



Smash & Grab

Kalbar's proposed Fingerboards mineral sands mine project

Alistair Mailer 16th June 2021

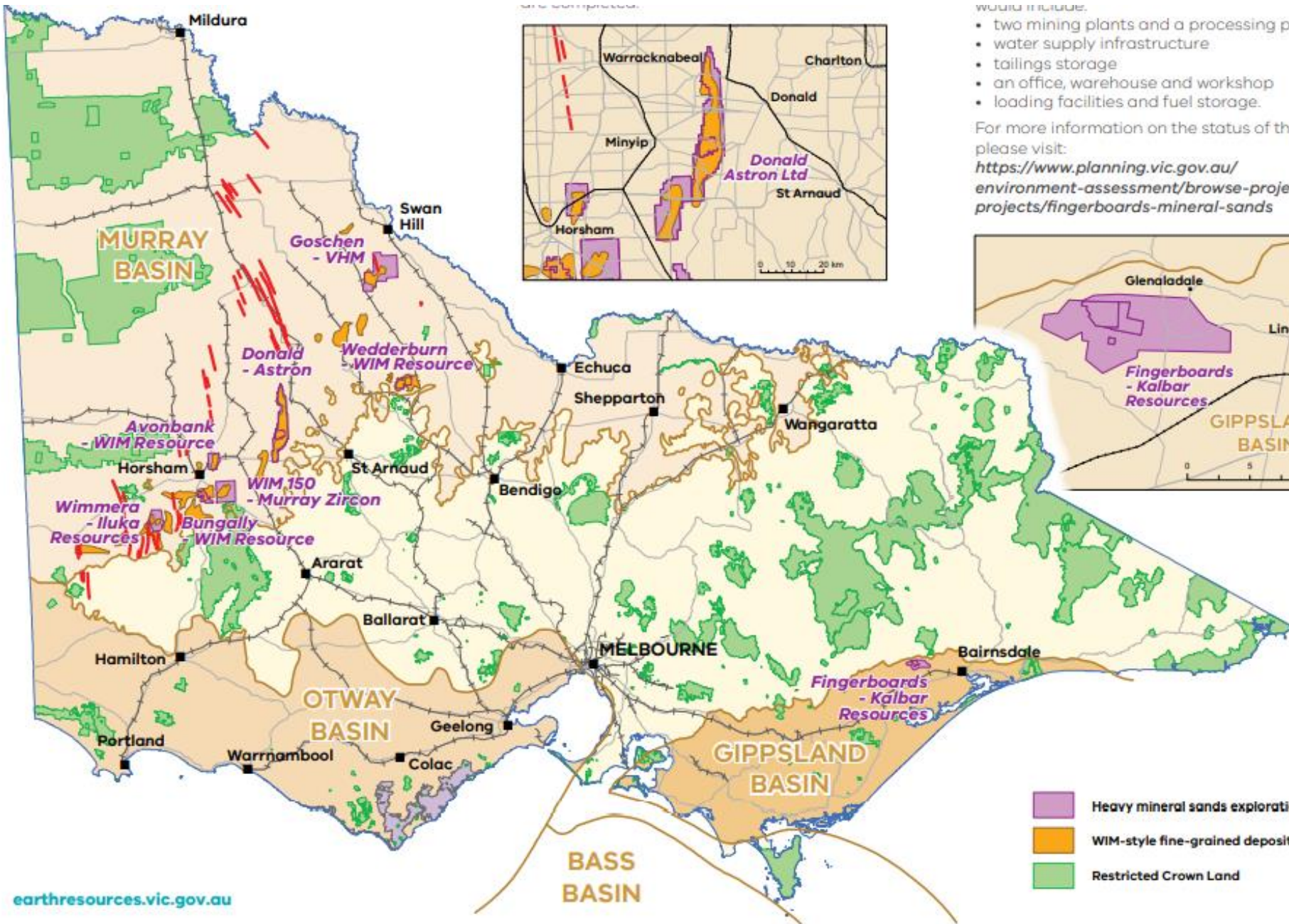




Centrifuge cake moisture content

- It appears that the solids content of the centrifuge cake could be as low as 63%.
- The Alfa Laval centrifuge test indicated a possible 70% solids, whereas Kalbar's water balance assumed a 73% solids cake
- This changes the ratio of moisture to cake. And hence the water requirement :
 - from 3 GL p.a. for a 63% cake to :
 - 3.48 GL for a 70% cake and
 - 4.76 GL for a 63% cake
- These figures indicate a possible > 50% increase in water requirement and centrifuge throughput, compared to present water balance numbers

