

**Given that the NSW Government's Department of Planning and Environment has not fully considered impacts through a rigorous appraisal process, and that the impacts from lead mining are direct, indirect, cumulative and profound, I believe the Bowdens lead mine should not go ahead.**

There is so much wrong with this proposal that I hardly know where to start so I will make a brief comment about the effects of lead upon human health and the inequities of inflicting this damage on the inhabitants of a pristine environment. I will then go into detail on the economic damage the proposed mine would have upon the area.

Despite the company naming itself Bowdens Silver, the mine is effectively a lead mine. Mineralogically, lead and silver are almost always found together and by Bowdens' own admission, the deposit will yield at best 3 percent silver, probably less; the majority of the resource will be lead with nickel and zinc also making up significant portions of the total.

The World Health Organisation (WHO), the Centers for Disease Control and Prevention (CDC) and the National Health and Medical Research Council (NHMRC) have all stated there is no safe level of exposure to lead. Young children are particularly at risk from exposure to lead, however, it is also noted that the effects of lead exposure are cumulative and cannot be reversed therefore the impact on older people can also be highly detrimental.

Bowdens claim it can mitigate the impact of lead-laden dust upon the community and the environment is a fantasy, much like its Magic Pudding water balance model that we heard about again and again during the hearing. It is not as if the company intends to enclose the mine site within a dome such as that enclosing a city in science fiction writers William F. Nolan and George Clayton Johnson's novel, Logan's Run.

The prevailing winds in the area blow from west to east, this means that dust from that mine laden with lead and other heavy metals will be blown all over the hamlet of Lue with its primary school, the towns of Rylstone and Kandos with their primary and high schools and the area in between.

This will happen. It is only a matter of time. In 2012 a dust storm blew for days taking topsoil from the area around Broken Hill and depositing it onto the ski slopes of Queenstown, New Zealand. Dust storms blew at the end of the Millennium Drought and during our most recent drought. Dust storms will happen again, indeed with climate change they will happen more often and be more ferocious, and when they do, toxic lead-laden dust will be dumped on Lue, Rylstone and Kandos.

The area around the proposed mine site is a mix of agricultural properties and bushland including some areas that are quite pristine. The idea that it is reasonable to build a mine and spread this poison on people living in this environment is so inappropriate it is almost evil in its disregard for the resident's health and welfare.

If I were to move to Mt Isa or Port Pirie, I would do so with the knowledge that I would be moving into an area with abysmal air quality, i.e. I would be exercising free will and choosing to put my health at risk by moving to the area. To inflict this upon a population living in a pristine natural environment for no reason other than they happen to live in proximity to a mineral deposit is wrong. It is unfair. This mine should not be approved, and I urge the IPC to refuse its approval.

I would now like to make an economic argument against the mine in some detail.

## 1.1 Economic viability in doubt

At a local level, approving the mine will impose significant costs on the local community and provide no long-lasting benefit. Indeed, as detailed in submissions on Surface Water, Groundwater, Acid Mine Drainage and other factors by the Mudgee District Environment Group, Lue Action Group and other groups the environmental impact on water resources of building the mine will have a negative economic impact on affected landholders.

It is highly unlikely that any eventual mine proposal would provide the touted benefits such as royalties and employment to a degree that would outweigh environmental and social costs and there are question marks as to the mine's long term economic viability. In addition to the equity issue highlighted above, I would suggest the following issues work against the mine being viable:

- Low quality – Although this deposit is touted as the greatest untapped deposit in Australia, if not the world, the fact is that over the history of mining, the deposit is very low quality compared to discoveries made in the past – the Potosi silver mines of Bolivia were worked for centuries, not decades. The reason why no one has sought to exploit it until now is because it is a relatively low-grade deposit with high production costs.
- High costs – while it is initially being touted as an open cut mine, to fully exploit the deposit, Bowdens will have to eventually go underground. Underground mines typically have higher per tonne costs than open cut mines. In addition, there is no capacity on the rail lines between Lue and Mudgee or Lue and Bylong, so Bowdens will be forced to truck concentrate to Parkes and then rail it to Port Pirie. These factors combine to make the mine a very high-cost operator. This means it will be highly vulnerable to fluctuations in the global price of silver. Economics 101, if the cost of production is too high compared to its price on the global market, the mine will shut down. As a teenager, I lived for some years in Queenstown, Tasmania, and saw this cycle at first hand.
- Community opposition – opposition to the mine has proved to be strong in the local area, not to mention across NSW and Australia.
- Difficulties attracting finance – Due to the lack of social licence as evidenced by strong community opposition, Australian and global investors may be reluctant to finance the mine.

