HEALTH

Dear Commissioners

The DPE has directed Bowden’s mine with their obligation to minimise harm to the environment see the following paragraph. Schedule 2 A1 Administrative conditions.

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, or rehabilitation of the development.

Jayne and Peter Bentivoglio, our children and grandchildren and employees and contract workers at Bentivoglio Olives and Rylstone Olive Press are excluded from the assessment of prevention of harm in the DPE Conditions of Consent, even though we will be adversely affected with unacceptable impacts by fine particle toxic lead dust and other harmful metal dust contamination on our property, including in our lungs, in our drinking water, irrigation water, olive washing water and olive oil processing water and all our 8,000 commercial olive trees.

Our grove is located 5km from Bowden’s Mine and the impact on our health and wellbeing, including our mental health and including the risk of cognitive impairment will be affected by the approval of this mine.

The effects of acute cognitive impairment in elderly people and the association with Parkinson’s Disease was not even considered by the DPE and we draw your attention to Professor Bruce Brew’s report submitted to the IPC. Professor Brew is Australia’s leading researcher in dementia and a distinguished medical neurologist, at St Vincent’s Hospital Sydney.

It is for the unacceptable impacts of exceedances of lead and other metal contaminates from Bowden’s mine that we do not accept that living and working at this distance from the mine is safe for the community, our family, our employees and our clients requiring olive oil processing and any contract workers that we require in the production and processing of olives.

**Neurologic/psychiatric**–Chronic(cumulative)lead exposure at a level as low as BLL5 mcg/dL has been associated with neuropsychiatric effects. These include:

* Declines in neurocognitive functioning
* Psychiatric symptoms (phobic anxiety, depression, and hostility)
* Distal motor and less commonly sensorimotor neuropathy after many years, usually of very high exposure
* Decreases in hearing acuity
* Tremor
* Brain structural changes including white matter lesions, loss of brain volume and increased brain gliosis [80]

Bone lead, which remains for decades, has been shown to be a better predictor than BLL of long-term effects on cognitive function [73,81]. In a cohort of workers followed over a 22-year period, bone lead level predicted lower cognitive performance, particularly in workers older than age 55, whereas BLL showed no association.

*Ref: Lead exposure and poisoning in adults 2020, Goldman and Hu*

The NHMRC guideline for lead in drinking water is 0.01mcg/dL. This guideline is not a value for Bowden’s Mine **to pollute up to!** NHMRC guideline for BLL is 0.05mcg/dL and again this is not a value for DPE to recommend in the conditions and Bowden’s to pollute up to. The DPE conditions of consent must recommend for total dust deposit for water soil and air to come under 50% of this guideline!

The adverse impact on our health and the environment of our olive grove and olive processing plant, will not be remedied by Bowden’s Mine to prevent any exceedance of lead from fine particle lead dust dispersal.

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’.[[1]](#footnote-1) 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.

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.

## 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

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.

Averages conceal variations and the magnitude of variance.

1. The Department anticipates variance by providing for it extensively in the Recommended Conditions which detail at B26, C5 & C6 that exceedances are anticipated.[[2]](#footnote-2)

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

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,

1. 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)

1. 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)

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)[[3]](#footnote-3), 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 they are within the range of acceptable impact criteria (DAR para 211), but it does not address their social impacts.

*Ref: A Ziller Likely Social Impacts to the proposed Bowden’s Silver Mine*

As there is no acceptable impact criteria, the number of days affected is a non-scientific guess to determine what affect this has on the community, is an unknown.

It is for these health and social impact reasons above we request Bowden’s acquisition of all properties surrounding the mine to a distance of 17km upon approval of this toxic Bowden Mine.

Jayne Bentivoglio

Jayne Bentivoglio

Bentivoglio Olives + Rylstone Olive Press

1. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)