

Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory
Committee - EES

812

Request to be heard?: Yes

Full Name: Frederick Coleman

Organisation: Coleman Partnership

Affected property:

Attachment 1: EES_Submission_-

Attachment 2:

Attachment 3:

Comments: See attached submission

EES Submission (Coleman Partnership)

Contents

EXECUTIVE SUMMARY.....	2
INTRODUCTION.....	3
FLAWED AGRICULTURE PROFILE	3
Location and proximity of our community	4
Erroneous information	4
Soils.....	4
Functionality	5
NATIVE VEGETATION	6
KEY BENEFITS	7
CONSULTATION	7
Non-consideration of the Mt Ray bush-fire and the recent three year drought.....	8
FARMS AS AN ECO-SYSTEM	8
FARM MANAGEMENT	9
EAST COAST LOWS	9
STATE OF TRANSITION	11
RESEARCH vs. STUDIES	11
DESCRIBED POSSIBLE ACTION TO REDUCE OR AVOID SIGNIFICANT IMPACTS ON AGRICULTURE	12
REHABILITATION.....	13
ISSUES NOT/INADEQUATELY MENTIONED	13
ECONOMIC BENEFITS	14
WIND.....	15
INFRASTRUCTURE	16
HUMAN HEALTH.....	17
LAND REHABILITATION	18
CONCLUSION	19

EXECUTIVE SUMMARY

The depiction of agriculture presented by the proponent in our zoned agricultural area, and that of our food producing enterprises, is flawed. The report is underpinned by numerous inappropriate assumptions, including touting that the high input, high cost, high intensity and high risk model of agriculture is the appropriate and preferred model. However this system is only one model. It is not the only model, and certainly is not the preferred model, particularly when one understands that food-producing farms are an eco-system.

Where is the recognition and comprehension of agriculture as being part of an eco-system? Or an acknowledgement of the essential role that biodiversity plays in this eco-system? Where is the identification of the role and importance that management plays in food production?

Where is the consideration of the impact of natural recent historical events such as the recent bush-fire and extended drought? Why have the severity and longevity of the impacts of these major events neither been adequately acknowledged, nor their importance recognised?

Why have other relevant and influential natural phenomena such as wind strength and its frequency been significantly under-reported? Why is there a clear misunderstanding of the importance of the extensive, local shallow water aquifer system and its critical value in our region's agricultural activities?

Not only has this essential natural water resource barely been recognised, its importance has been misrepresented. Why have the risk ramifications of major issues such as these been so ill-considered to the point of trivialisation or omission?

Another grave exclusion is the non-provision of a detailed assessment of impacts of the proposed mine on livestock production and its consequent flow-on economic consequences. The inclusion of a limited selection of not particularly relevant and mostly out-of-date animal studies is disingenuous.

The magnitude of our district's contribution to the local, state and national economy has been gravely understated. Is it acceptable to present information and "data" from only four of the nineteen landholders (21%) and claim adequate stakeholder consultation and representation? As a consequence of this and other additional factors outlined below, reported economic consequences of the project's proposal are neither fulsome nor accurate.

The Fingerboards proposal epitomises a mine-field of unacceptable risks to our important industry's many facets, particularly biodiversity, groundwater, surface water, soils and productivity – in addition to human and animal health. The proposal presents an unacceptably high risk level to important food-production within the project area, adjacent to the project area and downstream from the project area. In

summary, this proposal is a misguided attempt to establish a mine in the wrong place.

INTRODUCTION

Our family has traced its involvement in agriculture for well over 900 years. This commenced originally in England and then continued in Australia with First Settlement. Like many other farmers in the area whose ancestors have been farmers for generations, our family has an extensive history of food and fibre production.

Our farm business has run sheep and wool as well as Boer goats in the past, along with Hereford cattle prior to Angus cattle. We also produced raspberries on a commercial scale which were sold via fruit and vegetable outlets in both Bairnsdale and Sale.

As a consequence of the uncertainty of the past six years - due to the proposed mine proposal which came to our community's notice immediately following the 2014 Mt Ray Bushfire - we have had to stream-line our operations. At this point in time we currently run Angus cattle. These are much sought after as our reputation for producing quiet stock that 'do well' is widely known.

We have an extremely strong bond to the Glenaladale region and our food production business located within it. Our successful food production business is a thriving economic and satisfying enterprise. Like others in the district, it fully supports our local and surrounding community; turnover and profits remain in the local area where they continue to circulate and support our local economy.

FLAWED AGRICULTURE PROFILE

The proposed Fingerboards project's Agriculture Impact Assessment report demonstrates not only a limited understanding and comprehension of agriculture and its management in our area, but also of our local agricultural region and its many intricate and complex facets and interactions. We, as knowledgeable and experienced local farmers with an extensive family history in the area and 'knowing it like the back of our hands', did not recognise much of what was stated in the Agricultural Impact Assessment about our area or industry.

