

**INQUIRY AND ADVISORY COMMITTEE  
FINGERBOARDS MINERAL SANDS PROJECT**

**IN THE MATTER OF THE FINGERBOARDS MINERAL SANDS PROJECT  
ENVIRONMENT EFFECTS STATEMENT**

**IN THE MATTER OF DRAFT PLANNING SCHEME AMENDMENT C156 TO THE  
EAST GIPPSLAND PLANNING SCHEME**

**PART A SUBMISSIONS**

**ON BEHALF OF KALBAR OPERATIONS PTY LTD**

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## INTRODUCTION

- 1 This Part A submission is made on behalf of Kalbar Operations Pty Ltd as Proponent of the Fingerboards Mineral Sands Project (**Project**).
- 2 This submission is supplemented by the exhibited EES material, including the Summary Report, Map Book, Main Report, Attachments and Appendices (Technical Studies). This material is available from the following link:  
<https://ees.fingerboardsproject.com.au/download>
- 3 In addition, various documents have been filed with the IAC and are available on the Engage Victoria website: <https://engage.vic.gov.au/fingerboards-IAC>. These documents include ‘Tabled Documents’ before the IAC as well as the Proponent’s expert evidence, technical notes, response to submissions and response to requests for information from the IAC.
- 4 The Proponent also relies on the witness reports by the following experts which will be supported by presentations to the IAC:
  - a) Joel Georgiou (EMM) – Groundwater
  - b) Hugh Middlemis (HydroGeoLogic) - Groundwater
  - c) James Weidmann (Water Technology) - Surface water and flooding
  - d) Michael Cheetham (Water Technology) - Erosion and sedimentation
  - e) Tony McAlister (Water Technology) - Surface water quality
  - f) Robert Loch (Landloch) - Rehabilitation
  - g) Aaron Organ (Ecology & Heritage Partners) - Ecology
  - h) Paul Carter (Arup) - Traffic and Transport
  - i) Simon Welchman (Katestone) - Air
  - j) Christophe Delaire (Marshall Day Acoustics) - Noise
  - k) Darren Billingsley (SGS) - Radiation
  - l) Karen Teague (Coffey) -Health
  - m) John Glossop (GTP) - Planning
  - n) Jarrah Muller (EMM) - Water balance

- o) John Sweeney (Coffey) - Water impacts
- p) Doris Blaesing (RMCG) – Horticulture
- q) Ivan Saracik (Epac) – Centrifuge operations

5 The content of this submission responds to the IAC’s directions dated 19 February 2021 which relevantly state:

“54. The Proponent’s Part A submission must address the IAC’s Terms of Reference including:

- a. A summary of and initial response to submissions (Direction 27 issued on 23 December 2020) including centrifuge submissions.
- b. A response to the IAC’s and information requests agreed to at the Directions Hearing as far as practicable (Direction 28 issued on 23 December 2020 and Direction 29 in this document).
- c. An outline of the background, development and key elements of the Project and EES.”

6 The body of these submissions outline relevant background matters, including:

- a) key elements of the Project;
- b) the EES process and Commonwealth EPBC Act referral and decision applicable to the Project;
- c) an overview of draft Planning Scheme Amendment C156 to the East Gippsland Planning Scheme, which proposes changes to facilitate the use and development of land outside the mining licence area;
- d) a brief description of the Environmental Management Framework and the key approvals and instruments that will regulate the Project if it proceeds after the EES;
- e) identification of key aspects of the IAC’s Terms of Reference which assist to understand the nature of this process before the IAC.

7 In addition, the Proponent’s initial response to submissions on the EES is set out in Tabled Document 107.<sup>1</sup> The Proponent’s response to submissions about the use of centrifuges is being submitted as a separate document.

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<sup>1</sup> Dated 8 February 2021.

8 Whilst these submissions seek to outline key background issues, necessarily at a high level, a large amount of information that can assist readers to further understand the Project and the technical studies that support the EES is available on the Project website: <https://ees.fingerboardsproject.com.au/>

9 In addition to the EES documents themselves, of note are:

- a) the ‘Project Fly Through’ video  
<https://ees.fingerboardsproject.com.au/project-overview>; and
- b) the ‘technical summaries’ videos prepared for each technical area  
<https://ees.fingerboardsproject.com.au/technical-studies-summaries>.

