

Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory
Committee - EES

733

Request to be heard?: Yes

Full Name: Sandra Jayne Hammond

Organisation:

Affected property:

Attachment 1: my_final_submissi

Attachment 2: my_final_submissi

Attachment 3:

Comments: see attached submission

I am writing this submission for the Fingerboards mineral sands mine project. I oppose the mine because of environmental concerns around *atmospheric entrainment* of toxic particulates over the Gippsland Lakes catchment area, a danger that has been exposed in research undertaken by the Australian National University in a study regarding the Tasmanian Toxic (Mountain) Lakes study by Schnieder et al. 2019.

I have lived in the area for 40 years, initially farming at Woodglen and now Landcaring at Eagle Point after a teaching and social work careers. I particularly enjoy morning walks to the lakeside where swans are numerous and international avian visitors are seen. Our local caravan parks, whilst empty over COVID, will most likely be booked out again this summer as is usual. Being in reasonable proximity to Melbourne for holiday makers, campers, fisher people, bushwalkers, naturalists, children and families and those enjoying water sports all flock to Eagle Point.

The study I refer to is that produced by the ANU:

‘How significant is atmospheric metal contamination from mining activity adjacent to the Tasmanian Wilderness World Heritage Area? A spatial analysis of metal concentrations using air trajectories models’; (15 March 2019; Schneider et al; Pub. *Science of the Total Environment*; pp. 250-260)

The Australian Minerals Council (AMC) gives the ANU study credence stating ‘it will conduct a review of it produce further research’. At a Kalbar public meeting on 29-10-2019 I asked Victor Hugo about his reaction to the atmospheric entrainment of heavy metals in this study. He replied that ‘he had not heard of the study and stated that the heavy metals will be washed down through the soil.’ Kalbar ought to be aware of and be considering current research in its core business. It leads me to think that Kalbar is not using current information and findings produced by universities here in Australia and perhaps is relying on old ideas. The pollution of the Tasmanian mountain lakes is said to be amongst the worst in the world and therefore I was concerned that he and his team had not factored in the potential of this hazard exposed in the research.

I am opposed to the proposed Kalbar mine because mineral sands contain carcinogenic heavy metals including chromium, titanium, vanadium, uranium and toxic respirable silica dust. The ANU study (Schneider *et al*, 2019) above

demonstrates that **atmospheric entrainment** has far-reaching potential to cause serious environmental damage by unearthing safely buried toxic particulates as well as respirable silica, to be unearthed via open cut mining. These poisons can be carried upwards for kilometers and be deposited on the ground and in waterways, eventually to be carried by the water cycle through rain clouds, or via firestorm, flood, or wind-flight onto the surrounding land, into waterways and tributaries of the Gippsland Lakes. The potential for creeping poisoning is a real and unacceptable risk to the whole of the Gippsland Lakes and catchment area.

I am also extremely concerned about the health of the population. We have an income below the national average and as the social determinants of health

[The social determinants of health: the solid facts; (2003);Wilkinson, R. and Marmot, M; 2nd ed. Pub. WHO Library]

show, lower incomes translate to poorer health outcomes. After enduring drought and devastating fires followed by COVID, it is absolutely cruel to then pose the risk of soil and water contamination onto the East Gippsland community. Residents will be exposed to dangerous dusts both in the air and through our drinking water whereby the Woodglen reservoir sits in close proximity to the proposed mine. This will increase the health problems in the region. Children and babies will be particularly susceptible to poorer health outcomes through their ground dwelling habits and propensity to ingesting carcinogenic heavy metals that become part of the ground environment. The U.S. National Cancer Institute states that Thorium for instance, once ingested cannot be removed from the human body: “there is research evidence that inhaling thorium dust increases the risk of [lung](#) and [pancreatic](#) cancer. Individuals exposed to thorium also have an increased risk of [bone](#) cancer because thorium may be stored in bone.”

<https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/thorium> (accessed 29-10-2020). Dusts cannot be prevented from travelling across the landscape. East Gippsland cannot afford to risk the health of its population to the airborne carcinogens and silicosis causing dusts. The airborne carcinogens will inevitably bioaccumulate in the food chain. This is unacceptable.

After the horrific bushfires of January 2020 and massive loss of animals, habitat and vegetation, it is preposterous to consider the large scale removal of habitat

including the 700 mature trees. Proponents may argue that the vegetation can be regrown which is true however, at this time and for several decades into the future, there is a dire loss of animal habitat. Possums, bats and birds cannot live in grasslands or low lying scrubby bushes. The time taken for trees to develop hollows is 80-100 years. Animals will be destroyed by the land clearing, including insects, lizards, birds and other tree dwelling species such as the endangered grey headed flying foxes which are endemic to the Bairnsdale area require flowering eucalypts to adequately survive. The loss of the mature vegetation will be a travesty after the vegetation losses during the fires.

I find it unacceptable to allow compulsory acquisition of private land to be used by the mine for infrastructure that is located outside the mining project boundary for: water pipelines, bore pumps, bore field, roadworks, new powerlines, easements, rail siding and vegetation. Why wasn't this part of the mine project area? Why isn't this a matter for the East Gippsland Shire Council to determine?

In closing I would like to emphasise that it is impossible to overstate the importance of a clean environment and clean water to the East Gippsland community. Our economy relies on healthy land and clean water for the huge farming and tourism industries to flourish. Residents of our area appreciate its clean, and beautiful environment.

My family in farming, medicine, small business and pharmacology, my friends in landcare and acquaintance around Bairnsdale and Lindenow are aghast at the potential health and environmental destruction the Glenaladale mine poses. It has been completely inconvenient and unfair to conduct this EES during COVID lockdown for obvious reasons of computer literacy and access by older people. Also its disappointing that the Gunnai-Kurnai have not be able to contribute to the process and I feel a special effort could to be extended to the local aboriginal community to facilitate a cultural heritage assessment. If this has been done I stand corrected.

I do thank the panel for allowing me the opportunity to make a submission and do hope my points will be considered earnestly.

Regards, Sandra Hammond.