The picture presented of our food production industry is inaccurate and misleading. It is based on incorrect assumptions and inadequate data. There is clearly an underlying assumption that high input farming is the only way to go. To assist those who are not familiar with agriculture and agricultural parlance, high input farming means spending lots of money and time on throwing fertiliser, seed, water and other inputs around. There has been no consideration of the importance of management in the description of agriculture.

Language is a powerful tool and has been used to full effect in the Agricultural and related reports in the EES documentation, planting a particular image in the readers' minds, rather than portraying an accurate description of what is actually here. A great deal of angst has been created within our community by the depiction of the project area and surrounds as unsuitable for agriculture! There are around 170 years from First Settlement up to today demonstrating the sustainability and longevity of successful, productive food and fibre farming enterprises within our Agricultural zoned proposed project area and local region. This is clear and irrefutable evidence that the description of agriculture portrayed lacks competence, professionalism and accuracy.

Location and proximity of our community

Glenaladale is a zoned agricultural area producing high-quality food. It is a rural community, not a remote community; the EES creates the impression that Glenaladale is remote. It is only 25km from Bairnsdale, a city with a population of around 16,000 people. There are numerous local communities situated very close to Glenaladale, including Woodglen, Fernbank, Iguana Creek, Walpa and Wuk Wuk amongst others.

Residences within the project and adjacent area are understandably scattered; farms are large and homes and neighbours are separated by acres of land. Our own farm is over 750 acres or 300 hectares.

The use of the term "scattered" also implies not many homes. Nothing could be further than the truth. Our family home is located only 1 km from the project boundary. There are around 80 homes within 3 km of the edge of the proposed mine footprint (MFG Social Licence Survey).

Erroneous information

Why have numerous erroneous claims and pronouncements about our food producing agricultural systems been made in the EES documentation with very poor, and in many cases, no evidential backing?

A definition of 'productive' area is not provided. However, the language used clearly demonstrates a limited understanding of this word in an agricultural context. The focus presented is on the writer's perception of productive soil; soil is only one aspect of many that constitute a productive area.

Soils

Given that we, and our closest neighbours within the project area, and our immediately adjacent neighbours are current and successful agricultural producers, it cannot be claimed that the soils are "clearly not suitable for agriculture" [p. 27 (Landloch, April, 2020)].

This dubious assertion does not consider crucial aspects of agriculture such as farm management which influence soils – and many other characteristics - in a myriad of

ways. The soil testing results referred to in the soils section reflect a selective choice of sample sites; information provided regarding sample soil sites positioning clearly reveals a limited number and quality of sites from a restricted area under production. The sampling method was non-standard, samples were left for an “extended period” (length not defined), and a very small number of samples was taken. The tests undertaken for Phosphorus were not standard for agronomic use in Victoria, and Total Phosphorus (largely irrelevant) was generally quoted. No valid conclusions cannot be made about soils when the testing procedure was so poor.

As for tunnel erosion, this is such a complex, important topic that it is best to refer the reader to the more detailed examination in the Soils and Rehabilitation chapters of this document. This note-worthy phenomenon really requires a section entirely devoted to it.

The number of active tunnels reported in the EES is far lower than that which exists; they are indeed to be found within the project area. Tunnel erosion and its malignant consequences are one of the most significant risks and outcomes of the proposed Fingerboards project. The consequences of excavating and building massive dams on unstable soils are potentially catastrophic. The lack of knowledge of tunnel erosion, with its manifestations and behavior in our particular area, makes it impossible to rely on the suggested simplistic remediation strategies to produce an effective and realistic risk assessment. Most of the suggested strategies rely on “further research” to develop a solution – this is an extremely high risk option. How can the impacts and risks be assessed when the proposed mitigation measures don’t yet exist? How can unspecified mitigation measures be regulated?

Functionality

We concede that a few parts of the project area are rocky. However there is a positive function of rock in assisting with the health of hooves. This was particularly useful when we were grazing goats and sheep.

The claim that the rocky areas are a barrier to cultivation and cropping [p14 (Hamilton SierraCon, 2020)] is misleading; the land is being grazed. Presuming that cultivation and cropping are preferable activities to grazing and therefore by inference ought to be undertaken, is a clear example of inappropriate assumptions. Grazing has been deliberately selected as the best use of the land after evaluating all available and possible options.

Why is it stated that irrigation does not occur in this area? The claim that irrigation in and adjacent to the project area isn’t currently feasible due to the distance from the Mitchell River is a furphy [p14 (Hamilton SierraCon, 2020)] and is under-pinned by the assumption that irrigation should be undertaken.