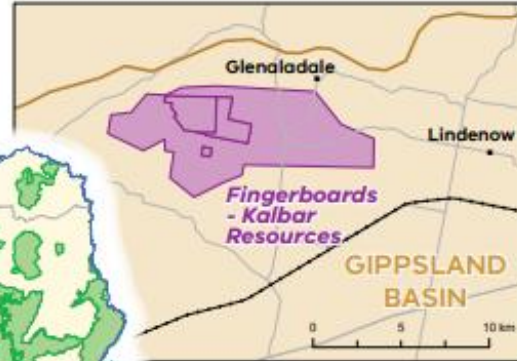
Cake moisture content %	Cake solids content %	Ratio of moisture : cake	Freshwater requirement GL p.a.
63	37	0.58	4.76
70	30	0.43	3.48
73	27	0.37	3.0



would include:

- two mining plants and a processing plant
- water supply infrastructure
- tailings storage
- an office, warehouse and workshop
- loading facilities and fuel storage.

For more information on the status of the EES, please visit: <https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/fingerboards-mineral-sands>



minerals.

The proposal includes:

- a mineral sands mine
- wet concentrator plant
- starter ore and overburden stockpiles
- slurry pipelines
- additional site facilities, such as site office, warehouse, workshop, rail loading facilities and fuel storage.

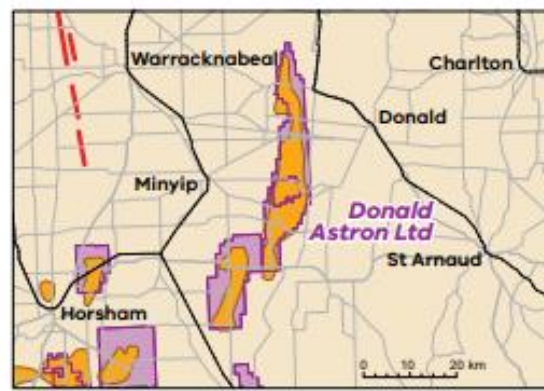
The proposed mining methods involve open-pit mining to extract around 9 million-15 million tonnes of ore per year over a projected mine life of 30 years to produce between 350,000 to 600,000 tonnes of heavy mineral concentrate per year. Mine products are proposed to be transported via road or rail for export overseas.

In August 2019, the Minister for Planning directed WIM Resource Pty Ltd to prepare an EES to assess the potential environmental effects of the project.

For more information on the status of the EES: <https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/avonbank-mineral-sands/overview>



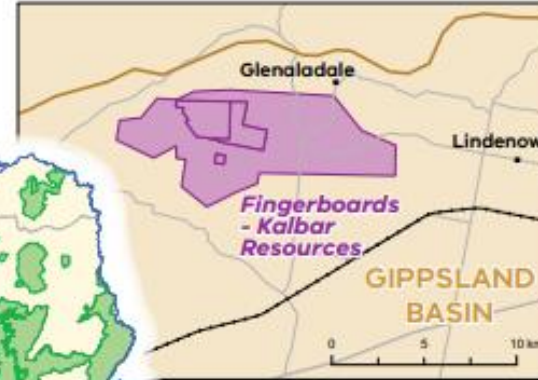
- Heavy mineral sands exploration licence
- WIM-style fine-grained deposits
- Restricted Crown Land
- Strand line deposits
- Geological basin boundary
- Road
- Rail



- two mining plants and a processing plant
- water supply infrastructure
- tailings storage
- an office, warehouse and workshop
- loading facilities and fuel storage.

