

Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory
Committee - EES

763

Request to be heard?: Yes

Full Name: Tom Crook

Organisation:

Affected property:

Attachment 1: EES_Submission_t

Attachment 2:

Attachment 3:

Comments: see attached submission

Submission to the Environment Effects Statement (EES) Fingerboards proposal, Glenaladale

By Tom Crook

-Submitted 29/10/2020 via <https://engage.vic.gov.au/fingerboards-IAC>-

Dear Inquiry and Advisory Committee members,

Thank you for the opportunity to express my concerns over the proposed Fingerboards mineral sands development and related EES documentation. I strongly oppose the current proposal for the various reasons, as outlined below.

Having lived and worked in East Gippsland most of my life and currently residing within 500m of the Mitchell River and around 30km from the proposed mine site, I am very concerned this development, if allowed to proceed, will affect my quality of life, the surrounding environment, local economy and broader community.

Timeframes.

The timeframes allowed for public consultation on this project via its EES result in a largely undemocratic and inaccessible process. Expecting anyone to read, let alone understand around 10,000 pages of information, much of it highly technical, in around 40 days, I feel is simply unrealistic, unreasonable and in affect prevents members of the community from meaningfully considering the various aspects and details of the project proposal.

I am likely more able than most (having an environmental science degree) to read and understand the huge volume of information the EES contains, but in reality, cannot possibly complete this task in the required timeframe, let alone conduct replicate surveys (some of which are seasonally dependant) or adequately evaluate the information provided. The EES timeframes, if nothing else, appear inappropriate, prohibitive and should be extended to allow the public to engage with the process.

Biodiversity

As an ecologist familiar with the mine site and other areas in question, having worked on various ecological restoration projects on the Gippsland plains and specifically the rail line, I am both concerned and alarmed at the inescapable impacts on biodiversity that will result from this proposal, if it proceeds. I do not believe that the proposed measures will, in reality either mitigate against or compensate for the biodiversity values that will be lost.

The ecological integrity of the areas and much of the surrounding landscape has already been significantly modified and or degraded, but continues to support a wide variety of native plant and animal communities. Many of significant conservation value due to their location and representativeness of ecological systems and species which are now large non-existent in that particular context. IE many of the species are common across the landscape but in these particular Gippsland Plains type systems are almost entirely unique (low land forest for example).

Make no mistake, all ecological processes within the mine operations footprint, if the mine proceeds, will be damage or their habitat removed/destroyed. This includes almost 150 native plant and over 100 native animal species. 1.74 ha of EPBC listed Redgum Grassy Woodland, 14ha of state listed Forest Redgum Grassy Woodland and various listed animals including the Masked owl.

I do not believe any 'offsets' purchased for this project will, in reality, compensate for the destruction of 160+ HA of remnant vegetation, represented by at least eleven vegetation classes and scores of specific vegetation communities, as well as over 460 large trees, which are significant for biodiversity in their own right. Acting as 'key stone species' and contributing disproportionately to local biodiversity and the function of ecological systems. As these are unique values which are not represented elsewhere in this specific area they therefore cannot be 'offset' as there is no 'like for like' .

The EPBC listed Gaping leak orchid occurs in only two main populations in Victoria, one within the operations footprint of the mine at Lindenow south. Studies undertaken as part of the EES for this species are highly likely to be inadequate due to the protracted dry period (drought) being experienced during the survey period and the fact that this is a highly cryptic

species known to be in severe decline. As such, surveys conducted as a part of this EES cannot, with any real certainty, confirm or disprove the presence of this significant species and should be subject to ongoing assessments which take these factors into account, before arriving at any determination of the mine's effects.

Dust

The production and dispersion of dust from the mine site, if the project proceeds, will be unavoidable. Irrespective of the stipulations/conditions imposed on the operation and the varying degrees to which the operation is able or willing to implement or abide by them.

Mining operations the world over have developed various capacities and techniques to control, mitigate and ameliorate the production and offsite transport of dust, but none are actually able to entirely prevent it.

EES emissions models demonstrate the need for specific and additional measures to control the toxic dust and propose a number of mitigations that could assist this. However, these are largely mechanical and/or completely reliant on operations managers diligence to implement and ensure they are consistently applied. Meaning that if they are not, the community will be exposed to harmful levels of pollution from the mine.

Relying on 'operational practices' such as water carts on roads and reducing travel speeds or progressive revegetation "as soon as is practical" often do not accord with other competing mine operation interests and provide little or no assurance of community safety, irrespective of claims made in the EES executive summary that predicted air pollutions will 'all comply with the relevant criteria at all sensitive receptors'.

Over reliance on 'best practice approaches to dust management' provide little or no assurance of community safety and at best will only control pollution to the 'maximum extent achievable' rather than removing the risk entirely.