There appears to be an unfortunate misunderstanding on the part of the proponent that properties within the project area do not irrigate. Nor is there any discussion

about different forms of irrigation. Landholders within the project area can and do irrigate according to their needs and the climatic circumstances.

The assumption that the river is the only source of water from which to irrigate is mistaken. Irrigation water on our farm is able to be supplied from our dams. Although we have irrigated from our dams in the past, with good management we find this no longer necessary.

Our dairy neighbour irrigates regularly. He has a centre pivot irrigator (the same as those used by the vegetable growers irrigating on the Mitchell river Valley flats) which is supplied from his dam.

Local farmers within and adjacent to the project area do grow crops, including us. The most common are oats and rye grass. In the past when it suited us we have grown, amongst other things, winter wheat and brassica crops. We now prefer to focus on maintaining a mixed perennial species pasture and also preserving our native mixed species pastures. In the long term it is more economic and far better for our eco-system.

The description in the EES report exposes an underlying assumption that pasture is inferior to crops on an economic basis. Whether crops are grown at all, grown and harvested or alternatively grown and used for grazing is a management decision. Such decisions are dependent upon a variety of factors, not just economics.

The grass growth model presented [p13 (Hamilton SierraCon, 2020)] does not take into account agricultural management. It also does not consider water application by means other than rain. Or the extensiveness and effectiveness of ground cover, soil organic matter, fertiliser application, soil biology, grazing management system used, stocking rate, the grass growth recovery period or a myriad of other inter-related and relevant factors.

NATIVE VEGETATION

The statement that there are "...areas of remnant native vegetation along gullies, creeks and roadside reserves" [p.12 (Hamilton SierraCon, 2020)] severely under represents the level of native vegetation not only on our farm, but also that of the entire area. We are not the only food-producing family within the project area to preserve extensive areas of native vegetation as part of our whole farm plan.

We have upward of 290 ha (NOT 29 ha as reported on page 1 (Ecology & Heritage Partners, 2020) or 49.925 as reported on page 12 (Ecology & Heritage Partners, 2020) in the EES) of well-preserved native vegetation with areas of old-growth forest and a very large number of old trees. Recent surveys have indicated that there are a number of significant species to be found here.

KEY BENEFITS

Why does the report not consider the key benefits of our food producing systems? Key Challenges are listed. However these are relevant to any agricultural enterprise; there is nothing listed specifically applicable to our food producing farms.

The report fails to accurately reflect the economic value of our food producing businesses to the local economy. Agricultural businesses provide a 4.2 flow-on job rate to our local region [p. 10 (National Farmers Federation, 2017)]. In addition, where is the acknowledgement that 100% of our financial returns stay in our local areas? What is earned in the area is spent in the area.

Why does the report not acknowledge that the value to the food-producer of particular areas of the farm have different values for different reasons? A considerable portion of the area to be removed from agricultural production in our case will result in the loss of around 290 ha of natural habitat. This would be an enormous scale of bio-diversity loss as well as a critical loss of shade for the protection of our stock. The animal welfare guidelines have strict recommendations on this subject. Biodiversity has a range of immeasurable benefits, for example prickly box hosts a parasitic wasp which predated on pasture scarab beetles (a pasture pest). Biodiverse farms have been shown to be more profitable and offer better well-being to the producer than conventionally run properties (Ogilvy Sue, 2018).

Our native vegetation is remarkable for its intactness and is renowned for being some the best around outside of state forests. We have a wild-life corridor running from the Bairnsdale-Dargo Road, all the way through the bush area to the other side of the property where it emerges into the state forest.

The statement that the proponent proposes to mine mineral sands "... occurring close to the ground surface" is questionable. (Hamilton SierraCon Social & Economic Consulting, Fingerboards Project Agriculture Impact Assessment Final Report July 2020, p5). Surely up to 60m cannot be considered close to the surface?

The value of the land for use as off-sets against native vegetation clearance in projects such as road-widening has not been considered. The off-set value of the areas of our farm within the project are estimated to be worth approximately \$200,00 per hectare (over 10 years).

CONSULTATION

Only four out of nineteen project area landholders were consulted in person [p.6 (Hamilton SierraCon, 2020)]. So 21% is considered to be satisfactory and representative of the entire landholder population?

Mitigations are based on so-called stakeholder consultation which in our case has been non-existent. To this day the proponent has still not informed us as to what

they intend to do on our land. There has been no communication what-so-ever. We didn't sight the Agriculture survey until the EES was released. This suggests a high level of "selection" in the "consultation", which makes any finding farcical. Any discussion of impacts in this environment is clearly biased.

One can only hope that the landholder compensation process will not be what we have already experienced – a threatening letter to take us to court if we don't sell them half of our farm miss-quoting and miss-using the MRSDA.

