

# Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory  
Committee - EES

# 894

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**Request to be heard?:** Yes

**Full Name:** Barry Deane

**Organisation:**

**Affected property:**

**Attachment 1:**

**Attachment 2:**

**Attachment 3:**

**Comments:** See attached submission

Date: 18 October 2020

## **Response to the proposed Fingerboards Mineral Sands Mining Project Inquiry**

Dear Inquiry and Advisory Committee members,

### **My background**

I am a retired professional engineer and management consultant.

As an engineer and manager, I have worked in Australia's building, heavy engineering and mining industries for more than 20 years; 16 years of which I spent in various roles with CRA (now Rio Tinto). During my employment with CRA, I have:

- Provided managerial leadership for a large, in-house engineering department of a large poly-metallic, pyrometallurgical smelter/refinery, providing investigations, designs and projects to improve plant metallurgical and environmental performance
- Provided managerial leadership for a 'business analysis and studies' division of multi-disciplinary specialists (e.g. geologists, mining engineers, metallurgists, environmental scientists, economic modelers) evaluating resource development prospects and proposals (incl. pre-feasibility and feasibility studies)- working across CRA
- Provided managerial leadership for the development of 'Physicals/Financials Cash-flow Simulation Modelling' for the financial evaluation of resource development studies
- Provided managerial leadership for the establishment of Group-wide (and external) laboratory-supported, in-situ bioremediation of contaminated sites (e.g. poly-aromatics, diesel, sump oils, pcbs)
- Provided managerial leadership for intra-Group technology and methods transfer (e.g. orebody modelling, geostatistics, mine planning)
- Been a senior team member for selected high-priority resource development prospects in Australia and overseas (e.g. Potash in Argentina, Copper in India, Nickel in Australia, treatment of nuclear waste in Australia)
- Been a contributing member of a number of select CRA corporate-level study and advisory teams (e.g. new business development, executive development initiatives, organisation reform initiatives, Aboriginal communities engagement architecture)
- Been a part-time member of CRA's in-house manager training program teaching the principles of managerial leadership associated with CRA's Group-wide, long-term organisational/cultural reform program.

Since leaving CRA in 1996 I have, with my partner, worked in our specialised management consulting business providing analysis and advice to our clients for the design and implementation of the fundamental reform of their workplaces. We have performed this work in Australia, New Zealand and overseas (e.g. the USA, Canada, Mexico, Malaysia) in a range of industries (e.g. power generation, paper making, water supply, air transport, public transport, specialty chemicals, steel making).



## **What is my response to the Kalbar proposal?**

The East Gippsland Regional Council Plan for 2017 to 2021 begins:

*East Gippsland is the most liveable region in Australia. A place of natural beauty, enviable lifestyles, and opportunities.*

I believe that this characterisation of East Gippsland is a significant under-statement.

This south-east corner of Australia is a place of great natural beauty, a place of neighbourly coexistence for its people (who are more 'sufficiency' kind of people than they are materialistic; who are more welcoming than distant; who are decidedly more country rather than city folk). The Australian country ethos is alive and well here.

We have more than our fair share of hard-working, innovative people. We have more than our fair share of self-reliant people. We have more than our fair share of artists and craftspeople. We even have more than our fair share of ageing rock musicians. This place has outstanding social values as well as environmental values.

This is a place where weary and alienated city dwellers come to 'touch the earth', to feel the balm of nature in its endless forests, hills and lakes; to get away from it all; to be reminded that friendly greetings and other simple courtesies mean much more to the soul than the few words involved.

This is a place with so much human potential. This is a place that needs to harness the capability and full potential of its people to actively work on what its potential human futures could be and to be choiceful in deciding the best possible future; a post-bushfires, post-covid, climate-changed future.

This place does not 'need' a mine – anymore than Australia needs another sand mine. Nor does this place need or, indeed deserve, the endless game of pretence that there is going to be a mine – that is, a mine which would be profitable, community value-adding, completely safe, free of government and community costs/subsidies; completely free of noxious liabilities which, history tells us, we will wear one day.

This place does not need – nor does its people deserve – the endless 'selling' of this mine; the absence of real information; the gilding of the lilly; the lipstick on the pig. This place does not need the social anxiety and disruption inevitably caused by sectional or individual interests amplified by the proponents and their carefully crafted 'messaging'.

Although I have examined the EES and associated documents, I have not examined them to the degree which I judge would be warranted in, say, a professional review or audit. This is simply not reasonable to expect. My experience tells me that such a review would require an expensive, multi-disciplinary effort (a point which deserves more attention by those who mistakenly think that 'public engagement' on these matters can be more than cosmetic). Rather, I will make some observations which appear not to have been considered in the current proposal and which I think are of fundamental public interest.



## Drawing on my career experience, I ask:

1. **Are you dinkum?** There exists a small-scale industry in buying into, 'improving' and on-selling mineral prospects. Often the prospect development idea sticks around until a new owner loses money. Sometimes, a project which shouldn't be built, is built only to face years of technical and/or financial difficulties – a situation which commonly leaves unwary investors (e.g. pension schemes) out-of-pocket and the public to clear up the environmental mess. There are sufficient examples of such failures in East Gippsland.