### **PROJECT CHANGES – USE OF CENTRIFUGES**

10 On 18 January 2021, the Proponent advised the IAC and submitters of its intention to modify the Project, by using centrifuges to dewater fine tailings.<sup>2</sup> Technical details concerning the use of centrifuges were provided in Technical Note 1.<sup>3</sup>

11 Direction 58 of the IAC’s directions dated 19 February 2021 required the Proponent to confirm whether the Proponent proposes to proceed on the basis of:

- a) both the Project in its original form and with centrifuges; or
- b) the Project using centrifuges only.<sup>4</sup>

12 In its response provided on 26 February 2021,<sup>5</sup> the Proponent confirmed it would proceed with the latter option – i.e., centrifuges only.

13 The IAC’s directions dated 23 March 2021 confirmed that the IAC’s assessment will only consider the Project with centrifuges and that expert evidence concerning water and tailings management should be confined accordingly.<sup>6</sup>

14 The implications of the use of centrifuges for the Project are explored in a number of documents before the IAC, including expert evidence statements, Technical Notes 001 (Tabled Document 43) and 014 (Tabled Documents 194-195), updates to EES

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<sup>2</sup> Tabled Document 42.

<sup>3</sup> Tabled Document 43.

<sup>4</sup> Tabled Document 144.

<sup>5</sup> Tabled Document 151.

<sup>6</sup> IAC Directions, 23 March 2021, order 30-31, Tabled Document 212.

Chapter 3 (Project Description)<sup>7</sup> and the Draft Work Plan (including updated risk treatment plans).<sup>8</sup>

15 In addition, the IAC has received supplementary submissions concerning the use of centrifuges which are available on the Engage Victoria website.<sup>9</sup> The Proponent’s initial response to these submissions is provided as a separate standalone document.

## PROJECT OVERVIEW

### *The resource*

16 The Project involves mining of mineral sands from an area which the Proponent refers to as the ‘Fingerboards resource’. The Fingerboards resource lies within a more extensive mineral sands deposit known as the ‘Glenaladale deposit’ (refer Figure 1).

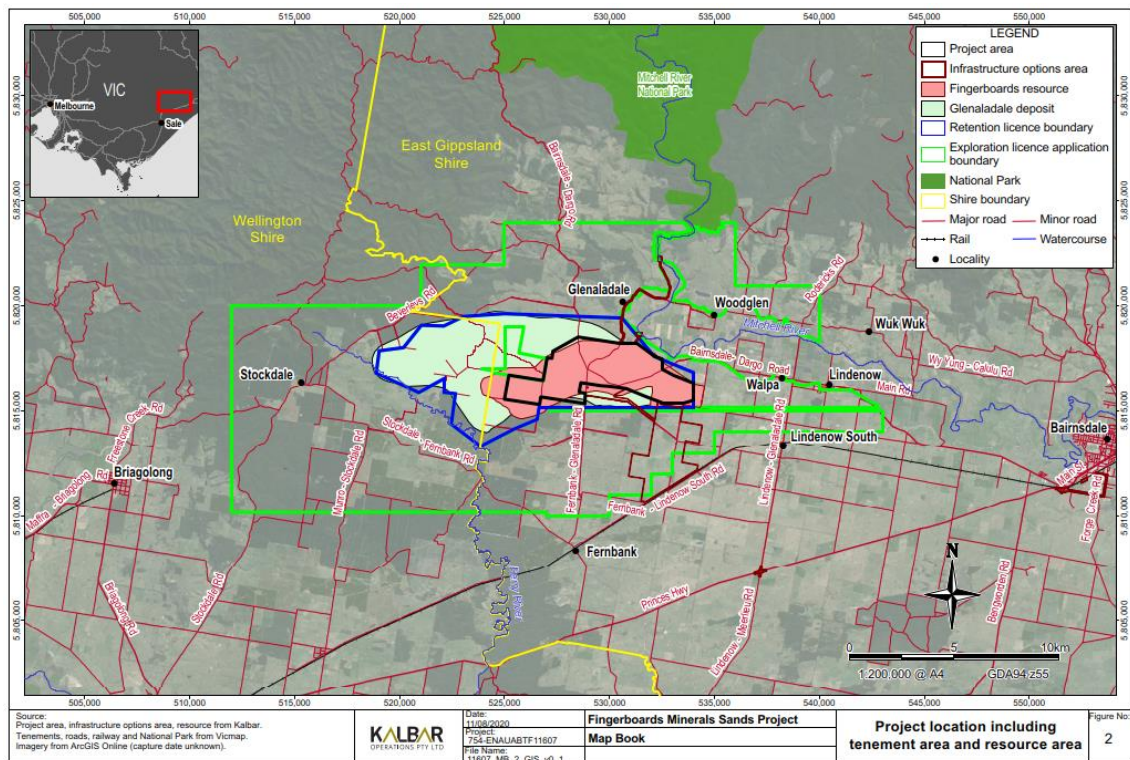


Figure 1 Mining resource areas<sup>10</sup>

17 The Project area is approximately 1,675ha, of which approximately 1,350ha is proposed to be disturbed by mining activities.<sup>11</sup>

<sup>7</sup> Tabled Document 122 (updated project description, EES Chapter 3, tracked changes).

