

**Supplementary  
Submission  
No 77a**

**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**

**Organisation:** Bowdens Silver Pty Ltd

**Date Received:** 13 November 2023

---

13 November 2023

Dr Amanda Cohn MLC  
Parliament of New South Wales  
Legislative Council  
Portfolio Committee No. 2 – Health  
Macquarie Street  
SYDNEY NSW 2000

Dear Dr Cohn,

**Re: Bowdens Silver Project: Supplementary Submission to Public Inquiry**

This supplementary submission has been provided to address and clarify a number of topics and comments raised during the Parliamentary Inquiry public hearings to the inquiry and outline the facts associated with the comprehensive assessment process and subsequent approval of the Bowdens Silver Project (the Project) by the NSW Independent Planning Commission (IPC).

Firstly, it's important to reiterate that in April 2023, the IPC stated in its Statement of Reasons for Decision, ***"After consideration of the material, the expert evidence before it, the absence of any outstanding concerns regarding health impacts from NSW Health or the NSW Environment Protection Authority that are unable to be managed, and the conditions imposed by the Commission, the Commission is satisfied that the Project can meet all relevant requirements for protecting human health and safety and that on balance, the Application is in the public interest."***

For the record, Bowdens Silver is not currently mining. The rigorous assessment process conducted since 2016 has involved numerous expert consultants in their field, numerous independent experts who have provided peer reviews and peer reviewers appointed by the NSW Department of Planning and Environment (DPE). Separately, the Project was also assessed by a range of Government agencies including the NSW Environment Protection Authority (EPA), NSW Health, the Resources Regulator, DPE Water, DPI Agriculture, Biodiversity, Conservation and Science Directorate, NSW Dams Safety and NSW Heritage among others. Suggestions were provided and clarifications were sought but no objections were raised by these agencies during the assessment process.

Bowdens Silver presented one of the most comprehensive Environmental Impact Statements (EIS) in regard to a greenfield mining operation in NSW. The Company made the early decision to ensure that time and resources were spent to develop the EIS to ensure the Project considered a range of alternatives to deliver an environmentally and socially acceptable Project. The Company took the extra steps of commissioning peer reviews, not only in the three areas required by DPE (being groundwater, economic impacts and human health), but also for noise, air quality, surface water and acid mine drainage. The NSW Government commissioned peer reviews included two groundwater, surface water, acid mine drainage, human health, economic impacts and social impacts. Our studies and assessments through six and a half years were extensive.

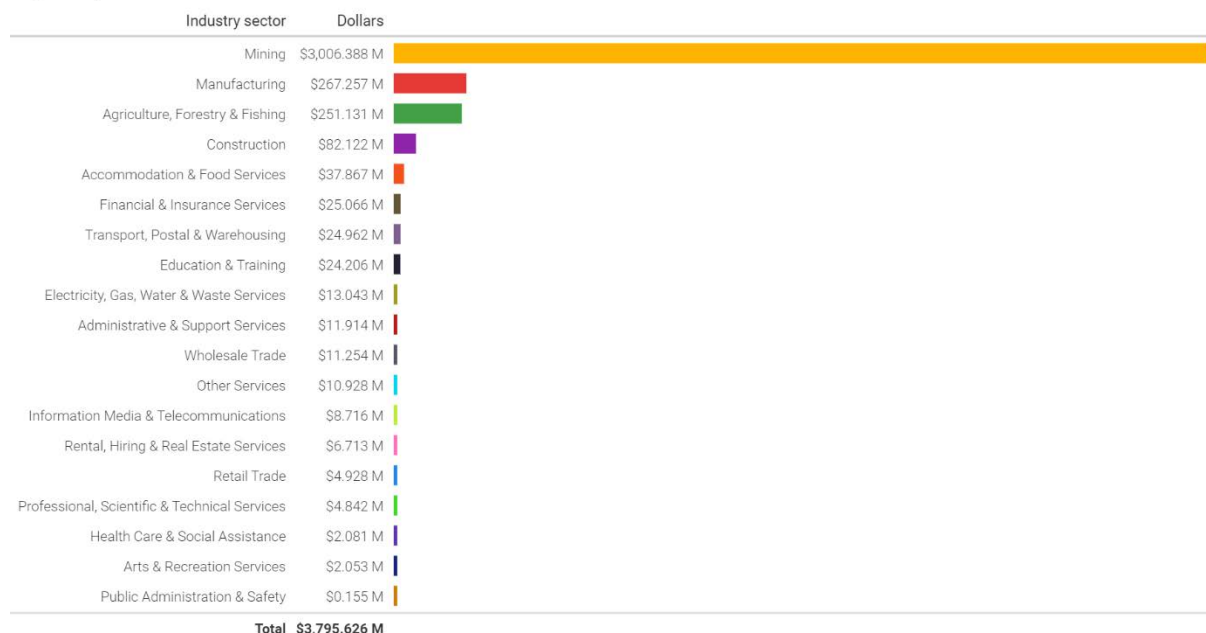
## Human Health and link to Economic Activity

