

Submission re. likely social impacts of
the proposed Bowdens Silver Mine

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Abbreviations

DAR	Department of Planning's Assessment Report
ES	Bowdens EIS Executive Summary
EIS	Bowdens Environmental Impact Statement
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
VPA	Voluntary Planning Agreement

Introduction

I have been asked by the Lue Action Group, to provide an independent expert report regarding the likely social impacts of the proposed Bowdens Silver Mine Project.

I am a sociologist with twenty years' experience reviewing social impact assessments on behalf of non-profit agencies and the public sector.

I have read and agree to be bound by Division 2, Part 31 of the *Uniform Civil Procedure Rules 2005* and the Expert Witness Code of Conduct.

A short curriculum vitae is attached.

The following report is based on my experience and expertise in SIA. It sets out a summary of key social impacts likely to arise as a result of the project and provides an assessment of the adequacy of the proposed mitigations and conditions of consent to respond to these.

Alison Margaret Ziller¹

23 February 2023

¹ Signed electronically in accordance with section 9(1) of the *Electronic Transactions Act 2000* (NSW)

Proposed Bowdens mine at Lue

I wish to raise four issues regarding the foreseeable social impacts likely to result if the lead, zinc and silver mine at Lue is approved.

1. The use of language

There are several ways in which the use of language in both the proponent's documents and the Department's Assessment Report [DAR] is misleading. As a social impact expert, I am concerned with the impact of these uses on the presentation of, and response to, social impact issues.

The name of the mine is misleading. Silver may be the most valuable mineral, but the Environmental Impact Statement [EIS] says, p 2, that far more lead than silver is proposed to be mined. In respect of predicted extraction quantities, this is Bowdens' zinc and lead mine.

The EIS describes multiple ways (e.g. EIS p 27), in which the local population can be exposed to lead. Exposure to lead is a health hazard.

Bowdens and the Department appear to be relying on a proposition that the level of exposure to lead will be 'negligible' (DAR para 376) and 'almost negligible' (DAR p v & para 477) in terms of likely health impacts. The definition of negligible is something so small as to be insignificant or not worth considering.² 'Almost negligible' seems to be something almost small enough to be not worth considering.

The World Health Organisation says lead is a 'toxic metal' and 'there is no level of exposure to lead that is known to be without harmful effects'.³ That is, when it comes to lead, there is no level of exposure that is not worth considering. This would seem to be particularly applicable to a proposal to create a risk of exposure to lead for a period of 23 years, and potentially longer.

² <https://www.merriam-webster.com/dictionary/negligible> viewed 25 January 2023

³ WHO Lead poisoning and health <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health> viewed 23 January 2023 based on US CDC Advisory Committee on Childhood Lead Poisoning Prevention. CDC updates blood lead reference value to 3.5µg/dL. Atlanta: US Centres for Disease Control and Prevention; 2021 (<https://www.cdc.gov/nceh/lead/news/cdc-updates-blood-lead-reference-value.html>) Australian Government Healthdirect, 2022, Lead poisoning, September: <https://www.healthdirect.gov.au/lead-poisoning> viewed 23 January 2023

The fact that there may already be lead present in the soil and buildings in Lue (EIS 4-181 & 4-189)) is not an argument for increasing it.

Treating 'negligible' as if it were the same as 'none', seems to be being used to reduce the social impact risks of exposure to lead to a discussion about people's anxieties. While anxiety is a reasonable response to this proposal, negligible levels of exposure are not, in terms of the World Health Organisation's Fact Sheet, a safe level.

2. The social impact of exceedances

In its Assessment Report, the Department not only relies on the word negligible but also on the levels of risk measured as averages (DAR para 211 & Recommended Conditions B26).

There are three things to note about this reliance

- i The averages are achieved by modelling. The models are predictive and based on assumptions. The accuracy of assumptions is only known when they can be compared with empirical results and, therefore, a model may be partly or significantly inaccurate. This is not just a technical or academic issue because errors in modelling can affect individual lives as well as public health.
- ii Averages conceal variations and the magnitude of variance.
- iii The Department anticipates variance by providing for it extensively in the Recommended Conditions which detail at B26, C5 & C6 that exceedances are anticipated.⁴

Bowdens' EIS notes there could be adverse impacts on aquatic life due to

Accidental release of silver/lead concentrate and zinc concentrate from the processing plant

and

⁴ The Department's 2018, Voluntary Land Acquisition and Mitigation Policy For State Significant Mining, Petroleum and Extractive Industry Developments, also permits exceedances at p5

Changes in groundwater quality due to excavation of the open cut pits, possibly from exposure of unweathered PAF waste rock or ore.
(EIS p 4-260)

But the Department does not address risks to human health arising from the same kinds of accidents or exposure. Rather, it says these risks can be managed (DAR para 216).