<sup>8</sup> Tabled Documents 197-202.

<sup>9</sup> <https://engage.vic.gov.au/fingerboards-IAC/Fingerboards-IAC-submissions>

<sup>10</sup> Source: EES Map Book, Figure 2.

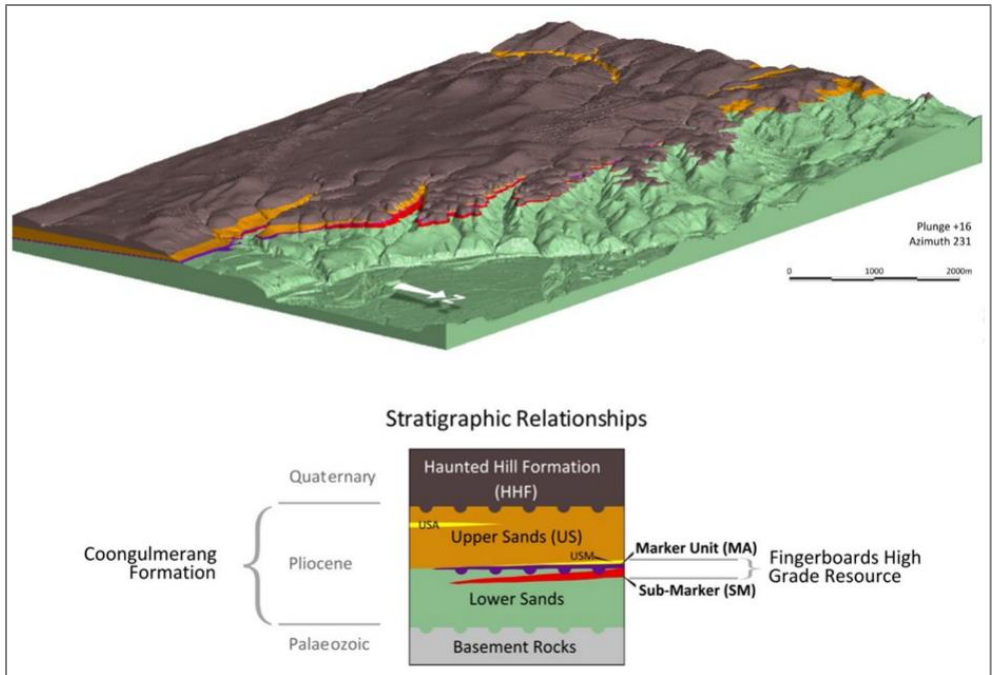
<sup>11</sup> EES Chapter 3 (Project Description), p 3-3 (pdf p 5).

- 18 The Project is targeting an ore body with high levels of zircon, titanium minerals and rare-earth minerals, collectively referred to as ‘heavy minerals’. These minerals are denser than sand and clay particles and can be separated from mined ore using gravity and magnetic separation techniques to form a heavy mineral concentrate (**HMC**), which is the product the mine will produce for export to overseas markets. Two types of HMC will be produced, a magnetic HMC and a non-magnetic HMC.
- 19 The target minerals for the Project are used in both everyday (e.g., ceramics, pigments and paints) and high-tech products (e.g., with uses in mobile technology, medical applications and high temperature magnets used in wind turbines and electric vehicles).<sup>12</sup>
- 20 The broader Glenaladale deposit was discovered by Rio Tinto in 2004. The Proponent’s parent company acquired licence rights over this deposit in 2013. Since acquiring its interest, Kalbar has refined the Project, and its understanding of the deposit, to focus on the higher grade economic ore within the Fingerboards resource, as compared with mining the more extensive Glenaladale deposit.<sup>13</sup>
- 21 Geologically, the target ore for the Project exists within the sandy Coongulmerang Formation which sits below the overlying Haunted Hills Formation. The upper sands and marker units within the Coongulmerang Formation will be mined and processed. The ‘lower sands’ will not be mined (refer Figure 2).

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<sup>12</sup> See EES Chapter 2 (Project Rationale), section 2.4.1 (Mineral Use), p 2-7.

<sup>13</sup> See EES Chapter 2 (Project Rationale).