Through the Parliamentary Inquiry hearings there has been no or limited discussion linking economic activity and health. Australia is a first world country; our health care system would not exist without quality economic activity. Of the top 10 export earning industries for Australia, 7 of them are from mining. In NSW mining royalties alone will be around \$6 billion this year. That is in addition to billions in taxation, employment, wages services and broader economic impacts. There is obviously a direct link between mining and the wealth (and health) of our state. Our schools, roads, hospitals, aged care and the like rely on it. Our population is aging, and we need to look after the elderly's needs. Health is one of our largest cost centres and these costs are increasing. Australia's health care system is the envy of much of the world. Government cannot spend without strong economic activity. Mining is a critical path to this in Australia.

The Committee has recently visited the Mudgee region and have no doubt seen the success of the region. This is primarily as a result of mining - specifically coal mining. Total exports from the Local Government Area (LGA) is approximately \$3.8 billion per year. The three coal mines in the LGA produce around \$3.0 billion per year or 79% of exports from the area. They employ around 2200 locals. Manufacturing and Agriculture exports from the LGA are also important representing 7.0% and 6.6% respectively. See graphs below.

## Mid-Western Regional

### Regional Exports

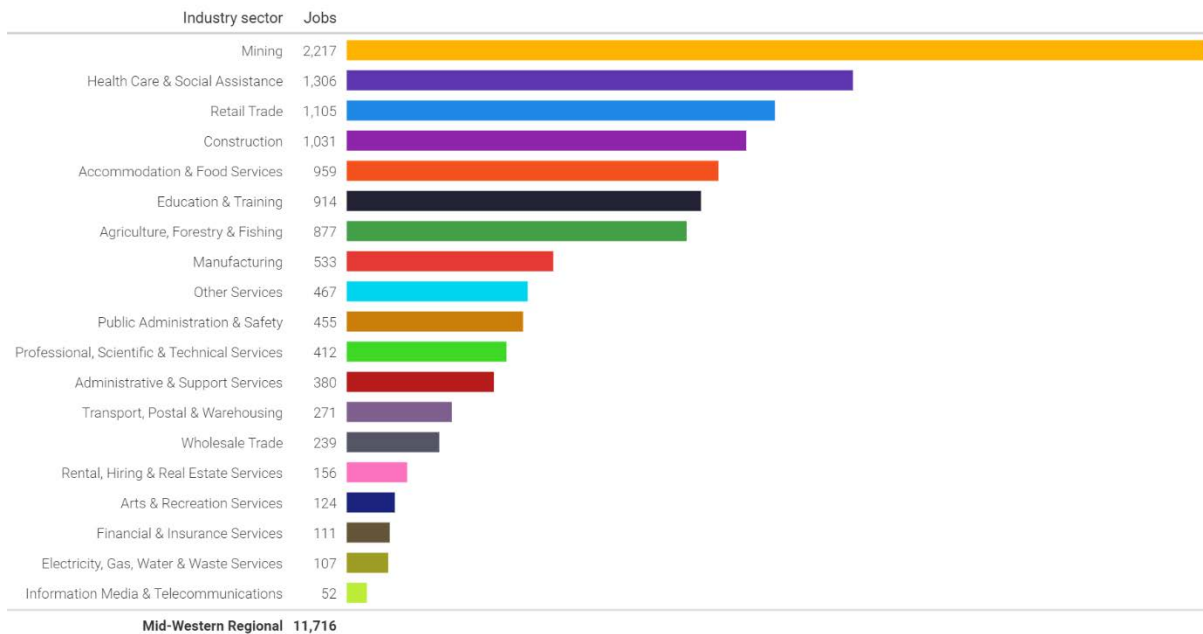


Benchmarks: None | Industry sectors: All Selected

Source: Mid-Western Regional Council website. ABS 2021 Census Place of Work Employment (Scaled), ABS 2020 / 2021 National Input Output Tables, and ABS June 2022 Gross State Product.

## Mid-Western Regional

### Employment



Benchmarks: None | Industry sectors: All Selected

Source: Mid-Western Regional Council website. ABS 2021 Census Place of Work Employment (Scaled), ABS 2020 / 2021 National Input Output Tables, and ABS June 2022 Gross State Product.

A question that comes to mind is, “what happens post coal in the coming decades as we head to net zero emissions by 2050 - in 27 years’ time?” Locally, the coal mine economic activity will be lost, all of mining’s highly skilled people in the LGA will be retrenched, there will be a regional exodus, property prices, service industries and schools will come under significant pressure. If there is no substantial industry replacing the coal mines, the LGA will go into substantial economic decline. Local developments in renewable energy will help when in development, however, post development those industries typically have very low employment numbers.

Although the township of Mudgee and surrounds are doing quite well for the moment, elsewhere in the LGA are significant problems. Kandos in particular with a population of around 1200 is in poor condition. This has been caused by economic decline. The coal mine closed, the cement works closed, employment was lost, services closed, shops closed and no new investment by industry or support from government came in to help. Kandos has been in socio-economic decline for over a decade.

It is recommended that the Committee examine these issues carefully. The Australian Bureau of Statistics (ABS) (Census 2021) quotes:

- In Kandos, household income is about a third of that of the State average.
- 48.0% of households earn less than \$650 per week. That is household income not individual income.

- Divorce and separations are double the State average.
- 43.1% of two parent families have both parents not working.
- 17.2% of people have achieved Year 9 or below at school.
- 40.0% of people have not achieved year 12.