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<https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/fingerboards-mineral-sands>



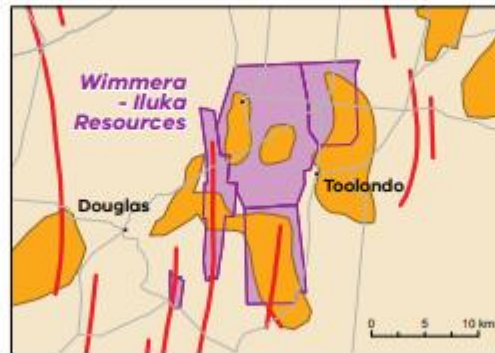
[projects/wimmera-mineral-sands/overview](https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/wimmera-mineral-sands)



the project.

For more information on the status of the EES:

<https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/wimmera-mineral-sands>



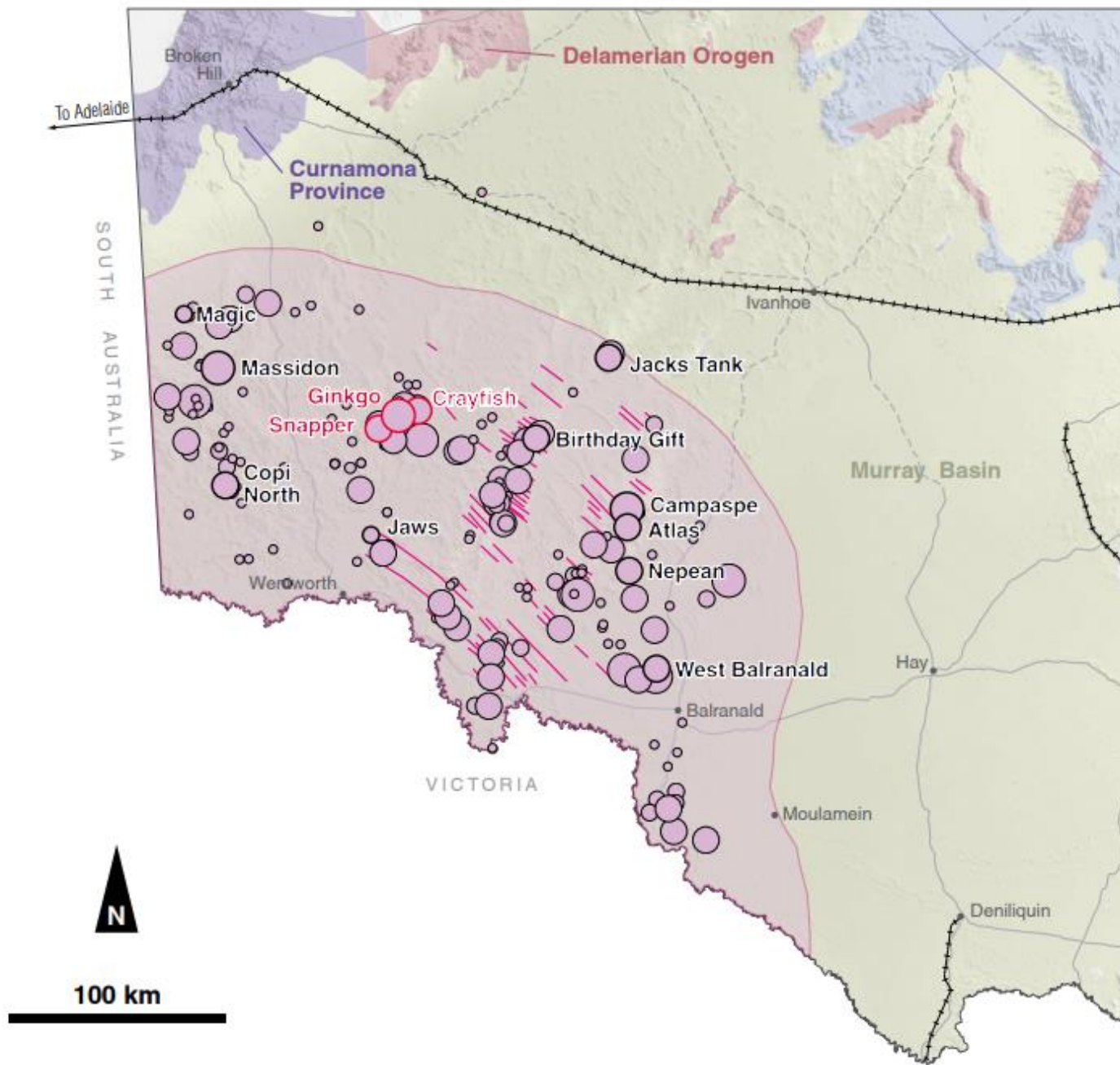
directed VHM Exploration (now known as VHM Limited) to prepare an EES to assess the potential environmental effects of the project.

