

Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory
Committee - EES

568

Request to be heard?: Yes

Full Name: Geoff Johnston

Organisation: Yes

Affected property: [REDACTED]

Attachment 1: Geoff.docx

Attachment 2:

Attachment 3:

Comments: see attached submission

My submission into the EES for the proposed mineral sands mine at Glenaladale

Roads

Bairnsdale-Dargo Road and Fernbank-Glenaladale Road – the costs to build and maintain new roads on unstable ground. Why move the roads for a small amount of ore under them? These roads are where they are because this is the highest, driest ground avoiding crossing Lucas Creek twice if they are relocated – avoiding many soaks and head of tributaries of Simpson Gully system.

By leaving the roads where they are located and not removing large and medium sized trees which are significant habitat trees including large hollows as well as keeping the road base dry and reinforced with the trees huge root structures.

Many native grasses and eco systems are within this corridor, this road is a popular scenic tourist drive. The ground in this area can become very wet following rain events, the soil when saturated has a consistency of a sloppy mix of concrete. Moving these roads necessitates two crossings of Lucas Creek and no root structures to hold the road foundations together and keeping the area elevated and dry.

The Fernbank-Glenaladale Road straddles the original horse drawn wagon and bullock teams tracks through this very boggy terrain and soaks. There is no reason why they cannot build a decent roundabout near the Fingerboards intersection making the road much safer as the mine trucks will have their own haul roads and underpasses for safety, and time saving routes.

They say the landholder will not be affected while infrastructure, public roads and haul roads are being constructed. When my farm fencing is cut at one end and through the middle and across the western end this cuts the fences on every paddock of my farm, also cutting the water supply to my sisters property on the other side of Chettels Lane which I lease. My present extensive water supply that I have developed, drought proofs my farm for approximately 3 years as it did in this last drought sustaining all my breeding stock and weaners.



Fingerboards land showing road diversions and Haul road to left

Photo source Johnston collection

Road Diversions Bairnsdale-Dargo Road /Fernbank-Glenaladale Road

Moving these roads onto unstable country and crossing gullies, water courses and soaks which exist where the proponent wants to divert the roads to, would cost more than the ore is worth, with all the associated costs for road diversions, mining as well as ongoing maintenance costs because of unstable ground under and either side of these roadways, including reinstating these roadways back to their original alignment appears an unviable and problematic suggestion.

Removal of listed roadside EVC's, containing small animal and bird habitats, nesting holes including three species of lizards some not mentioned in the EES which are common to the area, several porcupine habitats and territorial ranges, this is a major wild life corridor as well as wind break for south-south/westerlies and north -north/westerly winds. So many birds, small lizards, gliders, and possums have not been mentioned in the studies for these roadside vegetation corridors. Ecological assessment was not adequate.

When the area of the upper reaches of Lucas Creek increases and lower areas are also modified with the progression of the mine with the increased catchment and water flow why hasn't any thought or mention as to how the culvert where Lucas Creek passes under the Bairnsdale-Dargo Road will cope with the extra flow? As in my lifetime I have seen the water to within 60cm of the top of road embankment. General and mine traffic routes to and through the project area will be impacted causing longer traffic travel time frames with no access to properties on the river flats on the eastern side because of the volume of water flowing through the Creek for a longer duration of time.



Lucas Creek entering Mitchell River (Easter end of project area)

Photo source Johnston Collection

Map 4 of the ESS identifies areas of prime or high-quality agricultural land, the proponent advises ..."project area does not include any such areas".

As fourth generation farmer I am certain that I would not have had an opportunity to farm this country if it were not good producing land with a higher rainfall than the surrounding areas. This country may not look very productive at present as it was severely burnt in the 2014 fires, with a one-year reprieve with some rainfall, followed by three years of drought. I can surely say the country will produce cattle as good as the river flats and wool quality yield equal to the Victoria's Western districts. It seems to me the proponent only thinks of themselves as they have every study conducted as low impact, moderate or no impact – in a perfect world this would be good but I don't know anyone, expert or not that could say that in everything they study the results will be low, moderate or no impact to people and the environment.