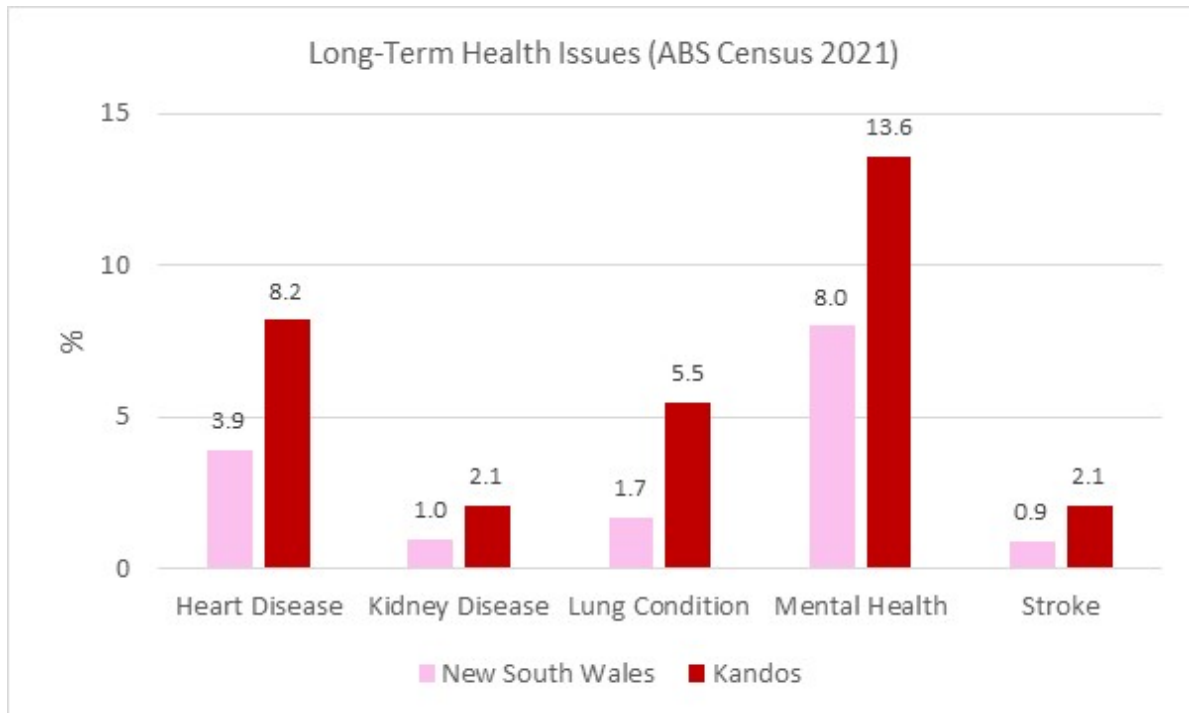
It is well documented that educational disadvantage in early life has a negative impact on career prospects and future earning capabilities.