## 1.2 The cost to local communities - uncertainty

Development proposals to establish mines where there is insufficient social licence inflict considerable uncertainties and costs on local communities. Having a mine proposal near residential and agricultural properties can lead to a decline in the value of properties and houses as the uncertainty renders them impossible to sell.

For example, the Bylong Valley coal project has dragged on for 11 years and is still under appeal while the Watermark project saw a 13-year battle culminating with the NSW State Government buying back the licence from the Chinese government owned Shenhua. This uncertainty can lead to property values declining, and houses outside the actual zone of exploration becoming impossible to sell until the project is abandoned or developed.

As these projects can leave the community in limbo for many years, businesses defer investment decisions or just give up and leave. This can lead to declines in population and a reduction in community cohesion. The natural environment declines as water quality and availability diminishes, flora and fauna deteriorate, and air quality and noise impinge on health outcomes. Agriculture and tourism industries would have been sacrificed for no gain. The region would suffer an economic collapse that could not be recovered due to the permanent impacts of the mining industry.

There are only a few large landholders remaining in the Bylong Valley and these have all stated that they have not invested in their substantial agricultural properties for more than 10 years; they have done “the bare minimum of maintenance” (pers. com. D. Baguley).

*“Kepco’s exploration of the Bylong Valley began more than a decade ago. Through a process of divide and conquer it bought up the farms of the local landholders - some of the best agriculture land in the state. After completing its exploration, Kepco eventually set in train the mine approval process. It wasn’t approved, Kepco appealed to the Land and Environment Court and lost. It is still appealing its case so 12 years later. In the meantime, the community has been decimated while good farming land degenerates. The few landholders left haven’t invested in their properties for more than a decade because of the uncertainty. Community events such as the world-famous Bylong Mouse Races don’t happen anymore as there’s no community and there no-one to volunteer for the local RFS. How is this good for rural communities?”* (pers. com. B. Hodge)

By contrast, economic benefits for the local community are few. Due to the financial and technical factors discussed above, a company seeking to develop the lead and other metals deposit faces considerable risk. Because of the high risk, such projects attract speculators, not reputable mining companies that develop beneficial projects and have a good reputation to lose. Such wannabe developers would have every incentive to cut corners on environmental and safety standards in a race to the bottom that further externalises costs to the community.

### 1.3 The existing local economy

The proposed mine is within the Mid-Western local government area (LGA) of NSW. The nearest towns are Rylstone and Kandos.

The REMPLAN (2021) website presents economic and demographic insights for the LGA. REMPLAN divides the LGA into East and West areas. The East area runs from Capertee in the south through to Kerrabee in the north, with Rylstone and Kandos sitting approximately in the centre. The East area is highlighted in Figure 1 below.

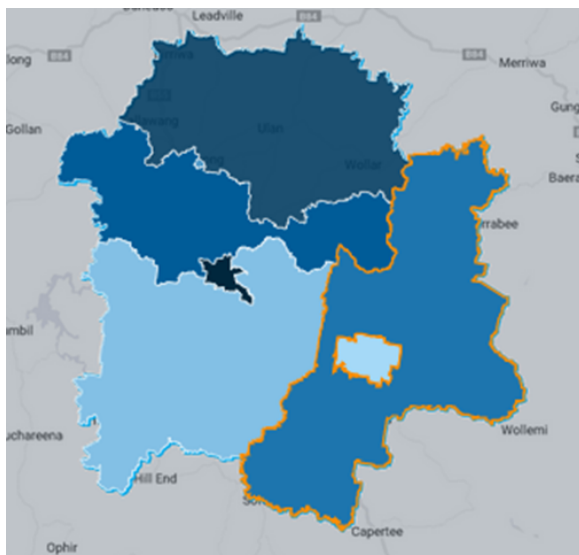


Figure 1 The East area in the Mid-Western Regional LGA

(Source: REMPLAN 2021)

There are many and varied small businesses throughout the area that will be affected by dust and other pollution from the mine. Farms and business activities including grazing, cropping, orchards, vineyards, plantation forests and native forestry have been successfully developed. Additional

economic activities include tourism-based businesses such as farm stays, B&Bs and retreats, as well as horse and cattle studs, poultry egg production, artisanal workshops, mineral water supplies, boutique brewers and more.