**Figure 2 Stratigraphic relationships within the proposed mining licence area<sup>14</sup>**

- 22 A photo showing the different soil formations to be mined is extracted in Figure 3. This is a photo taken from an eroded section within the Project site. The darker, gravelly soil (upper in the photo) is the Haunted Hills Formation soil with the Coongulmerang Formation (containing the target ore) seen as a lighter sand below.



**Figure 3 Haunted Hill Formation (darker clays and gravel above red line) overlying Coongulmerang Formation (lighter sandy soil below red line)<sup>15</sup>**

<sup>14</sup> Source: Draft Work Plan, Section 3.2.2 (Fingerboards Resource), Figure 3-4, p 3-34 (pdf p 61).

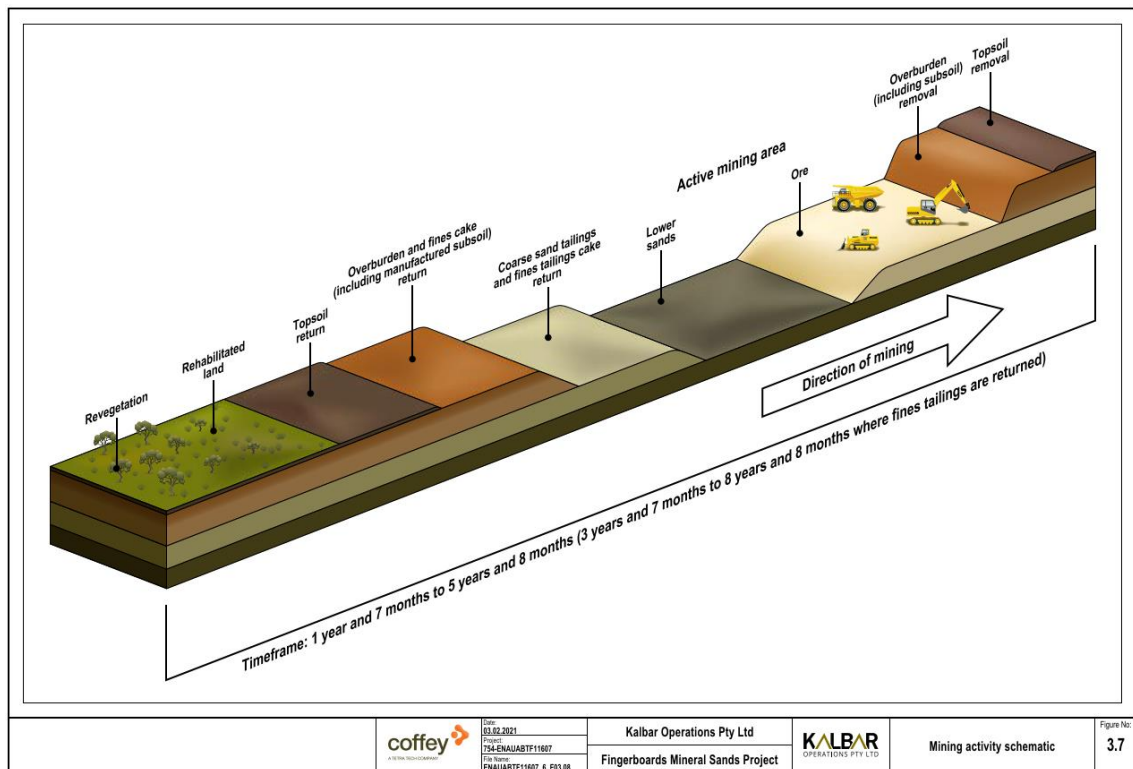
<sup>15</sup> Source: Draft Work Plan, Section 3.2.2 (Fingerboards Resource), Figure 3-5, p 3-35 (pdf p 62).



- 23 The ore and overburden to be mined is soft enough that it can be mined with standard earth moving equipment, and explosives are not required.
- 24 The thickness of the ore is expected to vary between 10 and 30m, with thinner horizons in some locations.<sup>16</sup> Accounting for topsoil and overburden removal, the mine voids are predicted to be about 29m deep on average, with a maximum depth of 50m.<sup>17</sup> All mining is proposed to occur above the water table.

*Mining sequencing and method*

- 25 The land will be mined and rehabilitated in stages or ‘cells’. Two useful schematics which show the planned sequence of topsoil stripping, overburden removal, ore mining, backfilling and rehabilitation are shown in Figure 4 and Figure 5.



**Figure 4 Mining sequence schematic<sup>18</sup>**

<sup>16</sup> EES Chapter 3 (Project Description), p 3-18.

<sup>17</sup> EES Chapter 3 (Project Description), p 3-18.

<sup>18</sup> Source: Tabled Document 122, EES Chapter 3 (Project Description – tracked changes update re centrifuges), Figure 3.7, pdf p 13.