Non-consideration of the Mt Ray bush-fire and the recent three year drought

Why have these two fundamental events been neglected? There is no real acknowledgement of the debilitating and serious affects of the two major events that have directly impacted both farms and our community over the past 6 years; this being the timeframe over which the proposal has been around. Nor has there been any recognition of the recovery process and what that entails from these significant events.

Neither the 2014 Mt Ray bushfire nor the drought 2017-2020 (still on-going as East Gippsland has not received enough of its nominated total annual to declare the drought ended) have been analysed, considered or studied. Nor have their ramifications.

The proponent has never acknowledged the severity or even the existence of the Mt Ray fire in the beginning, or its consequence. At public meetings denied that they knew it had happened, even though they pushed for exploration access on one property two weeks after the event, while the owner was looking at his burned paddocks and fences trying to work out what to do first.

The fire and the drought are crucial to many aspects of the EES, including water, bio-diversity, soils, rehabilitation... So why have these aspects not been fully incorporated and considered?

FARMS AS AN ECO-SYSTEM

Where is the essential consideration of a farm as an eco-system? The report is looking at agriculture in isolation, at its individual components. It fails to acknowledge that a farm enterprise is an entire eco-system, necessitating the examination of every single aspect of the farm from physical land attributes to management as part of an inter-related system, rather than focusing on its individual components.

The potential changes for agricultural operations suggested by Kalbar are underpinned by false assumptions. Firstly, that productivity is required to be boosted. Secondly, that their version of high-input productivity is the best means of achieving this. Thirdly that the soils will be capable of sustaining agricultural production after

they have “rehabilitated” it. Experience from other farmers impacted by mineral sands mines has indicated this is unlikely.

It has taken much active management (incorporating a great deal of rest) for recovery after both the Mt Ray fire and the recent three year drought - which technically has not ended. Our farm is almost back to where we want it; the re-establishment of pre-fire fences has been waiting for this recovery. The proponent’s proposal has forced us not to reinstate them, a decision also made by other landholders within the project area.

What the writer is proposing is based on their limited understanding and philosophy of agriculture rather than the specific conditions of agriculture in our area. In the writer’s view, ‘agriculturally mining’ the land as an exclusive money-making strategy is the preferred view. We, like other like-minded farmers in our area, considering the overall picture of the farm as an eco-system for its current and future well-being and health in conjunction with economic production is the preferred option. This philosophy produces far better results in every respect.

FARM MANAGEMENT

Experience, knowledge and education are all integral aspects of this important aspect of our farm. We make a point of keeping up-to-date with agricultural practices and research. Indeed we have conducted our own trials on our farm, both in animal studies, pasture and other aspects as well as being part of trials run by other groups.

We subscribe to many agricultural newsletters and forums. We are members of many associations, including Better Beef, MLA, Landcare, the Organic Association of Australia, MLA... We have attended many field days in the past and over the lockdown period have participated in many webinars

We have extensive knowledge of current and past agricultural practices and actively search for further knowledge to compliment our management system. We make extensive use of grazing charts and feed budgeting, cash flow budgets, 1-5 year farm plans...

We are European Union accredited producers. Our weaner cattle are renowned for their growth and quiet temperament and are fiercely sought after locally and much further afield. The cows we choose to sell are also snapped up quickly.

EAST COAST LOWS

It is clear from the Agriculture reports (Impact Assessment and Main Report) that landholder concerns about the proposal’s inability to control the over-whelming run-off that occurs during our random and frequent east coast lows have been brushed aside. There is no real understanding or recognition that this is a serious problem and a major risk. A linked issue is the localised variation in weather patterns.

Rainfall events at the Fingerboards has been recorded as significantly higher than at properties less than 5km away.

This phenomenon creates numerous problems that Kalbar has failed to recognise or highlight. There is a significant under-report of the flood events in the local area and their subsequent effects.

Fences are pushed over and often broken by the sheer volume and speed of travel of the water as it moves across the land.

Dams overflow and the breaking of dam walls in our area is a common and regular occurrence. This is a result of the sheer volume of water and not a reflection of the dam building; dams here of necessity are constructed by professionals with years of experience of construction in our area.

The saturation of the soil is a serious issue in the project, adjacent and surrounding areas. We have had periods that necessitate no vehicles on paddocks and this period of time ranges from a month to a full six months to avoid damage to the land.

Just recently in October 2020 we experienced damage to our land from the proponent's 20 tonne drilling rig whilst exploratory drilling. Despite the extensive rain just prior to entry, which we knew was a disaster waiting to happen, their insistence resulted in a bogged drilling rig that has damaged the crust of the soil.

The ground underneath was so wet that the drilling crew were shoveling what could only be called liquid mud for around three hours. The proponent simply does not understand the nature of soils in our area; once the crust is broken it takes years for recovery. In the mean-time, the damaged area cannot be driven over and presents a hazard for farm vehicles and grazing animals and requires fencing off for an extensive period of time.