These land uses and businesses are all sustainable long-term businesses and rely on the land and its water resources for their viability. The Bowdens mine places this sustainability at risk. This potential destruction of existing sustainability is an unwarranted and unwanted anomaly.

While mining is the Mid-Western Region’s largest employer overall, the three huge coal mines to the north of Mudgee distort the employment market. According to REMPLAN (2021) (Figure 2) the industry sector with the largest employment within the Rylstone Kandos and East areas is Agriculture, Forestry and Fishing accounting for 22.3 percent of jobs in the selected areas. Mining by contrast is only 2 percent.

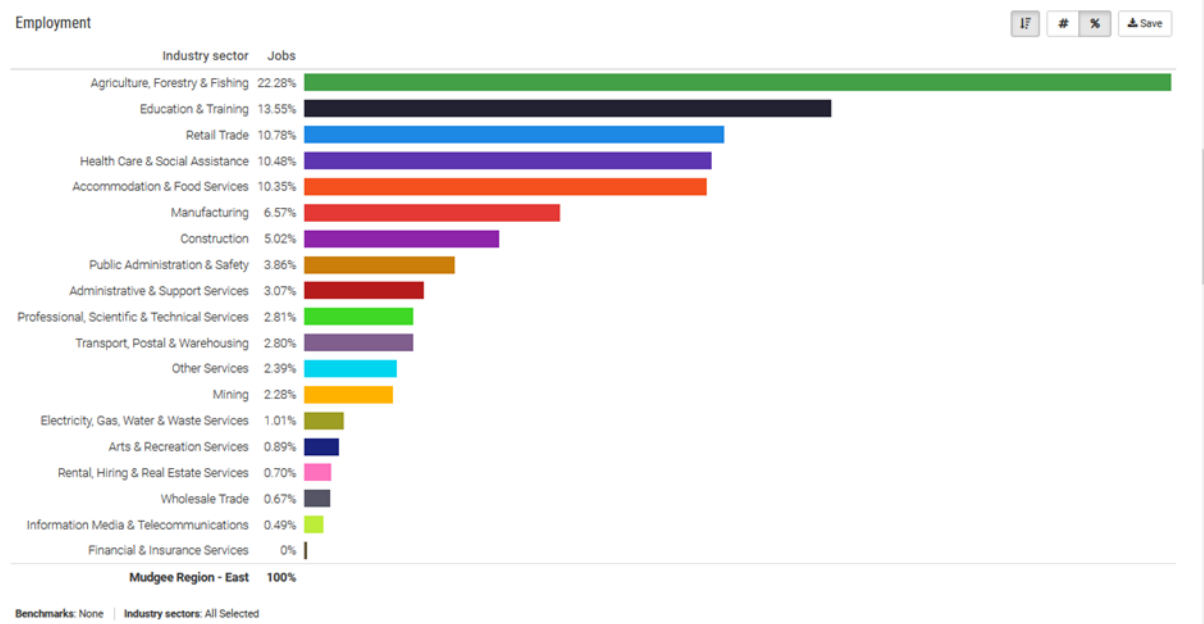


Figure 2 Industry breakdown

(Source: REMPLAN 2021)

The people in the region have built long-term sustainable economic stability for this region. According to latest data released from the National Skills Commission, as part of Mid-Western Regional Council’s Builders and Developers Update, the Mid-Western Region’s unemployment rate has remained under 4 percent following record tourist visitation in 2022, and strong construction activity establishing in the region. The revenue generated by this high level of employment stays in the pockets of our local businesses and is circulated within the region.

Businesses that have helped build the tourism industry in the region include vineyards, olive groves, horse studs, beef and sheep farms, eco-tourism, short stay accommodation, restaurants, cafes, antique shops, soft furnishings and knick-knacks for example. These businesses are incompatible with mining: tourists do not come to see towns covered in toxic heavy metal-laden dust from a lead mine.

Figure 3 details how dollars spent by a visitor to Mid-Western Regional LGA benefits local industries.