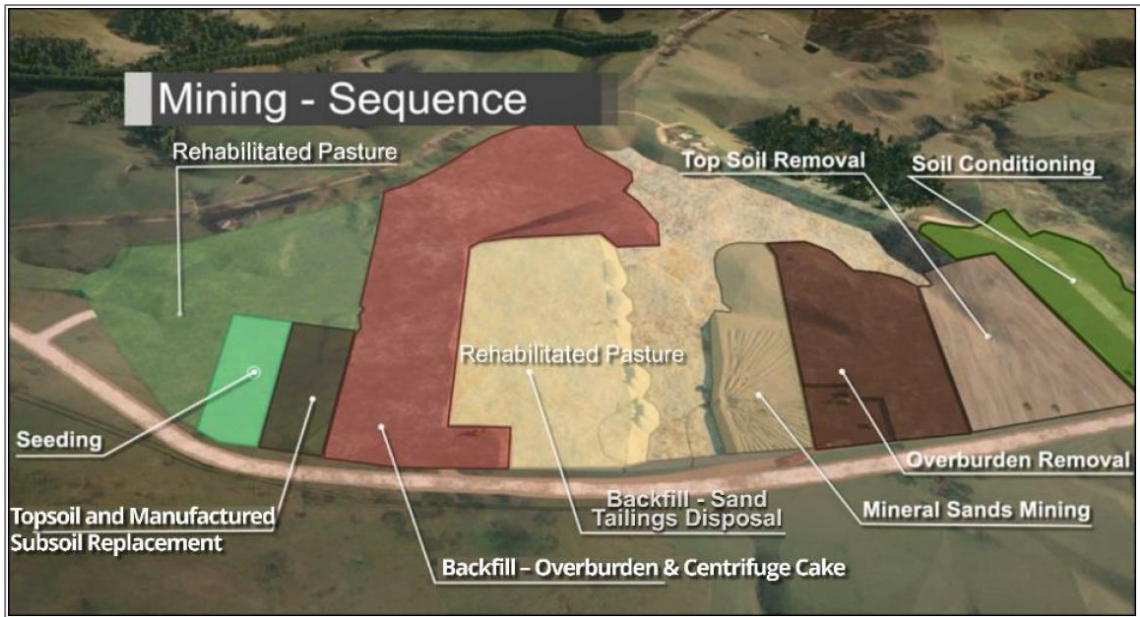


Figure 5 Progressive mining and rehabilitation sequence (mining takes place towards the right)<sup>19</sup>

26 The Project will be mined by progressive open-cut mining methods, with an indicative cross section and description of backfill treatments shown / described in Figure 6 and Figure 7.

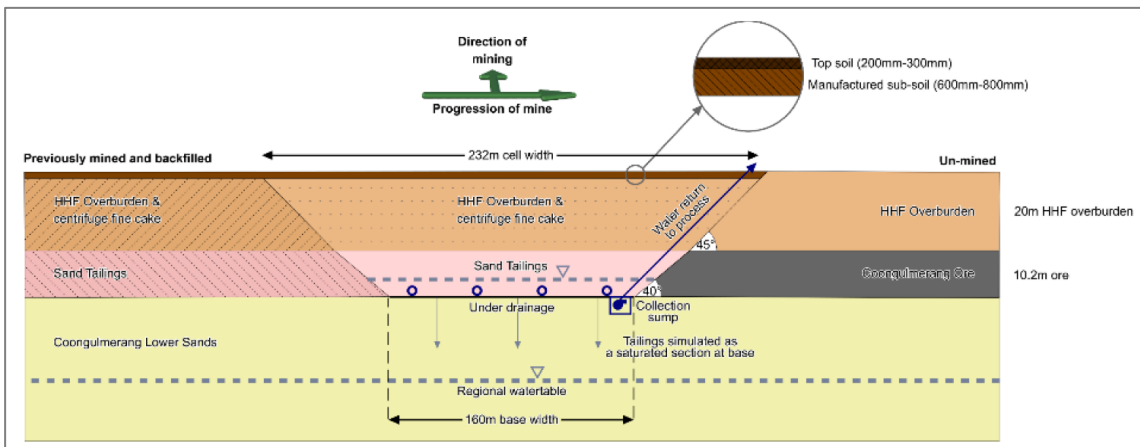


Figure 6 Cross sectional representation of the mining cell<sup>20</sup>

<sup>19</sup> Source: Tabled Document 215, Updated Draft Mine Rehabilitation Plan (Work Plan Attachment C), Figure 9-1, pdf p 101 (in the tracked changes version of this document).