Operations should be forced to consider examining opportunities higher up the wastes hierarchy to reduce emissions, such as avoiding the creation of hazardous emissions in the first place. Particles less than 10 microns in size (PM10) and other contaminants such as respirable crystalline silica are capable of penetrating the lungs. They have been associated

with a range of health effects including respiratory and heart problems. They may cause breathing difficulties and worsen respiratory diseases. Some particles will also contain cancer-producing materials.

As little or no compliance or enforcement activities are likely and the fact that there is a profit motive to not impellent these controls to the greatest extent possible and that in their absence, levels will exceed known safe exposure limits for the community, the proposed measures are seen to be an inadequate.

Dust is inevitably produced and current dispersion models confirm for some pollutants (PM₁₀ for example) levels will be basically at the upper limits of 'Air quality assessment criteria', and in fact exceed SEPP ambient air quality objectives (for PM10 of 50 µg/m³ 24hr av.). This is with all available suppression and mitigation measures being available and consistently implemented, an assumption which appears unrealistic, and if not will result in damaging exposures to local communities and the broader environment. Which I find unacceptable.

Radiation

The EES confirms the presence of uranium and thorium contained within the Monazite which will be subject to mining, if the operations are approved.

I understand below ground level and undisturbed these substances do not pose a health risk. Yet when excavated and crushed, dust is generated and these materials released into the environment. I am extremely concerned the proposed control measure to protect human health will not be adequate and am very concerned, again, they are over reliant on actions at an operations level which conflict with the profit driven objectives of the company.

The EES radiation study found the dust containing radioactive materials contaminating vegetable crops to be possible, yet the consumption of vegetables contaminated with air born radioactive dust was dismissed as a potential pathway and not considered further as a part of this EES, as it was incorrectly claimed that people *always* wash their vegetables. This is a fundamental failing of the EES process and needs to be examined as a matter of urgency.

Radiation exposure via dust contamination during transport has also not been investigated or evaluated as it has, again, been incorrectly assumed that all ore carrying trucks will be sealed, preventing any dust from escaping, when in reality truck 'tarps' only reduce not prevent dust from escaping during transport.

Risks to community health posed by dust escaping from trucks was not considered or evaluated by the EES, as it has been incorrectly assumed a 'truck tarp' will suffice in providing 100% containment of these toxic materials.

A Management Licence should not be issued to Kalbar by the Department of Health and Human Services, as they have not adequately considered all potential occupational and public exposures as a result of mining, processing and transport operations associated with the proposal.

Rehabilitation

Concerns raised about the company's ability, willingness and capacity to rehabilitate the mine site are well founded, given the inability of several other similar projects to achieve this outcome in the long term and the fact that mining companies generally have a long history of 'cut and run' (Balmoral in Western Victoria for example) when it comes to remediation activities post extraction.

We need look no further than the neighbouring Tambo catchment and the 'Stockman' mine development to see how tax payers are left with the burden of both contaminated land and remediation costs in the millions, after the mining company bonds are found to be inadequate and they declare insolvency or simply shift their assets into another name, avoiding liability.

Kalbar's contentions that rehabilitation will closely follow behind the mining operation as the mining pit moves through the deposit are at odds with how virtually all other mineral sands operations have occurred both within Australia and overseas.

It is essential to ensure mineral sands mines are properly rehabilitated as they are progressively decommissioned after the depletion of ore bodies, or abandoned following low world commodity prices. As there is a particular concern that thorium, the principal

radioactive component of monazite, may over time leach from tailings dumps into local water supply systems.

Also, as elevated radiation levels are likely to occur at areas of spillage adjacent to monazite loading and storage facilities, it may be necessary to have a system of controls to restrict the public and nearby landowners from having contact with some parts of former mine sites. The EES currently make no such provision, and should.

A history of unsatisfactory rehabilitation of former mine sites, especially in other states is duly noted and if regulators and Kalbar are so confident mine rehabilitation will occur in a progressive manner, condition targets should be established prior to commencement, progressively assessed against S.M.A.R.T. (Specific, Measurable, Achievable, Realistic, Time-Bound) metrics during operations and heavy financial/penalties and a stop work order implemented if operations are found to be in breach of such conditions.

Water management

Claims made by Kalbar that when river flows are insufficient to meet the mine's water demands water will be bought from an already 'fully allocated' system with no discernible effect on current water users, are both over-presumptuous and makes assumptions which are entirely unfounded and possibly disastrous for other users.

Available unused ground water allocations currently only exist for water extracted some 200km away at the far end of the Latrobe aquifer, which it is understood takes decades, if not longer, to recharge to the extraction areas allocated as bore-fields by Kalbar. Meaning that if ground water extraction outstrips recharge, other users will be left short of supply in years where river flows alone are insufficient to meet demand and when groundwaters have historically supplemented their supply (for the vegetable industry, for example).