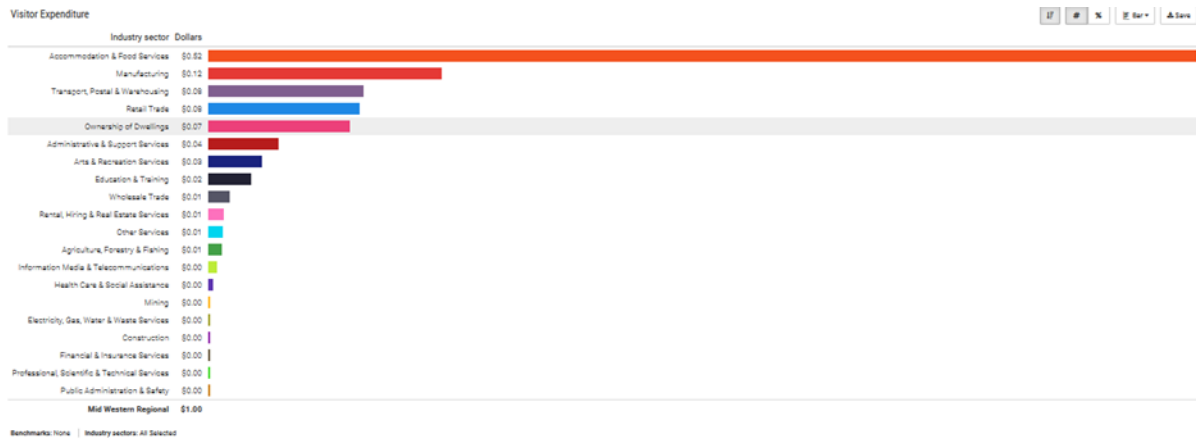


Figure 3 Breakdown of the tourist dollar spend

(Source: REMPLAN 2021)

Accommodation and food services are far and away the greatest industry sector that benefits from tourism. It is estimated that this sector captures \$0.516 for every dollar spent by visitors. The businesses that provide these services are owned and managed by locals. Services to these businesses are provided by other local businesses. It would be uneconomic to allow this financially viable situation to evaporate. This would occur if the Bowdens mine were to proceed.

The opening up of a greenfield mine is obviously going to bring major changes to a locality. None of these changes are warranted or desirable in the Lue-Rylstone-Kandos area. Table 1 below lists and summarises the most obvious of these negative impacts on the local area but put simply, building a lead mine in the area will lead to the destruction of its thriving agriculture, tourism and hospitality industries.

Table 1 Impacts and cost burden from mining in the Lue -Rylstone-Kandos area

Mining Activity	Impact	Cost burden
Purchase land	Fewer residents. Economic and personal uncertainty. Investment and confidence declines. Falling land values.	Local economy contracts. Resilience is compromised e.g., RFS brigades are lost.
Develop mine infrastructure	Loss of agricultural land. Loss of natural ecosystems. Loss of amenity, landscape, connection to country.	Present and future generations quality of life reduced. Soil carbon is lost. Agricultural output and associated economic activity is reduced. Ecosystem services are lost to present and future generations.
Operate mine	Increased noise, toxic dust, vibration, traffic. Pollution of ground and surface water. Loss of water for agriculture due to damaged aquifers.	Agricultural landholders Need for Government health and mental health services increased. Local tourism industry contracts. Cumulative and on-going costs as listed above.
Modifications Extensions	Solastalgia.	Need for Government health and mental health services increased.
Mine closing Rehabilitation	Long term pollution from leaching acid sulphates, heavy metals etc - due to inadequate or non-existent security	Pollution containment, management and remediation, if possible, by present and future generations, including government agencies.

	deposits to cover long term rehabilitation and monitoring. Local towns close. Unemployment and associated issues such as crime, increase.	
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Mining has many impacts – including, but not limited to those listed above.

The immediate cost burden of these impacts is strongest in the locality. As mining progresses the cost burden widens and includes regions and governments. The cost burden extends deeper to future generations and the management that will be required of the negative environmental legacy created.

Environmental degradation cannot be costed. Damage to the climate, soil and water cannot be reversed. Remediation is not an option. Any royalties, taxes and other income derived from the activity are therefore annulled and redundant.

## 1.4 Jobs a chimera

While mining royalties are the – unstated - main motivation for State government to open new areas to mining exploration and exploitation, the fig-leaf it uses to give legitimacy to its actions is jobs. **The promise is that a mine will bring hundreds of high-paying jobs within a few kilometres of town. While this was once the case, current conditions in the mining industry render this highly improbable.**

Miners, especially underground miners, are highly skilled and specialised. Very few apprenticeships are likely to be offered to the local community. What will happen is that rather than kids leaving Kandos High School at the end of Year 12 getting jobs in the mine, skilled workers from the local area currently working in the coal mines north of Mudgee will move to Bowdens mine.