<sup>20</sup> Source: Tabled Document 197a, Updated Draft Work Plan (with centrifuges), Figure 4-8, p 4-13 (pdf p 80).

	On plateau areas	On hillside areas
Final land surface	Conditioned topsoil mix, containing fertiliser and organic amendment added prior to stripping	Erosion resistant topsoil mix placed over subsoil mix with added gravel/rock to provide increased erosion resistance. Tilled to bring rock close to surface.
	Constructed subsoil mix, designed to enhance vegetation productivity, tilled to mix in amendments and fertilisers as required to maximise productivity and stability	Core of sand tailings  (If possible, keep HHF away from slopes)
Base of mine void	Overburden and fine tailings cake to fill margins and profile to design floor of subsoil level	
	Sand tailings	
	Engineered road pillar where required	Engineered road pillar where required

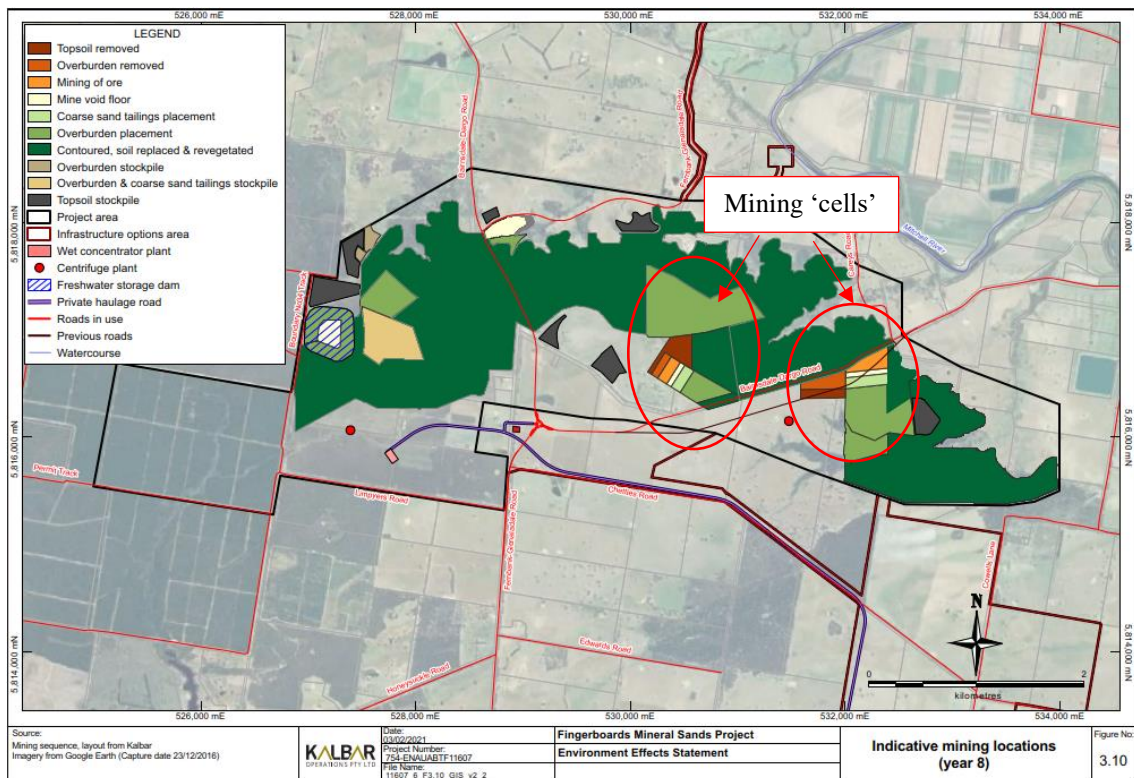
**Figure 7 Backfill treatments, in order of placement<sup>21</sup>**

- 27 The area directly disturbed by mining will be about 135ha at any one time.<sup>22</sup>
- 28 The timeframe for mining, from initial topsoil stripping to establishment of revegetation, is estimated to vary from 19 to 68 months.<sup>23</sup>
- 29 Indicative mine layouts for years 1, 5, 8, 12 and 15 are provided in the Draft Work Plan (EES Attachment B) (see also updated Draft Work plan which takes into account the removal of tailings storage areas associated with the use of centrifuges, Tabled Document 197a). The year 8 layout is extracted in Figure 8 as an example. In this figure, two mining ‘cells’ of approximately 60ha each can be seen, comprising stripped top soil and overburden, in progress mining, tailings placement and rehabilitation in progress.