There is also no proof that claims made by Kalbar that the Latrobe and other aquifers are separate to other ground water systems in the area, which in reality may not be separated by an aquitard from the Sea Spray group and could in reality be pervious....meaning drawdown could be vastly more severe than claimed, damaging Lindenow farms for decades.

Due to the Latrobe group acquirers unconfined nature, if it is used to supply on-going mine needs, the resultant modelled extent and magnitude of draw down could be much more significant than claimed by Kalbar, whose interpretation remains disputed due to modelling showing seepage between aquifers (Woodglen MAR site).

Mitigation measures and the ground water management plan overly rely on assumptions which are likely to be untrue and no amount of assurances escape the fact that as water demand increases, reliable supplies are put under increasing pressure. A situation that is only likely to accelerate in coming years.

Serious questions over Victoria's strategic food supply into the future appear not to have been taken into consideration by the EES. In particular the importance of the Lindenow food bowl to particular vegetable lines for which this area supplies almost half of the State's annual production. This is critical information in a drying climate and in the context of farmland in other parts of Victoria being taken over by residential developments.

Furthermore, with a 27% modelled probability that a major spill event will occur causing severe sedimentation to either the Perry or Mitchell systems, no guarantees exist that such events will in reality not become frequent as climate change exacerbates extreme weather events. Planning and engineering for a 1:100-year event is simply not good enough under climate change, where other areas have had to endure a 1:1000 year event in recent years.

Serious unanswered questions remain around the capacity of the mine operator to manage overland flow in the advent of an uncharacteristic east coast low rainfall events. In that the network of storage facilities overly relies on the operator's capacity to move water from one storage to another, so to prevent overtopping and ultimately unregulated discharge off-site. Assurances that no catastrophic failures will occur in the dams as they are to be built to 'best practice' standard also provides little and inadequate assurance.

Tourism

The potential loss to tourism resulting from the perception, correctly or otherwise and/or realised pollution of Bairnsdale, the Gippsland Lakes and surrounding areas is contaminated with heavy metals and radiation will mean people won't want to come to the area.

East Gippsland is a special place for tourists and residents alike who are attracted here by the beautiful unspoilt nature. This mine project, if approved, will damage that reputation and likely result in visitation declines for years to come, even without any accidents.

Road use and Traffic

As a road user I am very concerned that mine use of public roads will increase risks to the public and myself personally to an unacceptable level.

Risks to other roads users will also be accompanied by accelerated rates of damage to the public road network, for which the public must pay yet gains little or no direct benefit from the mine. This seems unfair. The mine should either pay to use public roads to turn a profit or be made us construct their own private roads.

Increased noise and vibrations are also of concern to residences will likely have negative effects on social and public amenity.

Private land

I feel it entirely unacceptable to allow compulsory acquisition of private land to be used by the mine for infrastructure that is located outside the official mining project boundary and would like to know why this wasn't considered part of the mine project and matter for the EG Shire Council to determine?

The Draft Planning Scheme Amendment - Attachment C in the EES should be rejected.

Cultural heritage and Traditional Owner rights

GLaWAC is opposed to any development that conflicts with the principles of their Whole of Country Plan and Elders' advice.

The rights and views of the Traditional Owners of Gunaikurnai country must be respected and understood. Aboriginal people are part of their country and they have a deep spiritual connection and responsibility to care for country. The proposed mining operation will disturb

and hurt the cultural connection of the Traditional Owners to the land, air and water that is part of the development area. Any government decision regarding the site must not disrespect or undermine this connection.

Whole Country Principles that GLaWAC upholds and uses for its decision-making include a requirement to 'not wait until it has gone' and a 'need to act now to prevent any further loss of environmental or cultural values'. These wishes should be respected and GLaWAC given veto rights over the Kalbar mine proposal.

Need for EES process reform

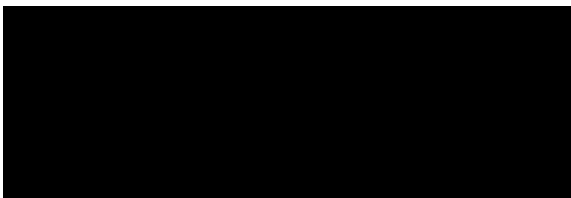
It is widely recognised that the Environment Effects Act 1978 (Vic) and associated Environment Effects Statement (EES) framework in Victoria requires substantial reform.

Victoria's legislation was developed at a time when an integrated approach to the protection of the environment and development was not taken, when there was little understanding about the concept of biodiversity and before concern about greenhouse gas emissions and climate change became widespread. Very few changes have been made to the legislation and the EES framework over the past 30 years.

Conclusion

This project, if approved, would have unacceptable environmental effects which cannot to be managed within safe levels. The project should therefore not be allowed to proceed and any current licences or approvals revoked.

Thanks for your time,



Tom Crook,
Eagle Point, 3878