Given this, and taking into consideration the nature of the material that the dams are being designed to hold, dams must be constructed to the new ANCOLD requirement of 1 in 1000 year event, rather than the 1 in 100 year flood events; the risk to the community and the water catchment must be assessed by these more rigorous standards.

WIND

This is a major concern; greatly under estimated and not acknowledged by Kalbar. The under-reporting of the strength and frequency of the winds is worrying. The proponent's wind monitoring was inappropriately placed, resulting in erroneous data. This erroneous data was then used as a basis for a range of modelling. The old saying "Garbage In, Garbage Out" rings true.

The second major issues are the strength and frequency of wind and its consequent unacceptable impacts on the health of both people and animals from wide-spread

toxic dust. The lack of sufficient and accurate wind data makes an appropriate assessment on wind impossible.

STATE OF TRANSITION

As a direct result of the impacts of bush-fire and severe and extended drought, some properties are still progressing through a state of transition. This means that the state of the ecology on the farm is constantly changing, and moving through a range of states. There has been no acknowledgement of the transient nature of the ecological states observed – the implication is that this is how things are and always will be.

INSUFFICIENT INFORMATION

RESEARCH vs. STUDIES

A dismissive approach to animal health is reflected by a poor and limited choice of out-of-date animal studies, some of which are not relevant or do not focus adequately on the areas of concern. For example:

- use of irrelevant animal studies dust (cattle only);
- minimal study re noise;
- no mention of working dogs who have real issues with noise & pets & chickens & horses
- no studies or even desk-top data of animals studies re light, vibration, ingestion, effects on ears/eyes/claws & dust + effects on wool
- no studies on impacts on animal performance, i.e. weight gain rates
- what about light?
- feet/claw, ears & eye damage
- wool damage and or contamination (dust).

Where are the studies on the monitoring and management of animal husbandry and crops in food production? There isn't even a description of this provided.

Where are the long-term animal health studies? Why is the irrelevant coal dust affect on palatability of grasses even in the EES? This particular study is irrelevant for many reasons, including, but not limited to:

- Coal dust is soft, organic and effectively hummus
- The make-up of coal dust is entirely different to mineral sands
- Mineral sands are gritty and also contain toxic substances
- The palatability of the grass is only one aspect of a whole raft of animal nutrition and health considerations which have been ignored.

The referenced aircraft noise studies quoted (p55) are out-dated – 2004 and 1991. Aircraft noise is not of the same frequency range or duration as the proposed mining operations will be; nor can the effects of noise on the single aspect of pregnancy for mares be extrapolated out to other important aspects for cattle or sheep, including but not limited to conception and growth rates, temperament and eating quality.

Other more up-to-date and relevant studies have been undertaken since then that clearly demonstrate issues with noise on livestock. Impacts of noise on dark-cutting meat (effectively downgrading animal carcasses) have been identified by MLA.

Previous studies p.55, 56 (coal dust plus noise) ignores farm working dogs and domestic chickens (go off the lay with noise)

Also where is the recognition that the farmers themselves will suffer the noise as they go about their daily farming tasks outdoors?

The proponent cannot claim that there will be no or limited impact on farms within the project area as they have done no studies to substantiate such an incorrect conclusion. They obviously do not understand how our area's food producing farms in general and our farm in particular, are managed.

Premier Daniel Andrew's recently made the comment is that "actual data always trumps modelling." Modelling is based on desk-top data. Most of the data used is out-of-date or not available.

Management has an enormous impact on the success and well-being of land, water, soils and other important aspects of food production.

DESCRIBED POSSIBLE ACTION TO REDUCE OR AVOID SIGNIFICANT IMPACTS ON AGRICULTURE

This section has little substance and a worrying lack of detail. Inaccurate and insufficient actions are presented due to the incomprehension and incomplete presentation of the issues.

Land access for the proposed project has not even begun with the majority of landholders, let alone finalised as claimed [p.27 (Hamilton SierraCon, 2020)]. As primary producers within the project area we had never seen the Agricultural

Mitigations are based on so-called stakeholder consultation which in our case has been non-existent. To this day the proponent has still not informed us as to what they intend to do on our land. There has been no communication what-so-ever. We didn't sight the Agriculture survey until the EES was released. This suggests a high level of "selection" in the "consultation", which makes any finding farcical.

Hamilton SierraCon has based information on "best estimates" of land use and assumed incorrect stocking rates of 5 – 9 DSE/ha (aka guessing) [p. 27 (Hamilton

SierraCon, 2020)]. As a result of their limited exposure they have listened to the proponent's misunderstanding and misconceptions of the area, leading to erroneous and simplified conclusions.

Where is consideration of the important roles of organic matter, water holding capacity, ground cover and the role it plays increasing water storage in soil ...?