For more information on the status of the EES:

<https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/goschen-mineral-sands-and-rare-earths-project>



- Strand line deposits
- Geological basin boundary
- Road
- Rail



REFERENCE

- Heavy mineral sand occurrence
- Small
- Medium
- Large
- Very large
- Ginkgo** ○ Operating mine
- Atlas** ○ Deposit
- Strand line deposit
- Approximate extent of Loxton-Parilla Sands
- ++++ Railway
- Major road, sealed
- - - Major road, unsealed
- Gas pipeline

Heavy mineral sands mining in NSW

Project highlights

Deposit name	Current resources and reserves (JORC)	Total contained HM (t)*
Ginkgo	(measured) 135 Mt @ 2.9% HM, 43 Mt (indicated) @ 1.99% HM	-
Snapper	(measured) 117 Mt @ 5.4% HM	-
Atlas	(probable) 11.3 Mt @ 15.4% HM (indicated) 21.8 Mt @ 9.6% HM	2 092 800
Campaspe	(indicated) 97.37 Mt @ 4.72% HM	4 596 000
West Balranald	(measured, indicated & inferred) 35.8 Mt @ 33.8% HM	12 100 000
West Balranald & Nepean	(combined inferred resource) 50.1 Mt @ 32.2% HM	16 100 000
Jacks Tank North	(inferred) 13.0 Mt @ 1.9% HM (coarse-grained)	247 000
Jacks Tank South	(inferred) 41 Mt @ 2.6% HM (fine-grained)	1 066 000
Crayfish	144 Mt @ 1.34% HM	1 929 600
Massidon	(indicated & inferred) 429.9 Mt @ 2.49% HM	10 704 510
Copi North	(indicated & inferred) 14.2 Mt @ 6.6% HM	937 200
Magic	(inferred) 15 Mt @ 3.7% HM	555 000
Jaws	(inferred) 63 Mt @ 1.9% HM	1 197 000

* Total heavy minerals calculated only from resource quoted above (not necessarily total valuable heavy minerals).

THE ANGLO AMERICAN ELECTRIC
DUMP TRUCK. SOURCE: WILLIAMS
ENGINEERING







Mining giants BHP, Rio and Vale launch challenge to accelerate electrification of mining industry to slash emissions and make industry safer and more productive. [The Driven 14 May 2021]