At the same time the Department's Recommended Conditions explicitly allow for exceedances.

According to the Recommended Conditions,

- i Exceedances may occur due to
extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.
(Recommended Condition B26)
- ii The air quality criteria do not apply
if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.
(Recommended Condition B27)
- iii Exceedances may occur on mine owned land providing the tenant or landowner is kept regularly informed of these (Recommended Condition B28)

There are social impact issues arising from the fact that exceedances are both anticipated and permitted.

The project is expected to last for some 23 years (ES p xix) or 8,395 days. If there are exceedances on, say, 1% of the days the project operates this will mean they occur on 84 days. At the rate of 2% this is 168 days. If the project is extended (DAR p iii)⁵, say for another 5 years, then the local residents might experience exceedances at the rate of 1% on 102 days, or at 2% on 204 days.

Exceedances may be due to accidents, mistakes, equipment failure, unforeseen events such as bushfires and dust storms, or inaccurate weather forecasting. The Assessment Report relies on modelling to anticipate exceedances, and to say

⁵ RW Corkery & co note in Feasibility of Open Cut Extension, Additional Information 16 Dec 2022 that 'From the Company's perspective a future application for expansion is likely given its exploration work has continued to demonstrate highly positive results.'

they are within the range of acceptable impact criteria (DAR para 211), but it does not address their social impacts.

As it stands, the proposal is that every day for 23 years, or potentially longer, people in the locality of Lue (that is, within 3 km of the mine site) will reasonably wonder if today will be a day of exceedance or if that happened yesterday but they don't know about it yet. Every day they will know that exceedances are possible but not whether they have happened or how large the exposure was.

There are 98 residences within 3 km of the mine and 70 in and around Lue, but only 13 are owned by Bowdens with another 3 which could be acquired. This leaves 82 residences in the situation I have described.

These residents do not have an offer of voluntary acquisition and would face difficulty securing a reasonable price should they decide to sell if the modelling proves incorrect. They face risks from cumulative exposure to lead for which there is 'no level that is known to be without harmful effects'.

They would appear to have no recourse if the recommended particulate matter and deposited dust criteria become more stringent during the life of the project.

3. Long term social risk

Bowdens' EIS is only concerned with health risks during the life of the project (ES-43). However, risks to health from exposure to lead disturbed by the project, may occur due to

- dust escaping from the low grade ore stockpile (EIS 2-30), &/or
- seepage from the tailings storage facility (EIS 2-38), &/or
- extensions to the open cut pit to ensure the final void remains a groundwater sink.⁶

These risks will persist after the mine is exhausted, the site has been sold or abandoned and mining activity has ceased.

The Assessment Report recommends Bowdens update its groundwater model every three years and provide a closure strategy for the final void, but does not say whether or how these responsibilities will pass to a new owner or indeed how responsible ownership and management of the void and stockpiles will be achieved for the next 70 years (DAR para 241) or in perpetuity.

⁶ RW Corkery & co, Feasibility of Open Cut Extension, Additional Information 16 Dec 2022

The proposal that more jobs for people living in the region is a justification for health risks accruing to people in the locality of the mine lacks both logic and empathy. It also takes a short term view of the project.

The royalty income to government seems to have been estimated without offset for costs to government generated by long term risks to residents' health and costs to the health system arising cumulatively from lead dust exposure, accidents and exceedances. When the silver has been mined it will be gone, but the risks of lead dust in the mined environment will remain.

It appears that the Department has not considered the future cost to government of liability for the foreseeable adverse impacts of a lead mine in this locality.

4. Inadequate mitigation of social impacts

The Assessment Report lists proposed initiatives to address the social impacts of this mine. After saying that physical exposure risks would be 'negligible' (DAR para 376), the list of social impacts are called 'residual' and described as 'perceived' and as 'stress' and 'anxiety' (DAR paras 377 & 378)

The measures to address these residual impacts are said to be 'strict and precautionary' and 'reflect current best practice for regulating mining projects' (DAR para 487) and are listed as:

- i A community investment program, run by a committee and delivering long term outcomes (unspecified, but examples provided) for the Lue, Rylstone and Kandos areas
- ii A planning agreement (VPA) with Mid-Western Regional Council to provide \$3m across the life of the project for community infrastructure
- iii Local employment and procurement program
- iv A 'Good Neighbour' program
- v A Social Impacts Management Plan [SIMP] (DAR 402-406 & 411).