REHABILITATION

This report is frightening due to its lack of recognition of the issues and lack of comprehension of these unrecognised issues, as well as the ones they do actually acknowledge and the resultant lack of detail. Clearly the EES document was produced in a rush; it has been poorly edited, footnotes are in the wrong place, reports referred to are not included. It is not a document which gives the community any confidence in the project or the proponent:

- Issues are downplayed.
- Rehab guideline presented are only outlines, no detail SUPERFICIAL
- Misconception about tunnel erosion
 - -in the sides of the valleys!
 - -not likely to be found in the project area
- Based on "expectations" of stakeholder consultation (both problematic – expectation is not law/set in concrete/changeable on a whim...

Why have Kalbar staff and their experts repeatedly stated at public meetings that the land can be returned in any way required but not as it was, particularly pertinent as the report states that the return of "... pre-mining landforms and land uses are key closure criteria for the (proposed) Project."?

ISSUES NOT/INADEQUATELY MENTIONED

Section 5.1.6 discusses the loss of landholder's on-farm infrastructure should the proposed project be approved. A number of areas are minimised or not discussed:

- Our only permanent supply of water is within the proposed project area. Without access to this groundwater supplied dam our business would lose its drought-proofing.
- We would lose all the water reticulation infrastructure
- Disruption of the shallow aquifer which supplies our dam would permanently destroy our drought resilience.
- Fencing rates of \$10 per metre are very out-of-date. Current figures are in the order of \$16-20 per metre. How many other estimates are out by up to 100%?

ECONOMIC BENEFITS

The EES uses *turnover* to represent economic benefits in some areas and *profit* when referring to the Agriculture/Horticulture section. This misrepresentation creates huge numerical anomalies in favour of the purported turn-over figures and the grossly under-rated profit margins in agriculture.

The stocking rate of 5-9 DSE quoted (p57) is a significant under representation of reality. The food producing operations within and adjacent to the proposed mine footprint strongly dispute the deflated figure. Some operations are as high as 20-25 DSE/ha. Currently stocking rates are still down due to fire and the sustained drought, particularly for breeding operations.

At public meetings, stakeholder meetings and in general conversation with community members Kalbar staff and report writers have been making erroneous claims such as “The land out there is f***ed” and it can’t return more than \$40,000 - \$80,000!” This sort of denigration and inaccuracy is neither professional nor accurate.

“When land is required to be taken out of production the value of production from this land is foregone, but the variable costs of production are also not incurred.” This inaccuracy misrepresents the nature and process of food production; the farm is a business and an eco-system that operates as an entire entity. Variable costs of production are not solely attributable to a particular section of land, but to the business entity. Fixed costs remain regardless of the level of production or area under production. Gross Margins are an extremely poor tool to use to evaluate financial impact. To take the statement to an extreme, a farm would be as profitable on 1 hectare of land in production as 1,000 hectares. There is no recognition of the role of fixed costs within an operating business. An imposed inability to operate a particular section of land deprives food producers of income and does not necessarily reduce the variable or fixed costs.

Why does the report not look at individual food-producing farms within and adjacent to the project area and acknowledge just how much area will be unusable for each farm? In our case we will 50% of our available farming area on that farm.

Where is the information about the enormous number of on-flow jobs from food production? Our extensive local agricultural industries contribute enormously to our local, regional and national economies.

Local beef, lamb, wool, horticulture, fodder cropping, viticulture and egg production are the mainstays of East Gippsland’s economy. They support so many local and regional businesses and industries. These include, but are certainly not limited to:

- Bairnsdale sale yards
- Food Company Vegco (employs approx ? people)
- Food Company Patties (employs approx ? people)

- Stock and Station agents
- Transport operators
- Agistment
- Fencing contractors
- Earthwork contractors
- Animal studs
- Veterinary clinics
- Accountants
- Legal practices
- Diesel mechanics
- Automotive repair industries
- Auto electricians
- Metal fabricating industries
- Metal suppliers
- Machinery suppliers
- Tyre repairers
- Tyre suppliers
- Hardware suppliers
- Plumbing suppliers
- Irrigation suppliers
- Tree tube stock suppliers
- etc

Many of these people and industries have a whole network of support jobs to support. These include admin staff (payroll, secretaries, etc) cleaners, delivery people ...

The National Farmers Federation (NFF) states that there is a 4:2 flow-on job rate for every agricultural job. (CITATION).

Our farm alone contributes two full-time positions plus 8.4 part time positions.

WIND

It has to be asked, why was the cursory wind study so poorly designed and executed?

-placement of the wind monitor in a wind shadow (height incorrect due to being placed in a dip + the proximity of the blue-gums etc

Although our winds here in the proposed project area are predominantly of a westerly persuasion (including SW and NW), the wind studies performed neglected to report the ferocity of the common Northerlies and the annual autumn and spring equinoctial gales. And yes, they are termed gales – for perfectly obvious reasons.