The end result of that is no net increase in jobs and little or no opportunity for people in the community whose land is being destroyed. It will also exacerbate the tight labour market; the mines north of Mudgee currently have job vacancies they cannot fill equal to the number of jobs Bowdens says it will provide. Of course, I hope the IPC will remember that mining companies habitually overstate the number of jobs the mine will provide.

If the mine goes ahead at all, by the time it has worked its way through the appeal courts then state and federal environment ministers' approvals, it may be as long as a decade. By that time, it is almost certain that it will be highly automated. Currently, BHP, Rio Tinto and Fortescue all have mines operating in the Pilbara that are run from control rooms in Perth with few human workers on site. The workers that are on site are highly skilled tradespeople such as mechanics and electricians who also have experience and skills in robotics and the Internet of Things. As with all technology, this technology is getting cheaper, more available and more capable. According to the 2021 NSW Treasury Intergenerational Report, mining employment has declined by 25 percent since 2016 and as the pace of automation increases, this trend will only accelerate.

## 1.5 Social and economic costs of 2-speed economy

It is also important to consider the social and economic costs that accompany mines at their construction and operational phases.

People living in the region have seen these impacts at close range. When the big coal mines well north of here, Ulan Moolarben and Wilpinjong, were starting up, there was a huge strain put on Mudgee. Property prices climbed rapidly, and local people could not afford to rent or buy which led to people

becoming homeless or leaving town. One person had rented the same place for 20 years and was kicked out to make way for mining construction crews coming to town (pers. comm. B. Hodge)

The local community saw firsthand how companies and organisations in Mudgee struggled to fill positions during the construction phase of large mines north of here. There was no accommodation available - if a person from out of the region accepted a job in a local business, they were unable to relocate because there were no rental properties available. There is a perception that mines bring jobs and increase property prices, but what mines do is create a two-speed economy divided between those who secure work at the mines and everybody else. Even now, prices for food and drink in Mudgee are close to Sydney prices because of the 'mining tax' that mine wages place upon the whole community.

High property prices overall and the volatility mentioned above have an impact on local people. If they were renting, they were displaced or struggled to buy. Mudgee's tourism industry took a hit because tourists could not visit because there was nowhere for them to stay! Mid-Western Regional Council spent tens of thousands of dollars since the end of the mining boom to rebuild the region's tourism industry to the point where it was prior to the construction of the three mines.

Many local people could not get work on their vehicles done at local businesses, for example panel beating done to fix their cars, because the smash repairers in Mudgee were unable to keep staff – so people went to Bathurst instead. The local service stations and car dealerships struggled to keep apprentices – they would get jobs in the mines as soon as they had any experience.

The main mechanical workshop in the Rylstone-Kandos area has been trying to recruit one, preferably two, mechanics for at least a year without success and existing staff are under constant and intense pressure from the sheer volume of work. Construction and operation of Bowdens mine will only exacerbate this situation further.

Rural produce supply stores were losing staff to the mines when the mines north of Mudgee were being constructed. This is not the mark of a sustainable local economy – it is undermining the long-term viability of those businesses affected and the community they service.

The local infrastructure was also unable to cope during this period. The traffic between Mudgee and the mine sites along Ulan Road was well above pre-mine levels, with heavy vehicles and a high number of vehicle movements. The local roads were unsuitable leading to accidents and damage to these roads. Given that Bowdens is intending to transport its concentrate using B-doubles along Lue Road, this issue will be even more acute if the mine were to be approved.

Despite the usual practice of private developments being required to fund the infrastructure they need to support their developments, neither of the three mining companies were prepared to pay for essential and much as needed road upgrades. This led to the State government stepping in and works being funded via taxpayer revenues. I do not believe that Bowdens will be any different. If anything as a smaller company with less resources than the large coal companies, it is even more likely that it will seek to avoid funding any improvements of Lue Road.

This community has seen that mines do not bring economic benefit but rather, cost both the local and State economy. The economic benefit is reaped by the overwhelmingly city-based shareholders of mining companies both private individuals and institutions.



## 2 | Indirect economic impacts

### 2.1 Cost of mental health impacts

When the environment and landscape are changed beyond recognition as happens with the construction of a large open cut mine, the community that exists there grieves for the place they have called home. The mental health of the remaining residents is affected in many ways – often convoluted and difficult to analyse. This combined stress was identified and named in the Hunter Valley – Solastalgia. Solastalgia (Albrecht G 2005) is a recent concept in mental health and identity. It is defined as the *“pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault. It is manifest in an attack on one’s sense of place, in the erosion of the sense of belonging (identity) to a particular place and a feeling of distress (psychological desolation) about its transformation.”*

People who experience Solastalgia are negatively affected. The distress they experience can escalate into more serious health and medical problems. This places a huge burden on society in many, varied on-going ways: not least of which is family and society breakdown, and on-going inter-generational health needs. The cost burden of this is largely hidden and not considered in planning matters.