Haul road

Haul road from Chettels Lane to the container loading facility at Kennedy's Crossing (Fernbank East) crosses as well as the land drains into the head of Scull's Creek which enters the Mitchell River flats 3.5k east of the eastern end of the project area and meanders through the middle of the vegetable growing area on the Mitchell River flats. Any spills or run off from this haul road or container loading area will contaminate waterways and more valuable land as well as passing through many hill country properties along the way and the listed wetland of Sapling Morass. There is no mention of this waterway system being contaminated in the case of an accident or spillage at the loading facility or along the haul road in the EES why?

As the soils in this area as well as the project area hold a huge quantity of water which also seeps underground eventually reappearing in soaks and underground streams, creeks, and dams on its way to the river flats. Along these roads and loading facilities, you will not be able to stop seepage in this type of country because where haul roads and loading facilities are placed is some of the wettest country in the area.

Rehabilitation

Rehabilitation of topsoils from different areas being top dressed in the necessary amounts of fertiliser and lime before being stripped and mixed ready to be placed on another section of the project area being rehabilitated.

What about the years of work to build that soil up and then for it to be spread on another part of the project area that has not had the same build up in humus and fertiliser history? This means if I get my land back it will be like starting off from scratch on a rundown farm or worse, once these soils are disturbed this much they will never be the same especially if we end up with the someone else's top soil with the probability of receiving noxious weeds and wattle invasion, not to mention possible biosecurity problems.

I regard myself as a pretty reasonable farmer having been an agricultural contractor working paddocks on the flats and hill country in this district for over 30 years sowing crops, establishing pastures, working ground, remediating ground work for others as well as for myself gaining much experience with different soils and soil improvement in the area, where many others have struggled in the same conditions.



Areas Sodic soils

Photo source Johnston collection

Water /Rainfall not accurate

Up on the plateau once you leave the lower sections of the project area (Eastern end) this area has a weather system of its own, receiving 5 inches (125 ml) on average more than the surrounding areas per annum particularly around the Fingerboards intersection to Telecom tower areas.

Where the centre of this weather system is where the current weather station for this project is situated, as this area has always been regarded as a wind shadow area. The reasons why we say this is because stock on both sides of the Fernbank-Glenaladale Road whether they be sheep or cattle always camp in this area in the vicinity of the weather station and just over the road into the adjoining property when severe weather conditions prevail from any direction.

Rainfall measured at the fingerboards very rarely matches Mt Moornapa, Lindenow, or Glenaladale as it is a system of its own. The BOM has no idea of the rainfall that falls on that plateau.

At my residence approximately 4.5ks east on the Bairnsdale-Dargo Road just before you drop down onto the river near the eastern end of the project rainfall in this area can vary up to 11 inches (275ml) less than the fingerboards area in an East Coast low or heavy rain event over a period of six months or more.

Up on this plateau (the project area) it has its own weather system ranging from just under Mt Ray (in the West-North West) to approximately to 3 – 4 k's south from the fingerboards and to the northern and eastern edges of the plateau.

This is why people always make comment of the fact that the one weather station might be all that is required by EPA requirements but it is in the centre of the weather system thus giving different readings most of the time compared to other localise results. If all the surveys are based on these figures, they will be very inaccurate possibility leading to engineered structures not strong enough to withstand a 1 in 100 weather event or extreme rainfall events which can occur in this area.

Example heavy rainfall year:

Date	Rainfall	Position
July 2020	136ml (544points)	Residence (North of the Eastern lower end of the project area)
July 2020	175ml (700points)	Fingerboards
June-Dec 2007	412.5ml (16.5inches)	Residence
June-Dec 2007	687.5ml(27.5inches)	Fingerboards



Fingerboards project area – Lucas Creek

Photo source – Johnston collection

Hydrogeology

Mining activity will cut through the gravel and sand seams that carry ground water within this project area. Kalbar say in their studies there are not any permanent surface water dams or ponds on the project area. In actual fact there are 5 reliable spring fed dams at least within the project area and in my lifetime I have never seen these ponds and dams dry, even surviving the last 3 years of drought maintaining quality reliable stock water for animals when all other dams in the area were well and truly dry.