Strong wind is a regular fact of life here on the farm and is something all farmers take seriously. Particularly us as we have so many trees on the farm. You wear eye protection when it is windy. You do not fence under trees when the wind is fierce, nor remove tree limbs from fences or cut firewood under trees. And you definitely do not perform any machinery repairs requiring welding when it is windy as sparks are a real danger for triggering a fire. After every wind event a fence inspection is required to ensure its efficacy.

Wind in our area has caused some severe damage. For example on our own farm we have had the back of our machinery shed blown in and smashed by a northerly wind. The extensive damage was a substantial insurance claim as the shed was destroyed. The replacement shed has been built to the standard to withstand cyclonic conditions.

The autumn & spring equinoctial gales are regular annual events and vary in destructiveness. We regularly have numerous large tree limbs crash to the ground and trees completely uprooted. (NEED PHOTOS)

Just last month the spring equinoctial gales have caused damage. The chook shed that was bolted down to its concrete base was completely blown off its concrete foundation and pieces of flying metal debris were strewn all over the paddocks. The same wind blew the galvanized iron 4,000 litre drinking water header tank tied down to the platform on top of the concrete water tank off and it ended up over 200 metres down the paddock. Of course it had to be replaced. Wind warnings have been issued for East Gippsland for several days already this spring.

The building inspector, after a site visit, issued a permit for a new house on our farm specifying that it must be built to withstand cyclonic conditions and all fastenings must be compliant to N3 wind conditions. (What is the wind rate of N3)? REQUIRE wind data (Bairnsdale, Mt Monappa etc for August & September to prove the ferocity & frequency of high wind.

INFRASTRUCTURE

The EES fails to define the term “standard” fence. Certainly two of the properties within the project area do not have anything like what could be termed a “standard” fence. In our case, we have a 6’ vermin boundary fence along the Bairnsdale-Dargo Road, a higher than standard 5’ fence across most of the shared boundary with the proponent, and then more 6” vermin fencing along the shared boundary and across the boundary with the State Forest. Replacing this would cost in the region of \$30-\$50/m.

The quoted figure of \$10 per metre for a standard fence is an under-estimate of the cost. Two reputable fencing contractors who live close to the project area start at \$15 per metre.

What is the “typical current contractor use” (p. 28) in the area? No definition is provided. Where is the consideration of the time of year for contractor services? Some seasons/months are far more contractor intensive than others as some contractor services are weather or seasonal dependant services. An assumption of around 4-6 week reduction of contractor inputs really is the proverbial ‘wave a finger in the air’ guesstimate and bears no relation to reality.

The extensive vegetable industry is acknowledged to be as close as 500m from the mine boundary site (p.29). What is not acknowledged is the dominant wind direction and its complicated relationship to land terrain.

Water for the cleaning of the vegetables is not considered. Nor is the fact that water to make ice for the packing and transport of the vegetable produce is taken directly from the Mitchell River – a mere 500m downwind and situated directly below the plateau of the proposed mine site.

The vegetable industry has stated that if it had the water to be directed to the mine project, it could triple production. It would also supply far more employment than the mine ever could. The vegetable industry is also sustainable and a considerably longer term and more consistent economic prospect for our region, state and country.

HUMAN HEALTH

So why was the arbitrary delineation of 1.5 km of the project boundary chosen for the noise impact assessment? (Executive Summary, xxiv). Given the number of households up to 2km, and even more within 5 km, the selection of 1.5 km is insufficient and mischievous.

At 600m from the project boundary (our property is both within and adjacent to the boundary) we can clearly hear the V-line train whistle from both our garden and also inside the house; the Fernbank crossing is 15 kilometres away. The nature of our clear air means that sound carries clearly.

So the noise will be less than predicted? Really? So why is the noise level of the harvesting machine on Kalbar’s property next door louder than any noise normally heard from our property? One machine that makes nothing like the noise of the machinery that will be used for the construction and processing of the proposed mine.

Dust is a major issue – locals rely on water catchment from their roofs for their drinking water supply. Some communities have had to be provided with bottled water by mineral sands mining companies as their rain-water was too contaminated. How do you shower from bottled water?

Given our extensive knowledge of both our farm and our local area and its important facets such as surface and ground water, soils, biodiversity, ... we are strongly believe that agriculture and mineral sands mining cannot co-exist in this area.

TOTALLY IGNORED: role of organic matter in the soil, role of soil microbiology in particular, both of these generate organic glues to form soil crumb and dramatically increase water holding capacity.

The statements in the soils report about water holding capacity are wrong (Landloch, 2020) – water holding capacity is strongly dependent on organic matter and soil biology (Hudson, 1994), not just the physical characteristics of the soil particles.

