

Planning and Assessment



PCU079894

Department of Planning, Industry and Environment

Locked Bag 5200

Parramatta NSW

2142

Department of Planning
Received
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Scanning Room

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Re :- Bowdens Silver Project.

I, Patricia Kempton,
43 Rocky Waterhole Road,
Mount Frome,
Mudgee 2850
NSW.

I submit this correspondence in **objection** to the proposed Bowden Silver Mine.
Application Number – SSD-5765. Open cut mine, with the intention of mining and blasting Zinc. Lead and a small percentage of Silver.

Approximately 26 Kilometres (KM) east of Mudgee and 2 – 3 Km North – East (NE) of the village of Lue.

I take the opportunity to state that I am not adverse to development, employment or mining.

My major concerns are for public health, biotic effects of water ways, the increase of heavy traffic on existing roads, which are not currently user friendly to heavy trucks, which the business is proposing an increase to up to 18 B-Double trucks per week.

Public health issue which are of immense concern to me as a health worker are:-

- **Lead poisoning** from dust and potential water contamination to Lue village and surrounding water catchment.
- **Crystalline Silica** (which is found in rock) dust which can travel up to 10Km away, creating potential water contamination to Lue village and surrounding water catchments.

Potential exposure is created from dust which occurs from increased activity due to mining, rain events causing the dust to settle in water catchment areas, and wind events.

World Health Organisation (WHO) has recorded key facts re health issues associated with exposure to both Lead and Crystalline Silica.

Residents of Lue, both drinking and bathing in rain water contaminated with lead and silica dust collecting on home catchment areas exposes them to the WHO documented health issues as set below

Lead is a cumulative toxicant that affects multiple body systems and is particularly harmful to young children. At lower levels of exposure that cause no obvious symptoms lead is known to produce a spectrum of injury across multiple body systems. In particular lead can affect children's brain development. Resulting in reduced Intelligence quotient (IQ), behavioural changes i.e. attention span. Lead exposure also causes anaemia, hypertension, renal impairment and toxicity to the reproductive organs. The neurological and behavioural effects of lead are believed to be irreversible

Lead in the body is distributed to the brain, liver, kidneys and bones. It is stored in the bones and teeth and accumulates over time.

Lead in bone is released into blood during pregnancy then becomes a source of exposure to the developing fetus. There is no level of exposure to lead that is known to be without harmful effects.

Crystalline Silica causes Silicosis, lung cancer, Pulmonary Tuberculosis, airway disease, autoimmune disease and renal disease.

- **Arsenic effects**, no measurements of Arsenic have been used in the Environmental Impact Study (ESI). Potential contamination to water, crops and animals/farm stock.
- **Cyanide effects**, prevents the cells of the body from using oxygen. When this happens the cells die. Cyanide is more harmful to the heart and the brain than other organs due to the brain and heart's high oxygen use.

Collectively the potential effects of chemical pollutants from the mine, pose a major risk to the residents of the Mid-Western Region.

An Industrial Hygienist should be considered for consultation for the protection of the current and future population of the area.

The transportation of materials from the Bowden mine on B-Double trucks may cause contamination to a much greater area than the Mid-Western Region due to dust from loads, if not sealed.

Has there been consultation with the local Health and Emergency Services re potential Work Health and Safety (WHS) issues, which may occur at the open cut mine?

There are a number of precautions which health workers and emergency workers must be aware of, for their own protections when dealing with possible contaminants on injured workers. i.e. specialised chemical resistant Personal Protective Equipment (PPE)

Biotic effects on waterways –

Bowen Mine indicates that they will use 1,857 mega litres (ML) of water per year for processing and dust suppression.

Concerns are: -

Lawson Creek is a rain feed creek.

Any bores, which the mine creates, will more than likely disturb the water table reducing the water flow to Lawson Creek.

Any contamination to the creek and water table will create potential devastation to crops, which are irrigated, and stock, which drink from the creek. Stock and crops will not be saleable creating economic downturn for the farmers who depend upon the water for just that stock/crop hydration.

Contamination of the creek and water tables from Arsenic, Lead Crystalline Silica and Cyanide will create Acid Mine Drainage (AMD).

AMD causes stress on stream organisms such as the platypus, which is already on the endangered list, other creatures of importance to maintain water viability are yabbies, native fish, dragon flies, and a multitude of vegetation, especially in the riparian zone.

Tailings Dam –

Tailings dams have proven in the past to be cost effective for mining operations (cheapest option) to dispose of their mining waste. In the last decade alone, there have been 35 tailings dam failures globally. With environmental sustainability at the forefront of the mining industry, alternatives to tailings management and tailings dams are now being drawn into the spotlight

Bowden Mining has proposed a tailings dam of 107Ha.

18 test pits only, have been done over such a vast area, which may not be a qualifying indicator to build such a dam with a 1.5mm - 1.75mm Geofabric to assist with retention of the tailings.

Possibly 2 x membranes of 4.5mm thick HDPE (sandwiched between 2 layers of bentonite impregnated geo fabric layers.

Independently assessed as being installed and compliant with design premise.

Membranes separated by >1m of compacted clay or stabilised sand (sand and ~8% cement)

Inclusion of pH sensors at multiple locations across the 107ha tailings dam bottom 'cap'- in the stabilised sand/clay - ("inter spatial zone (between inner/outer HDPE & bentonite: geofab sandwiches) to act as warning signals to flag possible breach of inner membranes by Acid Mine Drainage. (AMD) these types of pH sensors are available in most pool shops and would be a relatively inexpensive but extremely innovative and accurate early warning system not dissimilar to a weaker (ambit claim) Bowden's representatives have proposed (1.5mm HDPE + w 500mm of crushed rock before they dump tailings juice into the dam! - Extremely weak.

Will the mine be providing regular water test result to the Lue Action Group and general public within the greater Mudgee basin who will potentially be affected by water quality?

In turn AMD events will create biotic destruction and loss of livelihood along Lawson creek. Who will compensate?

AMD events are difficult to correct and do not occur without creating other issues.

Has the mine considered the employment of an environmental hygienist for the ongoing care of the community and environment?

Water pipe 58km from Ulan mine: - Has there been a flora and fauna study done along this line?

Increased traffic on Lue road: -

Lue road is a difficult narrow road to negotiate at the best of times.

There are a number of driveways onto the road; the users of these driveways will be placed at risk with the increase of 18 B-Double of trucks each week.

Some users come out onto the Lue Road over double white lines, the vision is poor and distances are short if/when vehicles are travelling quickly towards those driveways of concern.

There have been a number of serious accidents on this road over the past few years.

Some of these accidents have occurred at the bottom of our property. We have been required to assist injured persons, which is both distressing and sombre. With the increase of large vehicles the state of the road and bridges (no sides/barriers on bridges) is even more highlighted.

We have had boundary fences destroyed when some accidents have occurred, the culprits not informing us, leaving stock to wander onto the road creating further potential fatal incidents to road users.

Again I will express concern, if the loads are not adequately covered, with well secured covers, the potential for dust from those loads will further place the community at risk of contamination by dust.

Has Bowden Mine representatives made contact with the Roads and Maritime Services re the condition/use of the road and will they be assisting with potential upgrades to the roads?

Is that information available to the general public? If so where may it be obtained?

Thank you for you considering the points of concern in this submission to the Department of Planning, Industry and Environment.

Yours Sincerely

Patricia Kempton

A handwritten signature in black ink, appearing to read 'Patricia Kempton', written in a cursive style.

I declare I have not made a reportable political donation in the previous 2 years.

CC: Roads and Maritime Services

Andrew Constance.

Water Resources NSW