

Submission Cover Sheet

Fingerboards Mineral Sands Project Inquiry and Advisory
Committee - EES

408

Request to be heard?: No - but please email me a copy of the
Timetable and any Directions

Full Name: Dr Derek Allan Russell

Organisation:

Affected property:

Attachment 1: D_Russell_-Submi

Attachment 2:

Attachment 3:

Comments: See attached Submission

Submission on Kalbar Sand Mine ENVIRONMENTAL EFFECTS STATEMENT

Dr Derek Russell

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East Gippsland

Vic 3904

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I am an active member of Birdlife East Gippsland and part of the team from that organisation which has been monitoring the bird life in Gippsland Lakes Ramsar Site for the last 10 years. This submission refers only to the potential for impacts for bird life of the proposed mine.

There are two areas of concern – the impact on birdlife of the mine site and ancillary infrastructure and the potential impact of the mine on the Gippsland Lakes Ramsar site.

Most of the detail is commented on here is provided in the EES in the *Biological Technical Study – Appendix 5 Detailed Ecological Investigations*.

The first point to make is that the present bird records against the various criteria listed below. It is not quite clear where these records come from (possibly the Biodiversity Atlas of Australia and the Victorian Biodiversity Atlas). A much more comprehensive and entirely up to date record of birds from all of Australia including East Gippsland and including eight survey records for the extended mine area itself are on the Birddata database maintained by Birdlife Australia, publically available at Birddata.birdlife.org.au. This site holds some 20,000 bird records from East Gippsland including the results of eight surveys on the proposed Kalbar mine site and hundreds of records and surveys from the Gippsland Lakes Ramsar site.

Mine Site and ancillary infrastructure area:

The consultants *Ecology and Heritage Partners* undertook bird surveys on the proposed mine site over five days in Each of October 2016 and 2018 and 3 days in March 2018 (30 minute surveys repeated 3 times at each of 13 sites). Given the changes of land and resource utilisation by birds across the year, this does not seem at all adequate to identify bird use of the area across the year. To give a concrete comparable example, 12 surveys completed quarterly by Birdlife East Gippsland over three years, as part of Birdlife's 'Birds on Farms' project, on a Strathfieldsaye farm similar in size and character to the land for the proposed mine site and not far from the mine site, has identified 110 species using the site, but even on the most recent visit still added a further bird species to the list.

Migratory Bird Species:

Of the 18 species listed (File 13, Chapter 10 Section 6.4) as having occurred within 10km of the mine and its structures, of these only four (Black-faced monarch, Latham's snipe Rufus fantail and Satin fly-catcher) are likely to be potential users of the ground area of the proposed mine site, the other 12 being wading birds and terns, presumably from the Gippsland Lakes 25 km away. However, the recorded dates of last records of all 18 of these species are old, only one since 2008 and 10 species from the 1990s. Of these species, only Rufus fantail (a single bird) was seen during the technical surveys but was not recorded in the Birddata surveys. The proposed site is not likely to be critical habitat for any of the listed species.

Birds of National Significance:

The five species listed as having the potential to use the extended mine area include the critically endangered Swift parrot with four records within the 10km buffer area around the mine site with the last record in 1983 just 2.5km from the 10km zone around the mine. This species breeds in Tasmania but spends the rest of the year on the mainland feeding in flowering eucalypts – especially in open box-ironbark woodland. The regent honeyeater, also critically endangered nationally and seen near Bairnsdale in 2001, is another potential user of the feeding resources offer by flowering Gippsland Red Gum and Forest Red Gum trees slated for removal. The EES states that the loss of these trees will be offset but the concern is that it will take many, many years for any planted replacement trees to reach the habitat potential of the trees to be destroyed. It is important that as few large flowering trees be removed from the site as is possible. Impacts on Australian bittern (Endangered) and Australian painted snipe (Vulnerable) are perhaps more likely to be from changes to water regimes downstream of the mine site than from the surroundings of the mine itself but the loss of 34 ha of wetland is of concern and should be minimised to the extent possible and ideally replaced when possible.

Birds of State or Regional Significance

Fourteen species of *State or Regional and State Significance* are listed as potentially losing habitat (inc. the 34 ha of wetland). The consultants do not record seeing any of these on their surveys. However the relevant Birddata records for the extended mine area include Spotted quail thrush. It is recorded as Near Threatened on the 2013 Victorian Advisory List (although all near threatened species do not appear on the Flora and Fauna Guarantee Act Threatened List (current Nov 2019). Powerful Owl and Masked owl are singled out as threatened under the FFG Act. The consultants undertook visual and playback surveys for Powerful owl and Masked owl on four nights in Aug 2019 with no positive records. Again this is an inadequate survey for these cryptic species. Automatic audio recording at least four times across the year would have been more appropriate. These species require mature and overmature trees for nesting/ roosting/ feeding sites. Emu are listed as birds of *Regional Significance* and were recorded from the site. Again this emphasises the importance of minimising tree and other habitat loss, providing offsets and ensuring the eventual recovery of the original site, including its tree cover.