## 2. **Why such a strong focus on public promotion....?**

Although it might seem reasonable and even routine, to publically promote mining prospects and their claimed collateral community benefits, the practical reality is that such activity is very risky and distracting to what should be calm, dispassionate techno-economic prospect evaluation. Significantly, it too easily becomes corrupting of what should be discerning, science and facts-based evaluation.

Job creation is a particular 'trap for beginners' in the game of promoting mining prospects to the public at large. It is extremely attractive to governments, at all levels, to show interest in the potential for jobs creation associated with mining prospects. However, governments and their public servants would do well to reflect upon how easy it is to have their reasonable concern for jobs creation become a lever for the promoter to win government concessions (e.g. direct and indirect subsidies and/or regulatory relaxation).

The promotion of collateral benefits will almost certainly affect the highly sensitive and complex issues analysis and decision-making; in the formulation of hypotheses from probabilities; in the facts-based testing of assumptions. Prospect evaluation is complex work which is in the 'abstract--conceptual'\* realm of human work. In work of such ambiguity, confidence in science-based judgement can be eroded by insistent spin and the constant search for positive messaging. For those tasked with doing good, impartial techno-economic work of evaluation, the hunt for the 'thin red line of truth', and sticking to it, can be nerve-racking and conflict-ridden.

Poorly restrained promotion of collateral benefit can create 'alternative leadership', swaying evaluation judgement and decision-making. The benefits to the prospect of such energetic, public promotion are difficult to see – other than perhaps creating the illusion of a prospect that is more valuable than it really is.

High-ranking mining companies evaluate many and various resource development (mining) prospects routinely. They will evaluate a mining prospect on the value of the mineral it can extract and the costs of extraction, ore treatment and transportation of the minegate product. Jobs will be created if – and only if – the project stands on its economic fundamentals.

3. **Are you capable of managing the inherent complexity?** Whatever proposal is documented, it is simply that, i.e. 'documented'. It is a wish or a desired outcome. The documented project (including rehabilitation 20 to 30 years into the future) needs to be executed. It needs to be executed to faithfully achieve the documented project and the underlying assumptions in that documentation.



Execution involves design, construction, commissioning operation and – eventually – close-down and rehabilitation. This is a 20-to-30-year (minimum) task. This time-span is a measure of complexity of the task ahead of the CEO\*. Task complexity is a 'people' and organisational issue – not a technical issue per se. The CEO and his/her organisation must be capable of working at this level of complexity.

The general consequence of having insufficient capability to address a complex task is that the task will be 'reduced' to the level of capability of those involved. Critical issues for successful execution of the task will not be 'seen' and the task will fail in some way.

This misfitting of capability to complexity is particularly serious when, for example, a mine manager is faced with the seemingly 'at odds' objectives of maximising profit, on the one hand while, on the other hand, providing proper management and maintenance of the tailings dams. The management and maintenance of the tailings dams are high cost (often 'grudge cost') activities. With an inappropriate focus on the prize of cost reduction, tailings dams may not get the attention they deserve; their failure risk rising as a result. Unfortunately, tailings dams don't usually fail a little bit; they fail catastrophically; oftentimes with little warning.

There are only a few mining organisations in the world with sufficient capability to handle this level of complexity. Other than straight technical feasibility, those larger companies would judge a potential mine on the basis of how much profit they can make when they assign the right level of (expensive) capability to it. That Rio Tinto relinquished this prospect indicates to me the possibility that the reward (if any) is not sufficient to assign the right level of capability to manage the project complexity.

#### 4. Some questions.

- a. Has Kalbar done a final, independently audited feasibility study?
- b. What is the JORC-compliant classification of the Fingerboards deposit?
- c. Has the JORC classification been independently audited?
- d. Is there a 'mass balance' and process flow sheet available?
- e. Where in the mass balance/process flow do the radio nuclides report and in what form?
- f. Available documents indicate high levels of Chromium. How is this reduced in the ore treatment? Do the treatment methods proposed produce hexavalent chromium? Where in the mass balance/process flow does the hexavalent chromium report? Will a roasting step be used to reduce Chromium in the concentrate?
- g. Has Kalbar assessed the complexity of work (incl organisation and staffing) required to execute the Fingerboards project from start to finish (incl site restoration)?

\*For a full discussion about complexity and capability see Jaques, Elliott. *A General Theory of Bureaucracy*. (Heinemann 1976, 1977, 1981, 1983, 1986) and other publications by the same author.

## **Concluding**

My career experience has direct relevance to the evaluation of resource development prospects such as the Fingerboards project.

It is my judgement that regardless of any environmental and/or social impact of this proposed mining operation, no commitment should be made by government to the proponents until there is a clear and independently-audited final feasibility study and business case (incl. an independent JORC audit of the orebody model).

As to the question of this mine and mineral processing operation being sited where it is proposed, I cannot see that the Board of any reputable mining company would consider this proposal as environmentally or socially responsible.

As a down-stream, down-wind resident in the area, I am surprised and appalled that this idea has got to the point that it has.

Thank you for the opportunity to present my case on the proposed Fingerboard project.

Should the Panel members think it useful, I would be pleased to provide any further clarification of my submission by attending your Panel meeting early next year.

Sincerely,

**Barry Deane**