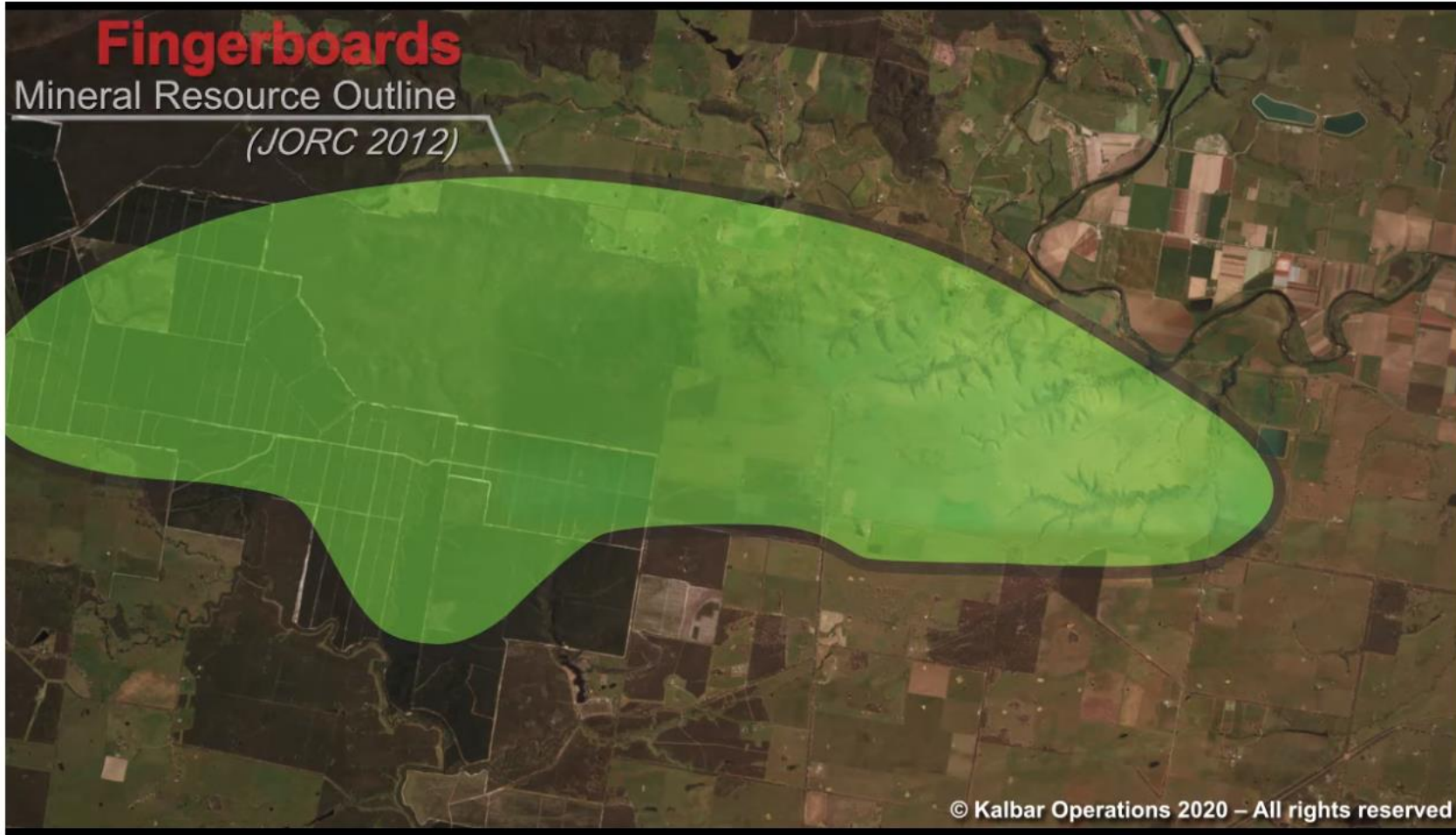
This 'EDUMPER' truck has a 600kW battery