<sup>21</sup> Source: Tabled Document 197a, Updated Draft Work Plan (with centrifuges), Table 4-2, p 4-13 (pdf p 79).

<sup>22</sup> See EES Chapter 3 (Project Description – updated to reflect centrifuges, with tracked changes), Table 3.1, p 3-3, part extract.

<sup>23</sup> Tabled Document 122, EES Chapter 3 (Project Description – updated to reflect centrifuges, with tracked changes), see Table 3.3, p 3-2, 3-3.



**Figure 8 Indicative mine layout – Year 8<sup>24</sup>**

### *Tailings management*

30 Two types of tailings will be produced from the processing of the ore in the WCP: fines tailings from the thickener in the WCP; and coarse sand tailings from the gravity separators. Both types of tailings are non-economic materials and need to be managed within the Project area.

### Fine tailings

31 Fine tailings will be dewatered within relocatable centrifuge buildings before being returned to the void as backfill. Based on the preliminary mine planning, it is anticipated that each centrifuge plant would be relocated to a new position every four to five years (i.e., so that it can remain reasonably proximate to active mine voids).<sup>25</sup>

32 A dewatering centrifuge works by increasing the acceleration forces (sometimes called ‘G-forces’) that act on the slurry, increasing the separation of the heavier solids from the lighter water in fine tailings. A flocculant is added to the slurry in the centrifuge to increase coagulation of the clay particles. After being processed through

<sup>24</sup> Source: Tabled Document 197, Updated Draft Work Plan (tracked changes), Section 4.1 (Site layout and surrounding land), Figure 4-5, p 4-10 (pdf p 100).

<sup>25</sup> Tabled Document 122, EES Chapter 3 (Project Description – updated to reflect centrifuges, with tracked changes), p 3-4.

the centrifuge, two products are produced. Firstly, overflow water (called ‘centrate’) containing some suspended solids and secondly a solid cake. These products from the centrifuge process are explained Technical Notes 001 (Tabled Document 43)<sup>26</sup> and 014 (Tabled Documents 197-197a) and illustrated in Figure 9.



Figure 9 Left - fine tailings after thickening;<sup>27</sup> right – overflow water (centrate) and ‘cake’<sup>28</sup>

### Course tailings

- 33 Coarse sand tailings will be pumped to the tailings disposal areas within mine voids and dewatered to around 65% solids. Water will be recovered from the coarse sand tailings using subsurface drains. The dewatered coarse sand tailings will be spread within the mine void using conventional earthmoving equipment.<sup>29</sup>

### *Plant*

- 34 The key items of plant used in the mining process are the ‘Mining Unit Plant’ (**MUP**), ‘Wet Concentrator Plant’ (**WCP**) and ‘Dissolved Air Flotation’ unit (**DAF**). This plant is briefly described below.

### Mining Unit Plant

- 35 The MUPs collect the ore in a hopper and screen it to remove larger content. Adding water, the MUP turns the ore into a slurry and pumps it to the WCP.
- 36 During the life of the project, it is planned that there will be two MUPs in operation, one for each active mine void.
- 37 The MUP is mobile and can be moved around the mine void.

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<sup>26</sup> TN1, *Implementation of centrifuges for water recover and tailings management*, Tabled Document 43.

<sup>27</sup> Source: Technical Note 1 (Tabled Document 43), Figure 1, pdf p 1.

<sup>28</sup> Source: Technical Note 1 (Tabled Document 43), Figure 5, pdf p 5

<sup>29</sup> Tabled Document 122, EES Chapter 3 (Project Description – updated to reflect centrifuges, with tracked changes), p 3-1.