These small gravel and sand seams carry the ground water which gradually gravitate East and North to the River flats supplying the ground water and base flows for the Mitchell River, this water is always reliable through droughts and dry times.

Why haven't the proponent's studies not noticed these reliable water sources within the project area, rather than dismiss them or are they missing the fact that there are other small aquifers within the project area that they know nothing about?

My two irrigation bores (registered with Southern Rural Water) on the flats are noted in the EES as being stock and domestic bores, the mining operations on the South and South-West

will more than likely impact these bores as they are fed from shallow seams and gravel beds running to the river which will be mined through as the mine progresses east ending my properties reliable water supplies.

Groundwater modelling

Two bores at Treasures - one which is 50 metres from the River and should be 200 metres at least from the river, the other should be located 300 metres from one another otherwise one will affect the other.

Dust on pastures

Concerns raised by landholders regarding the potential for livestock production to be impacted because of dust deposition on pastures. "As coal dust on pastures did not impact on palatability of feed" this does not mean that mineral sands will not affect the ability to grow and fatten animals unless frequent rain occurs. This is sand we are talking about on pastures, cattle or sheep will not thrive on these contaminated pastures as it represents being in constant drought conditions where animals will only eat enough to survive. These conditions wear out their teeth, halving the animal's life and they are more susceptible to worms and diseases. A good modelling exercise for the experts could try to prove my knowledge is right, is each meal they have sprinkle a small amount of dust on the meal and see how much they want to eat – stock are the same.

Ground water aquifers

Having worked on the preparation of the Wy Yung Groundwater Supply Protection Plan with Government Hydrologists, DELWP, East Gippsland Catchment Management Authority, Southern Rural Water, water drillers and irrigation farmers from Glenaladale to Bairnsdale and my experience of working land on at least 70% of the farms in the Mitchell River valley and adjacent hill country land, my knowledge of the local groundwater and surface allows me to question the failings and misinformation in some of these surveys. The use of SKM reports for this ground water and surface water studies is not regarded as a reliable source of information for groundwater aquifers in this district and was not used during the preparation for the WGSP Plan. My question is why the specialist would be conducting these groundwater surveys using information that does not relate to the groundwater aquifers in this area?

Water & Flood gauges future 1in 100-year events

I am a fourth generation farmer on the Mitchell River near where Simpson Gully and Lucas Creek enter the Mitchell River as well as a fourth generation farmer at the Fingerboards on the project area where half my property feeds into the Mitchell River via Lucas Creek and the other feeds into a tributary of the Perry River system - Honeysuckle Creek.

Over the years I have been fortunate to have worked on Committees made up of local farmers (River flat farmers including Glenaladale to Bairnsdale) and Leon Sossti from Melbourne University to set up more river gauges along the river in appropriate places as well as extra gauges on rivers and tributaries on some that are not metered but have a huge effect on the Mitchell River flood level height when least expected. Also, to make existing gauges more updated, waterproof, and reliable to a point where mother nature has the last say.

As my farm on the top end of the Mitchell River flats is the first place the river really leaves the main channel I am heavily impacted with silt, gravel, timber, debris, and pieces of damaged infrastructure. If a 1 in 100 event happens (like in 1936) and mines catchment dams rupture and perhaps leakage of other sediments and untreated water from the mine site my farm is going to be wiped out as I will receive sand and debris from every gully that flows into the Mitchell River. What is the proponent going to do if the overburden, contaminated sediment, and debris impacts my property?

In the aftermath of these major floods 1990, 1998 and 2007 I have become very experienced in rehabilitation and recovery ,having worked with Catchment Management in trying to lessen the impact my farm as it is one of the places that flood levels are surveyed and pegged for future reference. Unfortunately, the only true flood level recorded is 2007 also the flood gauges and flow rates at Glenaladale and Lindenow usually cease working for a period during peak flood height. So how are the impacts of a 1 in 100 event runoffs from the project area every going to correlate to the true impact on down stream landowners when flows will not be calculated to the correct levels i.e. Six inches at Johnston's farm equals about an increase of 2 feet at Picnic Point Bairnsdale.