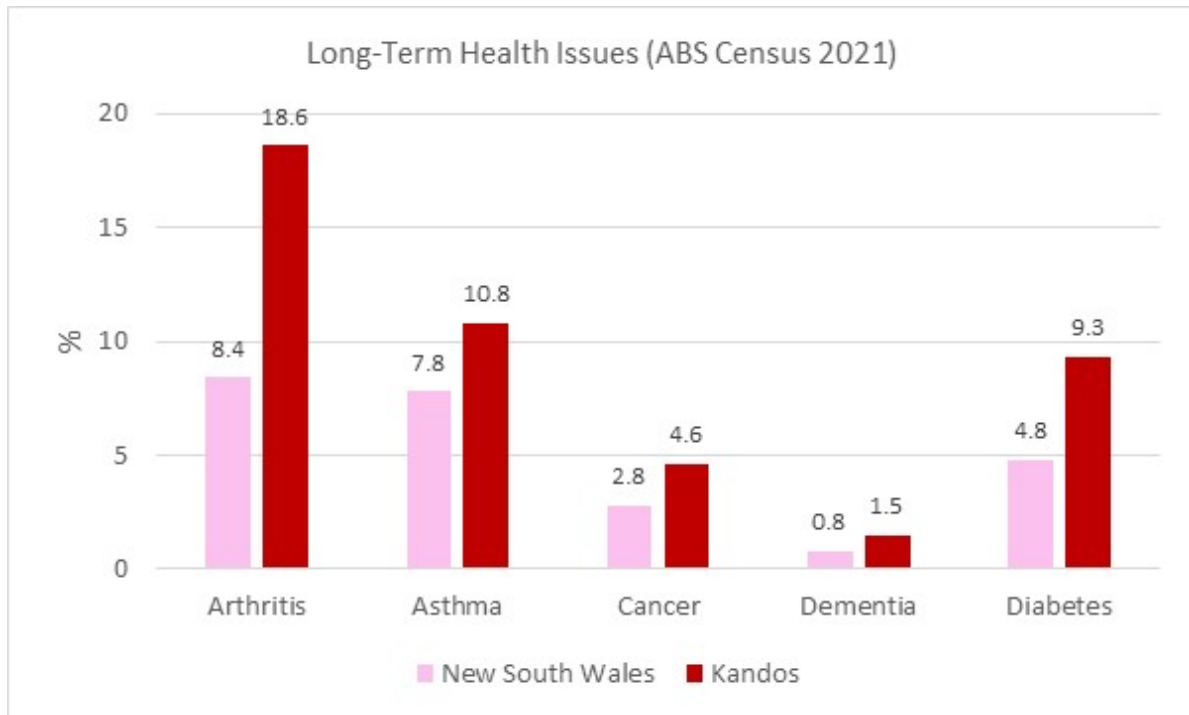
Comparing this ABS data to the previous 2016 census, there have been only very minor improvements since 2016 or stagnation.

