate and improve outcomes including: (i) the measurement, reporting and public awareness (ii) the provision of various protective materials (iii) the ability to ensure the health of at-risk groups (iv) the suitability of work health and safety regulations, and (v) the capacity to respond within existing resources (vi) the adequacy of existing work, health and safety standards for workers

Current New South Wales Government agencies appear to be unable to properly regulate mining activities in the state. Events at **Cadia** illustrate the lack of care in relation to point (i) in measuring, reporting or alerting the public to problems with mining activity. In this case, members of the public had to undertake their own testing and themselves brought the problems to the notice of the regulatory authorities, whose response to date has been far from adequate.

(h) whether the regulatory framework for heavy metals and critical minerals mining is fit for purpose and able to ensure that the positive and negative impacts of heavy metals and critical minerals mining on local communities, economies (including job creation) and the environment are appropriately balanced

To date it does not appear that the regulatory framework is fit for purpose. There is insufficient regulation to protect human or animal life or the environment, and to prevent water and air pollution. It is true that we may need some mining activity to produce minerals required for modern life, but the balance between the need for these minerals and the rights of humans and animals and the need to protect our environment is out of balance. Currently there is too much emphasis on mining at the expense of environmental protection, and care for local communities

and the environment. Minerals mining activities generally provide negligible benefits to nearby residents. Though mining companies tout the employment benefits of mining, these are in reality very minor. In the case of the **Lue lead mine**, there is far more sustainable and ongoing employment in local agricultural and tourism businesses than the mine will ever be able to deliver. And going ahead with the mine would decimate both agriculture and tourism in the area.

In the case of **Cadia gold mine** and the **Lue lead mine**, the production of gold, lead, silver and other metals has a greater negative impact on local communities and the environment than any positive impact in terms of the economy and job creation. Both of these mines are located on and surrounded by highly productive agricultural land, which produces large amounts of food for the residents of New South Wales and other parts of Australia. There is huge economic benefit from that, not to mention that clean water and food are the very stuff of life, without which none of us can exist. Currently it seems that water quality and food production are not valued by governments in the way that they should be, and the hugely negative impact of heavy metal and 'critical mineral' mining on communities and the environment appears to be ignored or minimised by regulatory and government authorities. In the case of Cadia in particular, one wonders why gold could even be a 'critical mineral' when there are already huge stockpiles of gold in every significant world capital. Why does the world need more gold when much of the gold that humans have already dug from the ground simply sits unused and hoarded in bank vaults?

I value the opportunity to make this submission. I hope that the NSW Government listens to what people are saying and works to limit and properly regulate the mining and mining 'remediation' activities that exist today. The ongoing health and wellbeing of the people and environment of New South Wales should and must be held as more important than the short-term profits of multinational companies.

Sincerely, Fiona Sim, Running Stream NSW

References

Cadia mine: There have been many media articles on this mine over the past few months, including in the *Sydney Morning Herald* and *The Guardian*, and on ABC TV's *7.30 Report*. I am not going to reference them all here, but it is obvious from the number of recent articles that there is a huge amount of public concern relating to this very problematic and polluting mine.

Sunny Corner mining toxic tailings: *Sydney Morning Herald* and *Melbourne Age* documentary: <https://www.youtube.com/watch?v=GL9hr5fCIgo&t=3s>; *SMH* article: <https://www.smh.com.au/environment/sustainability/sunny-corner-mine-was-abandoned-a-century-ago-it-s-still-a-toxic-deadly-mess-20230704-p5dlkf.html>

Submissions to this inquiry from: _____ near Cowra
NSW (regarding toxic tailings inadequately stored on their property), _____ regarding
the proposed Bowden lead mine at Lue, near Mudgee NSW)