No soil test fertility targets post rehabilitation. Soil testing has to be completed a minimum of 12 months after application of any amendments otherwise soluble components leach out, Nitrogen can volatilize. The proponent talks about using DAP; ammonium content can gas off under the wrong conditions. It's also good at making it look good i.e. successful for a short period, and then the N is depleted and everything falls over.

LAND REHABILITATION

One of our Better Beef associates has personal experience with mine rehabilitated paddocks at the Loy Yang power station. His comments were very uncomplimentary as the adequacy of it and also the reduced functionality and consequent loss of earning income from it. He allows for zero production from the “rehabilitated” areas, wearing the cost of maintaining it as part of the fixed cost for the productive un-mined country.

The sanitised and understated descriptor “general disruption” [p.30 (Hamilton SierraCon, 2020)] has been applied to describe the effect of the proponent’s proposed mine on our agricultural enterprises. Why have numerous effects on every aspect of our daily lives to date been so down-played?

Over the past six interminable years, this proposal has had profound effects on both the food producing agricultural businesses in the area as well as on our health and personal relationships.

It has actively interfered with the time we have available to live, work and sleep. We have spent thousands of hours finding out about the project, considering the ramifications and subsequently liaising with government authorities and other interested persons. We have prepared and written responses to all the formal documentation on the issue, including but not limited to the EPBC documents, the scoping process and finally the EES.

It has created interminable uncertainty, resulting in extensive stress, inconvenience, and costs in time and extra work. It has also produced unacknowledged issues of impacts on land productivity and land management strategies.

The proposal's future acknowledged impact of involving either the sale of livestock or agistment for several years (p.30) is understated. It does not out-line the ramifications of these 'options'.

Loss of breeding stock is a major issue. It takes many years to rebuild a herd following significant de-stocking. Disease free properties face biosecurity risks if purchasing which restricts options. The subsequent matching of stocking rate to carrying capacity will result in significantly reduced income given the amount of land involved. The project will also impact on the viability of the business of a whole; the remaining land directly adjoining will be subjected to toxic dust as well untenable noise and light.

The co-management of land is unacceptable. Currently the proponent's land manager is not au fait with acceptable agricultural practices; slashing African Love grass on their property is not advised. The proponent's and agricultural expert's lack of current agricultural knowledge is palpably obvious throughout the EES documentation.

And as for problems being explored through "discussions" between Kalbar and landholder [p.31 (Hamilton SierraCon, 2020)], Kalbar has for the duration of the past six years - from the inception of their proposed project to writing this now - NEVER consulted us as directly impacted stakeholders with 30 acres of land within the project area, about what they propose for our land.

We requested all information to be in writing, as we have had numerous experiences of what at best can be termed their verbal diarrhea, and to date there has been no information whatsoever as to what the future holds for our land. Kalbar has undeniably failed in their stakeholder engagement.

The severance of agricultural properties is problematic; particularly when the map purporting to show this is unreadable [Figure 1, p.90 (Hamilton SierraCon, 2020)]

CONCLUSION

It is extremely difficult to rehabilitate farming land that has been mined. Its original production rate is never achieved.

This proposal poses an unacceptable risk operating within and near a food producing area; food that is being produced for local, state, national and international human and animal consumption. The risk of endangering a multi-million dollar vegetable industry – both now and for restricting its future expansion - with its extremely high probability of dust and water contamination is unacceptable.

It has an extremely high risk of damaging the shallow aquifer system essential for the supply of water to not only to dams and bores within the project area, but also downstream to other users and the Bairnsdale Water Supply. The risk to the

Heritage-listed Mitchell River and the Perry River Chain of Ponds is also unacceptably high.

It poses intolerable risks to human and animal health. Our domestic tank water, vegetable gardens, chooks, horses, working dogs, farm animals and domestic pets are all at risk.

The risks of contamination are extremely high and the proposal should not even be contemplated.

If Covid-19 has taught us anything, it should be that our food supply, production and continuity are of such paramount importance that its value is incalculable. Australia is an island nation; one only has to look at food supply in WWII in the United Kingdom to see how precariously our nation could be held to ransom by the vagaries of international food production and supply. Given that Covid-19 is on-going, and that it is only the latest in a run of highly infectious/contagious world-wide diseases, food supply is an essential and highly-valued service.

Risks and impacts have not been effectively and factually presented to allow judgment as to their acceptability. Mitigation measures are not sufficiently detailed to allow any measure of their effectiveness.

A full and proper risk assessment cannot be determined given the lack of data and knowledge presented in the EES documentation. In summary, this proposal is an ill-advised proposition as it holds incalculable risks for a range of unacceptably high level of negative outcomes for our successful and sustainable food producing businesses now and in the future.