Rylstone and Lue are better across all these statistics but only slightly and still substantially below the State and national averages.

Worse still is health – the very focus and remit of this Portfolio Committee No. 2.

The 2021 Census shows that statistics for all long-term health conditions questioned are alarmingly greater than the NSW State averages. Diabetes, Heart Disease, Kidney Disease, and Mental Health and Stroke in the Kandos and surrounding area are roughly double the State average. Lung Conditions are over 3 times the State average. See graphs below.





ABS Census 2021. Calculated percentages represent a proportion of the number of people in the area (including those who did not answer the long-term health conditions question).

These figures have not improved at all over the years between the Census'. It is well known that such poor health outcomes are a direct result of local economic decline and a lack of support from Government in promoting and supporting these people and their families.

Bowdens Silver encourages the Committee to understand and spend time listening to these local people. Our project will be a huge help locally. Government needs to consider what happens to towns like Mudgee post coal. We suggest this Inquiry considers what mining brings to communities and our State and country as a whole and in particular health outcomes as a result of positive economic activity.

Kandos is only 25 minutes from the Bowdens Silver development site, Rylstone and Lue are closer. Developing a substantial new industry with local, high paying jobs, enabling people to live locally, raise their families and spend locally, populating and supporting the schools and other educational institutions will make a very big difference. There will be 228 jobs during our operations. The rule of thumb is that approximately 2.5 additional jobs are created for every worker employed by mining through local services and supply industries. That is over 500 jobs.

Strong, well paid local employment, good training opportunities for school leavers, keeping families together and living locally is important. Quality education and training is key. Resilient local economic activity is essential for social progress and with that leads to much greater local health outcomes.

Our development has a project life of 23 years, however, with our exploration success to date, we expect that this operation will be in production in 50 years' time, perhaps more. Our region is likely to move from

a coal mining region to a region producing critical minerals. This aligns with the NSW Government's strategy to drive the success of Critical Mineral and High-Tech Metals mining and production.

## Water

Water supply and its usage is vital to any proposed or operating mining operation. Accordingly, as outlined previously, the Company paid particular attention to this aspect during the EIS assessment phase to ensure that our mine will be able to operate in a way that ensures economic longevity but importantly without impacts to downstream users or the natural environment.

To that end, our groundwater and surface water assessments, independent peer reviews on groundwater, surface water and acid mine drainage plus the DPE commissioned peer reviews on groundwater (x2), surface water and acid mine drainage all concluded that our modelling is fit for purpose and impacts to downstream users from a supply and health point of view are negligible. The rigorous scientific assessment outcomes are clear.

There have been assertions made by witnesses and some questions raised by the Committee that suggest that the Project's water requirements have not been assessed, that our water take will be unlicensed and that there is not enough water to operate. These statements are incorrect and do not consider the outcomes of considerable assessments.