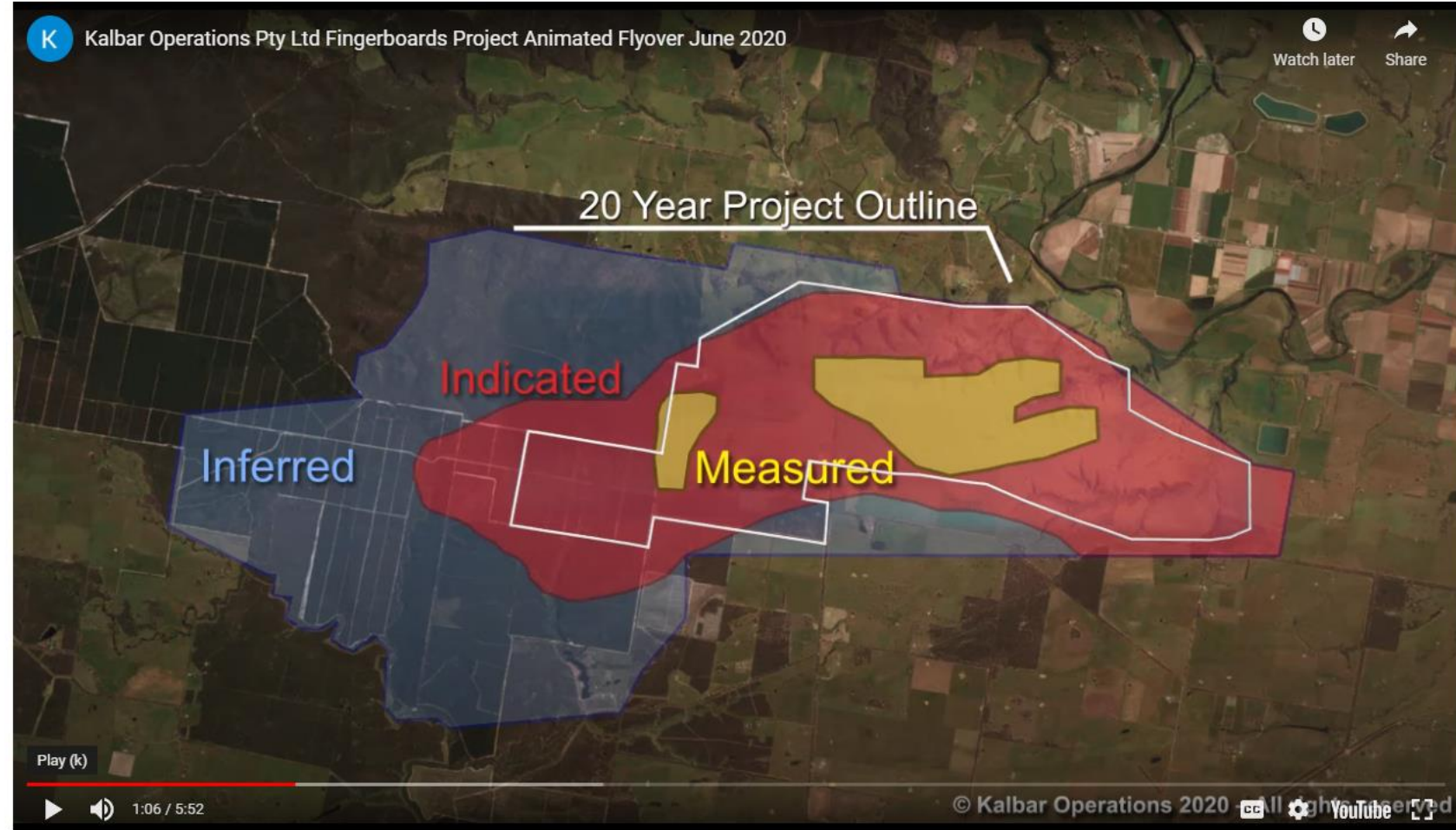
[Home \(emining.ch\)](http://emining.ch)

Watch on YouTube

Project Fly Through



Project Fly Through



Conclusions

- Kalbar is making a **GRAB** for resources owned by the people of Victoria, as represented by The Crown
- In order to grab these resources, Kalbar are proposing to **SMASH** the local environment;
- This is a **heist** that East Gippsland can do without;
- The price proposed by Kalbar is unacceptable;
- This is a project, the foundations of which are, quite literally, built on sand;

- The published EES was a half-baked attempt by Kalbar to demonstrate that the social, economic & environmental impacts were either acceptable or could be mitigated to an acceptable degree.

- Even with further information of the project plans, modification after modification, technical note after technical note – all have served to reinforce the inadequacy of the exhibited EES.

- Government body after government body (including DELWP, Dept. of Transport & EPA Victoria), expert after expert have all verified the notion that many of the statements produced by Kalbar are either not-present, inadequate, deficient, un-tested, requiring significant additional work, or simply do not address the EES scoping requirements.

Recommendations

1. The IAC should advise the Minister that they are not in a position to make a proper assessment of Kalbar's project;
2. From what is known, Kalbar's project has unacceptable potential environmental, social & economic impacts, which are in most instances, unable to be adequately mitigated;
3. The IAC cannot recommend the project, and further approvals should be denied.
4. Kalbar's smash & grab must not be permitted to proceed.