The SIMP is a suite of documents to be prepared and executed by the proponent. It requires

- i an update of the social baseline, (presumably in the SIA)
- ii a Stakeholder Engagement Framework
- iii a community investment program

- iv measures to enhance positive social impacts
(including the community investment program listed above)
- v measures to manage and mitigate negative impacts including:
 - a blood lead level monitoring and tracking over time;
 - b impacts to near neighbours;
 - c broader community cohesion;
 - d a workforce accommodation strategy;
 - e a local businesses and services strategy;
- vi a program to monitor, review and report on the efficacy of these measures. (Condition B83)

This list of mitigations gives risks of physical exposure to lead dust the same priority as local businesses strategy and workforce accommodation. It treats exposure to lead as something to be discovered and tracked after it has happened. Responsibility for this monitoring appears to rest with the project proponent (Conditions B28 & 30). In the case of an exceedance, a resident must be provided with a NSW Health fact sheet, i.e. an e-pamphlet (Condition C6). It appears it is up to individual landowners to initiate an independent review (Condition C7). In my view, this inappropriately places responsibility for the consequences of exceedances on individual landholders. Further,

- No action is proposed to compensate 82 property owners within 3 km of the mine for financial loss due to the presence of the mine – its noise and other impacts, as well as consequences of cumulative exposure to lead.
- The proposed \$3m spread across 23 years is a trivial amount. As it is not indexed it would have diminishing value. If meted out on a per annum basis,⁷ the Council would need to save it for several years in order to do something worthwhile with it. There is no indication that this would happen, nor anything to ensure that the money didn't simply go to meeting existing commitments.
- It is considered sufficient to suggest some nice-sounding social infrastructure that could be provided (e.g. enhancements to arts and culture) without any detail or backing. For example, there is no reference to the Mid-Western Regional Council Social Plan or Arts and Culture Plan nor the fact that it doesn't appear to have either – suggesting a lack of basis for choice of additional social infrastructure.

⁷ about \$130,000 a year for 23 years or \$107,00 for 28 years

- There is nothing in this list to ensure that Lue, rather than the large local government area, is the primary beneficiary of these small amounts of money, despite Lue being the primary adverse impact area.
- There is reliance on public relations in lieu of tangible and effective mitigations delivered by the proponent.
- The Community Consultative Committee is advisory only.
- There are no penalties for non- or inadequate compliance. There is no standard against which to assess failure to comply with the SIMP and no independent agency to do so.

Summary

Current best practice for regulating social impacts of mining projects was considered by the Land and Environment Court in 2019. In the Rocky Hill decision, that Court considered that strict and precautionary mitigations of social impacts should be tangible, deliverable and durably effective⁸. It is evident that the Recommended Conditions for mitigating social impacts of this mine do not meet these criteria. The principle strategy for mitigating exposure to lead appears to be discovery after it has happened. While tangible and deliverable, discovery after the event is not a durably effective mitigation for a substance whose harmful effects cannot be remedied, reversed or removed.

This strategy will not address the lived experience of residents.

In my opinion, the Recommended Conditions for mitigating social impacts are short term and lack substance, that is detail and enforceability. Weak and ineffectual requirements in a SIMP may be current industry practice but this doesn't mean they have a value other than to gloss over the fact that the proposed mine risks being at the long term social expense of the locality of Lue – a social cost which is not proposed to be mitigated.

In my opinion, in the process of recommending approval, the Assessment Report treats actual practice as best practice and describes weak and unenforceable conditions of consent as 'strict and precautionary'. This in itself suggests that a case for net social benefit cannot be made for this mine.

⁸ Preston B 2019, Decision: Gloucester Resources Ltd v Minister for Planning [2019] NSWLEC 7 para 418

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Qualifications

PhD, School of Urban and Regional Planning, The University of Sydney, 2004 Thesis title: The Role of Planning in Community Building

Master of Arts (Sociology) Columbia University, New York, 1969

Bachelor of Arts, Honours (Sociology), London School of Economics & Political Science, 1966

Recent publications

Ziller Alison and Tony Brown 2022, Using Cumulative Impact Assessment as a smokescreen in NSW alcohol harm reduction laws. A commentary, J Law and Medicine

Ziller Alison 2021, [Social impact assessment: the good, the bad and the unbelievable](#) A guide for reviewers, [Kindle edition](#)

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