In its Statement of Reasons for Decision, the IPC stated, *"The Commission agrees with the Department that potential impacts to water resources are capable of being managed in accordance with NSW government policy..."* The Development Consent requires Bowdens Silver to prepare and implement a Water Management Plan to the satisfaction of the Planning Secretary. This needs to include a:

- Site water balance;
- Erosion and Sediment Control Plan;
- Surface Water Management Plan;
- Groundwater Management Plan;
- WRE Design and Verification Plan; and
- TSF Liner Design and Verification Plan.

These operational plans will be regulated and monitored by the appropriate government agencies and the mine to ensure compliance.

Separately, but in relation to water, I would like to clarify a comment from the Inquiry hearing on 27 October 2023. Ms Faehrmann stated that the tailings dam (TSF) will seep at a rate of 1.6ML per day into the Lawsons Creek. This statement that the TSF is seeping into Lawsons's Creek and at that rate is incorrect.

To clarify, the preliminary design of the TSF included an estimate of 94.6ML per year of seepage. This is the total from the floor of the entire structure not in a concentrated point. The NSW EPA confirmed that the proposed compacted clay liner would meet its permeability requirements for this type of structure.

As presented to the IPC in February 2023, Bowdens Silver has committed to apply a bituminous geomembrane to the entire TSF impoundment or to the extent of the decant pond depending on the outcomes of detailed design work. We have confirmed that the seepage from the structure would be reduced to 16.2ML per year. Any seepage would be diluted by the existing groundwater and would naturally degrade or react via physical (e.g. adsorption) or biogeochemical (e.g. bacterial) processes as the groundwater moves through the aquifer. This was not considered in the groundwater quality assessment, making our assessment highly conservative.

Solute transport modelling has indicated that the additional mitigation provides significant reduction to seepage risks. Mitigation such as water reclaimed using the paste thickener plant would also improve outcomes. Detailed design work will further update outcomes but to reiterate, modelling of water quality risks has identified no adverse impact of TSF seepage to beneficial water uses locally. We should also keep in mind that groundwater monitoring will be targeted to the TSF so we will be tracking and reporting on water quality outcomes. This is standard practice in the mining industry.

### **Human, Tank and Soil Testing**

Blood testing is not necessary at all.

The Human Health Risk Assessment, its peer reviews, the DPE and reviews by other NSW Government agencies including NSW Health, all experts in their fields, concluded that there were no health risks of concern for the local community. The IPC also agreed and has stated clearly in that regard.

When it comes to testing locally whether it be testing people, soil or tank water, it was our proposal to offer to the community testing including baseline testing. This was to offer the community a physical means to establish that there are in fact no risks from our Project. The other reason of course was for the community to understand current level of metals including lead that already exist in the local environment whether it be naturally or from human activity in the past. Lead and other metals are natural metals and they occur throughout the natural environment. It is already in our soils, our streams and rivers and we have intake from various areas including drinking water and eating fresh vegetables. Lead is also known historically in paints, fuels, guttering, batteries, etc.

Some testing work has historically already been done on this locally. Our expanded baseline program will be done to further understand what is there in the environment now, pre-mining.

We have offered the baseline and other voluntary testing in our EIS in May 2020, we are pleased it was provided as a condition. The safety of the community and current and future mine employees is paramount and not something that Bowdens Silver takes lightly.

Bowdens Silver highlighted in the EIS that prior to commencement of mining operations, a baseline blood lead level testing program along with water tank and soil testing would be offered to Lue and district residents to enable surrounding residents to understand their existing lead exposures. Ongoing blood lead level testing would also be offered at ongoing intervals during operations.



Although there have been negative comments on blood testing during the Inquiry, at the IPC Public Hearing held in Mudgee, a witness who also presented to the Inquiry and who was the local action group representative on the Bowdens Silver Project Community Consultative Committee stated;

*“.....a regular broad blood testing program must be stringent, non-negotiable and a condition for this project.”*

For some within the community to now suggest outrage at the inclusion of a condition that was asked for despite what the assessments concluded, is not right.