This cost must be recognised, given a higher profile and considered as a matter of course in any mining assessments. The effects and costs of potential Solastalgia indicate the Bowdens mine should not be approved.

### 2.2 Clean up costs not provided for

In theory, mining companies are required to rehabilitate mine sites once the resource has been extracted and the mine closed. Putting aside the fact that agricultural land can never be completely restored after all the biologically active topsoil has been dug up, stockpiled and put back into the void, in practice, mining companies employ a variety of tactics to evade these requirements. As a result, voids are left as a problem for future generations to deal with or state governments, and ultimately the taxpayer, is left to foot the bill.

This issue has been around for a long time. The NSW Audit Office warned in a 2017 report that security deposits of the state’s 450 mines *“do not include sufficient contingency given the substantial risks and uncertainties associated with mine rehabilitation and closure.”*

*“There is also no financial assurance held over the risk of significant unexpected environmental degradation in the long-term after a mine is deemed to be rehabilitated and the security deposit is returned,”* the report argued.

Fast forward four years and the Sydney Morning Herald’s Peter Hannam reported on a May 2021 Australia Institute report found that filling in the 23 mine voids extant in the Hunter Valley would cost between \$11.5 billion and \$25.3 billion, based on the stated costs per hectare of four mines in the Upper Hunter. By comparison, the NSW government holds just \$3.3 billion in bonds to meet the rehabilitation costs of all mines across the state.

Report after report has found that mine rehabilitation bonds are woefully insufficient and mining companies do as much possible to avoid rehabilitation. According to the 2016 Environmental Justice Australia report, *Dodging clean-up costs Six trick coal mining companies play*, mining companies seek to avoid clean-up costs by:



- Mothballing or putting mines into 'care and maintenance' perpetually to avoid triggering rehabilitation provisions.
- Continuing to extract a resource when it is no longer financially viable to effectively bankrupt the company.
- Not rehabilitating. Some voids, such as Rio Tinto's Mount Thorley are held to be so large and so costly to rehabilitate that state governments let the company off the hook.
- Selling off the mine. A worked-out mine is worth nothing. Some mining companies have sold off a mine for as little as \$1 to escape the liability for rehabilitation.
- Expanding. By expanding an existing mine rather than closing it, mining companies can delay triggering the rehabilitation provisions.
- Governments granting inappropriate discounts to companies on the amount of financial assurance held by way of bank guarantees on the grounds that such assurances can impact the company's solvency.

Due to the mining industry's appalling rehabilitation record, especially when it comes to open cut mines of the size likely to ensue from exploitation of the Bowdens resource, it is likely that the cost of rehabilitating the site will be an economic cost faced by future generations.

## 2.3 Royalties

Mines provide a flow of revenue to governments and their shareholders, however, the flow on to local businesses and local communities is generally not seen. According to the NSW Government's Mining, Exploration and Geoscience Royalties page, non-coal mining and gas royalties amounted to \$200 million for 2021-22 or 0.35 percent of NSW State Government Revenue; compared to the approximately \$3.5 billion it receives from fines and licences.

## 3 | Conclusion

The Lue-Rylstone-Kandos locality examined here has a vibrant and viable agricultural and tourism economy which should not be placed at risk; especially since mining companies are owned by city-based investors and institutions who reap the profits while local people bear the costs of the degraded landscape.

Such proposals impose significant costs on local communities. Having a mine proposal near residential and agricultural properties brings huge uncertainty. Property values can decline, and houses become impossible to sell. Businesses have to defer investment decisions through the many years these projects are in limbo which leads to population numbers declining and a reduction in community cohesion. The natural environment declines as water quality and availability diminishes, flora and fauna deteriorate, and air quality and noise impinge on health outcomes. Agriculture and tourism industries would have been sacrificed for no gain. The region would suffer an economic collapse that could not be recovered due to the permanent impacts of the mining industry.

**Such costs are certain, while the potential benefits of the new mines are unlikely. It is my view the Independent Planning Commission should not approve construction of the Bowdens mine.**

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