Downstream of mine site – flood impact

Photo source Johnston collection

Runoff Management

This project area is said to be a low runoff area according to EMM's modelling and guesstimates but in fact the last few years have been low rainfall therefore runoff will be low to none. Having said that, this country holds large amounts of water before it starts to shed unless there is a sudden storm event. Much of this water held in these types of soils either disperses through runoff when the ground is saturated or into underground streams or gravel beds soaks which in wet years keeps Creeks running. In Lucas's Creek there is a lot of water that disappears into pond holes and travels underground to the River, through the river flats which in turn provide a lot of water for local bores. Other tributaries do similar to Lucas Creek but many of them travel shorter distances and flow straight into the Mitchell River showing more travelling surface water as they have more gradient.

When we have wet years in this area these creeks and small tributaries can run for months, then if there is a 1:100 event remembering ground would be saturated, dams are full the country some of which may be freshly rehabilitated much more country being stripped and in the mining stages, water flow off the area will be rapid with much silt overburden materials ending up in the Mitchell and Perry Rivers flooding downstream properties contaminating crops, pastures, worked ground and lagoons used for irrigation in dry times. In this case scenario will the mining company contribute to the flood recovery process.

There are 20 dams on the project, site Number 1 is a freshwater dam the other 16 dams stop runoff water reaching the Mitchell River, and the remaining 3 dams also stop water run off reaching the Perry River. As the mining process progresses these dams can be used as catchment dams stopping sediment reaching creeks and dams. These dams are essential to mitigating the effects of increased nutrient levels on waterway instability, particularly the Perry River system.

In the Perry catchment (Western end of project area) there are 3 catchments dams whereas on the southern side and north/north-eastern side of the processing and truck loading facilities there are no catchment dams to capture any runoff water, processing water overflow or seepage water in the case of a heavy rain event or a very wet year.

The amount of watershed off the north eastern and southern side of the processing /truck loading facility in a heavy rainfall event I estimate at lease one and a half times as much runoff compared to what flows to dam 18. This water flows through three properties plus four farm dams on the southern side and seven properties and fourteen farm dams then into Honeysuckle Creek to the Perry River.

Would it be reasonable of me to ask why these properties plus Honeysuckle Creek and the Perry River system has absolutely no protection from both these sides of the project area?



Stream flow below tailings dam flowing in Perry River system

Photo source Johnston Collection



Culvert following from tailings dam area estimated to flowing at 3gl per day in recent rain.

Photo source Johnston Collection

Technical Reference Group/Stakeholder Engagement

Fourteen Groups represented on the Technical Reference Group.

Nineteen famers on the project area as well as there are adjoining dairy farmers, sheep producers (wool and fat lambs), beef producers, tree plantations, vegetable growers and lifestyle farmers. When most of the project is regarded as dryland grazing with some cropping. Why is agriculture not worthy of a representative on the Technical Reference Group?

Being a fourth-generation farmer hoping to bring my Son into the business, having farmed this land within the project area all my life. I feel we are just being brushed aside by these proponents. Don't we need food anymore? Don't we need farmers anymore because we are not making any more **land** to feed our Nation if we keep taking it out of production ? Is this a quick grab to get the mineral sands and resources and then get the hell out of here?

Local agricultural and horticulture producers will be sought for an environmental review committee to provide input on concerns during project construction, operations, and rehabilitation. During some stakeholder engagement meetings with the proponent we would get a map thrown on the table showing us what is proposed for our properties regarding road diversions and mining with no discussion, consultation afforded.

These diversions cutting every dividing fence on the northern and southern sides of the farm as well as diversion of Fernbank/Glenaladale Road running north/south cutting the remaining interior and road fences on the western end of the property, as well cutting the pipeline from a large dam on the west end of the property. This dam drought proofs our farm as well as my sisters farm on the south side of Chettels lane. This is a lifetimes work and three generations before me.

When stakeholders are treated this way why would any landowners want to be involved in an environment review committee to provide input on concerns during the project construction and operations, it would be a complete waste of our time ?



My land – My families future

Photo source Johnston collection

Geoff Johnston – Impacted landowner, resident, and Community member