In any case, Bowdens Silver is committed to providing baseline blood, water tank and soil testing prior to mine commencement and ongoing tests during operations for community members. Of course, this can only be voluntary, and the privacy of individuals and results will be appropriately maintained. While the specifics of our baseline testing regime are still to be confirmed and ultimately approved in consultation with DPE and EPA, the testing that will be offered will be independent, include isotope testing in local soils to help identify the source of any metals and will be offered on a regular basis to ensure scientific rigidity that will allow community members to be confident in the program and results.

## **Community Consultation**

During the public hearings, the Committee has discussed and heard feedback from speakers regarding Bowdens Silver’s consultation activities. Since the Company took over the project in mid-2016, an open approach to community consultation has been at the forefront of our Project. Community consultation has been far reaching, consistent and ultimately helped inform elements of the Project.

The below list highlights some (but not all) of our consultation activities:

- Countless personalised interactions including face to face meetings, written correspondence, emails, phone calls and text messages.
- Well attended Community Open Days on site and at the Lue Hall.
- Drop-In Information Sessions in Kandos, Rylstone and Mudgee.
- Virtual Information Sessions during the Covid-19 pandemic.
- Distribution of more than 25,000 community newsletters within the Mid-Western Region LGA. Newsletters are also available on our website and have also been distributed electronically.
- An information stand at the Rylstone Show annually since 2016 for interested community members to seek information and ask questions directly to Bowdens Silver staff.
- Community Consultative Committee Meetings since Project inception in 2016 that has allowed for the sharing of information between Bowdens Silver and the wider community, Action Group, Indigenous Groups, Mid-Western Regional Council and the business community.
- Two separate rounds of personal interviews with members of the community as part of the Social Impact Assessment.
- Interviews with local service providers, businesses as well as community and special interest groups as part of the Social Impact Assessment.
- Consultation with Native Title Claimants and Registered Indigenous Parties.
- Information sessions, site excursions and meetings with local schools and education providers.

- Mentoring, work experience and collaborative work with high school students and university students.
- Site visits from local teachers as well as student excursions to site.
- Meetings and presentations with local business chambers.
- Numerous media releases, articles and radio presentations.
- We have a significant Q&A portal on our website that is based on questions from the community members over time.
- Consultation with Mid-Western Regional Council and relevant State government agencies.
- Independently conducted random telephone surveys in 2019 and 2022 for opinions and sentiment.
- Importantly, we have maintained an open-door policy for our neighbours and the wider community to get involved and seek information that is relevant to them.

It is clear that our consultation has been far reaching and effective. In fact, our consultation has helped inform different elements of the Project to achieve more socially acceptable outcomes such as moving the access road to the west of Lue to reduce traffic through the village, moving the processing plant further north and away from Lue, realignment of the 500kV powerlines to reduce visual impacts among others. It must also be said, that not unlike similar projects, some within our community have chosen not to engage and that is their right. However, for some to suggest to the Parliamentary Inquiry that consultation has not occurred is incorrect.

Further, an independently conducted telephone survey was held in November 2022 which included participants from within the entirety of the Mid-Western Region LGA. This research was conducted in accordance with the international quality standard for market and social research (ISO 20252:2019). Importantly, this survey showed that nearly 7 out of every 10 people were supportive of the Project. More importantly, less than 2 out of every 10 people were not supportive of our Project. A similar survey was conducted in 2019 as part of the Social Impact Assessment. Reassuringly, the results from then were very similar to the 2022 survey. It showed that our supportive community sentiment during our assessment phase, during EIS exhibition and more recently has remained strong. This was an important process and confirms the countless positive interactions we have had with community members throughout the years. It has reinforced what we know – and that is, that the majority of people we speak to support the Bowdens Silver Project.