Gippsland Lakes Ramsar and Key Bird Biodiversity Area (KBA)

It is stated that the Corner Inlet Ramsar site surrounding the Port Anthony facilities is no longer at risk as the intention is to now to use the Port of Melbourne for export of the mine productions. If it was subsequently decided to revert to Port Anthony a detailed EES of the potentially significant impacts on that site would be essential.

No details of the bird life potentially at risk are given in the EES. Birdlife East Gippsland has been undertaking surveys twice a year on 23 sites around the northern shores of the Ramsar site water bodies since 2011. The latest report (2019) is available on the website birdlife.org.au/location/birdlife-east-gippsland under Publications. Around 50 water-bird species utilise the site with over 16,000 individual waterbirds seen on the fraction of the Lakes which are part of the Birdlife surveys in the 2019 summer assessment alone. The key criteria relating to birds for the listing of the Gippsland Lakes Ramsar site are Criterion 5: > 20,00 water birds and Criterion 6:

Greater than 1% of the numbers of a species in a biogeographical region with seven species listed for the Gippsland Lakes. However, there are large numbers of other species, for example >10,000 Eurasian coot in Jones bay close to the junction of the Mitchell River and the Lakes. The potential release of heavy metal and other contaminants of potential impact on bird life into the lake system is therefore a very considerable concern.

The environmental consultants' conclusions (p320 of document A005) states:

'The proposed development will not result in a Ramsar site being destroyed or substantially modified, nor will it result in impacts to the critical components, critical processes or critical services and benefits of the Gippsland Lakes Ramsar Site (SEWPcC 2010). That is, while there may be minor changes to groundwater and surface flows, and changes in water chemistry (EMM 2020- Water Technology 2020a), the proposed mine is not expected to have impacts on marine, sub-tidal aquatic beds, coastal brackish or saline lagoons, fringing wetlands, threatened fauna species such as frogs and waterbirds, threatened wetland flora, waterbird breeding and fisheries resources values.'

For that to be accepted as true we would need to be convinced that water flow, contaminant levels, sedimentation and risks of unintentional discharge of contaminated water into the Lakes system were absent. It is important to remember that there is a lot of very slow moving water between the mouth of the Mitchell river and the entrance to the lakes system. Elevated metal and other contaminant levels, esp if capable to sedimentation, could take years to reach the sea, if indeed at all.

The EES makes a number of reassuring statements in relation to river flow, sedimentation and the impact on aquifers *Conclusions on Water Quality Impacts* based on modelling not provided in the EES. Of concern in relation to water quality are:

- The statement that Aluminium and Copper levels will be within drinking water guidelines but marginally above freshwater systems guidelines. Any increase (particularly in copper levels) would be very concerning and if guidelines were to be 'marginally' exceeded in routine mine operation what would occur in occasional storm events?
- The statement that water held in dams will be offset by release of storage from fresh water dams. Where is this water to come from?
- Statements to the effect that the tailings seepage in the shallow Coonqulmerang formation (the 90m deep sand formation from with the mine is proposed to extract minerals) from underneath the extracted void will have a mineral concentration lower than existing levels. It is difficult to see how there would not be an increased concentration of minerals given that the sand washing processes used generates the waste water likely to form seepage. Clarification of the justification for that statement are required.
- There appears to be no discussion as to whether heavy metals and other contaminants are carried in solution or as suspensions when washed into the Mitchell river, esp in storm events. If present as suspensions then would they be likely to sediment at the mouth of the river as it flows into Jones bay, which is the single more important site in the Lake system for wading birds feeding by probing in the sediment – for example thousands of red-necked avocet are seen there routinely in addition to numbers of the key species – the red-necked stint, black swan - and many others which may be at risk from the concentration of contaminants in the plant and animal life of the bay?
- It is stated that there has been no rainfall modelling taking account of changes within years, only between years. This is of concern both because of the risk of storm events and because of the risk of overflow from the main dam.

- The main dam is said to be built to withstand a 50 year rainfall event with some consideration given to the likelihood that rain storm events are likely to get more severe as climate change progresses. With a 15 year operational life this suggests a one in three risk of accidental discharge into the Mitchell river. It would be vital to ensure that the undesirable mineral concentrations in the main dam were no higher than those in the river (already undesirably high). Not enough details of the sand processing procedure are provided to give confidence that that this is likely to be the case.

Simply asserting that the risks are low and the possible negative impacts are likely to be only occasionally seen is not good enough when delicate food webs whose disruption could cause calamity lasting for many years could be the outcome. It is vital that it is mandated that either there be no stored water on the site with toxic metal/ mineral/ salt content higher than that already present in the Mitchell River and/or that the design of dams and other water storage/ piping systems (not only for the main dam) is upgraded to ensure that there be no unscheduled discharge into waterways able to be caused by any foreseeable rainfall event. The monitoring of levels of potentially toxic material before discharge into the Mitchell river during routine operations needs to be set up in such a way as flows can be diverted from the river catchment if levels are unacceptably high. This is not something that can be remediated after the event