# BOWDENS SILVER

## Highlights from the survey:

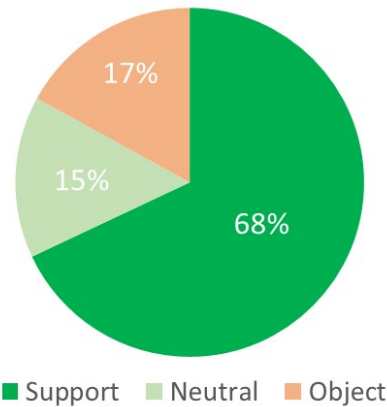
**83%** of people in the LGA aware of the Project.

**68%** of people in the LGA supportive of the Project:

- 66% support in Lue, Rylstone and Kandos.
- 70% support in Mudgee.
- 65% support in the rest of the LGA.

Only 17% of people within the entire LGA were not supportive.

Bowdens Silver  
Independent Community Survey



November 2022 - SEC Newgare Research (n = 407 in Mid-Western LGA)

## Sliver Mine with By-Products

The Bowdens Silver Project will be a silver mine. Around 70% of revenues will be from silver, 20% from zinc and 10% from lead. Incorrect commentary has looked at the products from a weight point of view, however, that is not like for like as we are comparing what is a precious metal being silver and base metals being zinc and lead. From a weight point of view, lead is a very heavy metal. Lead is around three times heavier than zinc, yet we have much more zinc by weight. By weight the Project will produce far more zinc than silver and lead combined yet curiously the local action group calls the Project a lead mine. In addition, witnesses have actually presented incorrect numbers to the Committee that considerably overstate the amount of lead that will be mined. These incorrect figures have also been provided to the wider community by the local action group.

## Dust

We have noted comments to the Committee by a local landholder who has stated dust levels of 4.0 g/m<sup>2</sup>/month are expected. What has been quoted is the guideline applied by the NSW EPA for deposited dust. This is a cumulative value so must take into account dust generation already in the environment. The EPA applies a criteria of 2.0g/m<sup>2</sup>/month for impacts from one operation alone. The highest predicted deposited dust level at a privately-owned residence due to the Bowdens Silver Project-alone is 0.15g/m<sup>2</sup>/month, which is less than 10% of the NSW EPA criteria for incremental dust deposition of 2.0g/m<sup>2</sup>/month. Properties in proximity to the said landholder are predicted to experience dust from the Project at no greater than 0.01g/m<sup>2</sup>/month or 0.05% of the criteria level as opposed to 4.0 g/m<sup>2</sup>/month purported.

We also note an error from my evidence at the public hearing when discussing dust-related impacts. My comments during the hearing are as follows.

*“It looks at lead particles that are generated by the mine, and that's expected to peak at the mine at 0.01 micrograms per metre cubed per year. Just to put that into context, a microgram is a millionth of a gram, so 0.001 micrograms per cubic metre per year is added to the mine—a minuscule amount.”*

It should be clear that the predicted impact is 0.001 micrograms per cubic metre at the most effected private residence. Erroneously a zero was left out in the first part of the statement.

## **Tourism and Viticulture**

There have been comments to the Committee with regards to significant effects to tourism and viticulture caused by the Project.

We are all aware of the current boom in tourism being experienced in Mudgee. Wineries and other businesses have benefited from this growth. We applaud the vitality in the region which comes from the multiple forms of industry including mining, manufacturing, agriculture, wineries as well as tourism.

There is no evidence whatsoever that the Project will impact tourism or wineries. The immensely larger coal mining industry has been operating successfully north of Mudgee for decades and there has been no tourist issues or backlash.

As far as impacts to industries including agriculture and viticulture, there is again no evidence that this would occur. Our Social Impact Assessment was thorough and examined by technical experts through independent peer reviews. There is just no evidence that the Project will affect other industries in a negative manner.

We trust that this submission provides relevant and balanced information to inform the Committee and we are happy to provide further information as and if required to clarify any matters.

Regards

Anthony McClure  
Managing Director  
Bowdens Silver