38 An illustration of the MUP taken from the 'Project Fly Through' video is provided in Figure 10.

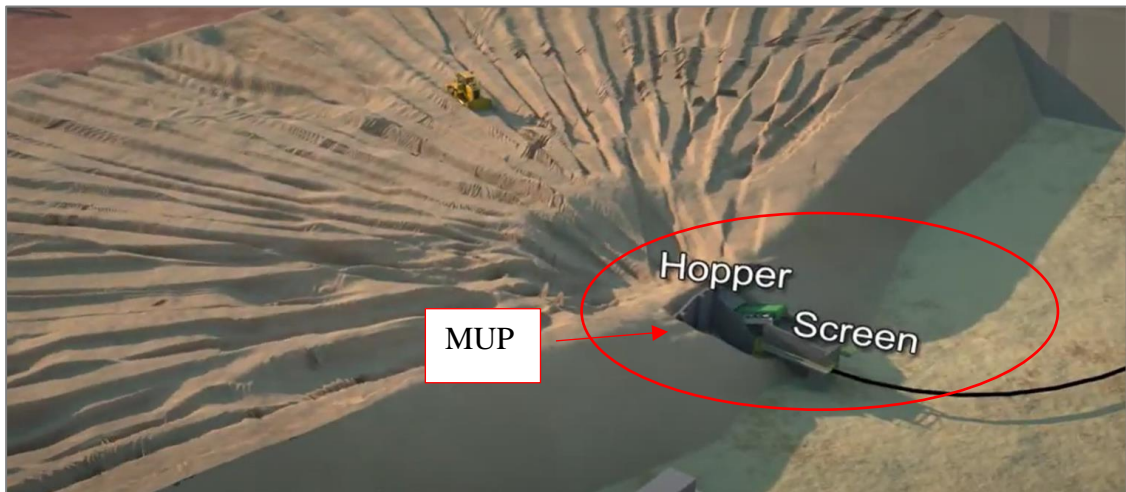


Figure 10 MUP illustration<sup>30</sup>

39 A more detailed illustration of the MUP is provided in Figure 11.

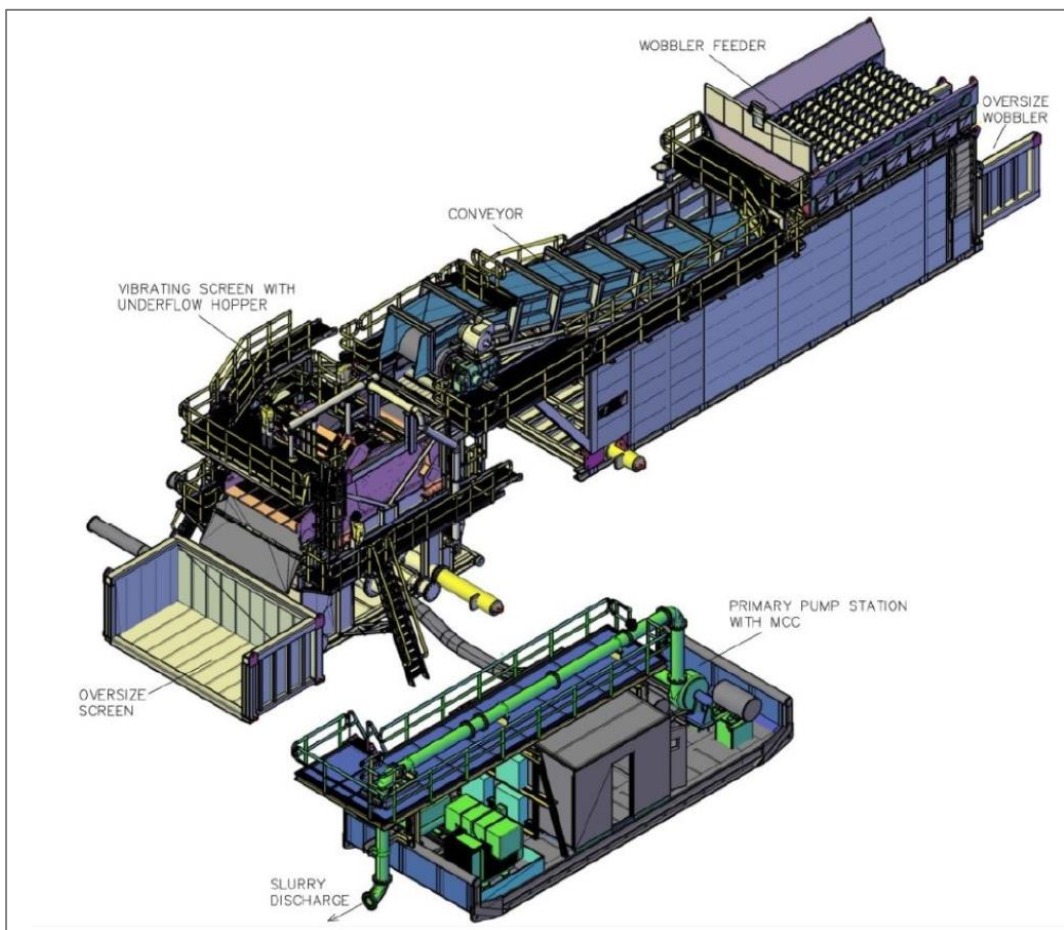


Figure 11 MUP plant – detailed view

<sup>30</sup> Source: Project Fly Through video, <https://ees.fingerboardsproject.com.au/project-overview>.

## Wet Concentrator Plant

- 40 The WCP is located outside the active mining area and is a permanent installation, with a fixed location. It is located within an existing Blue Gum plantation (refer Figure 12).

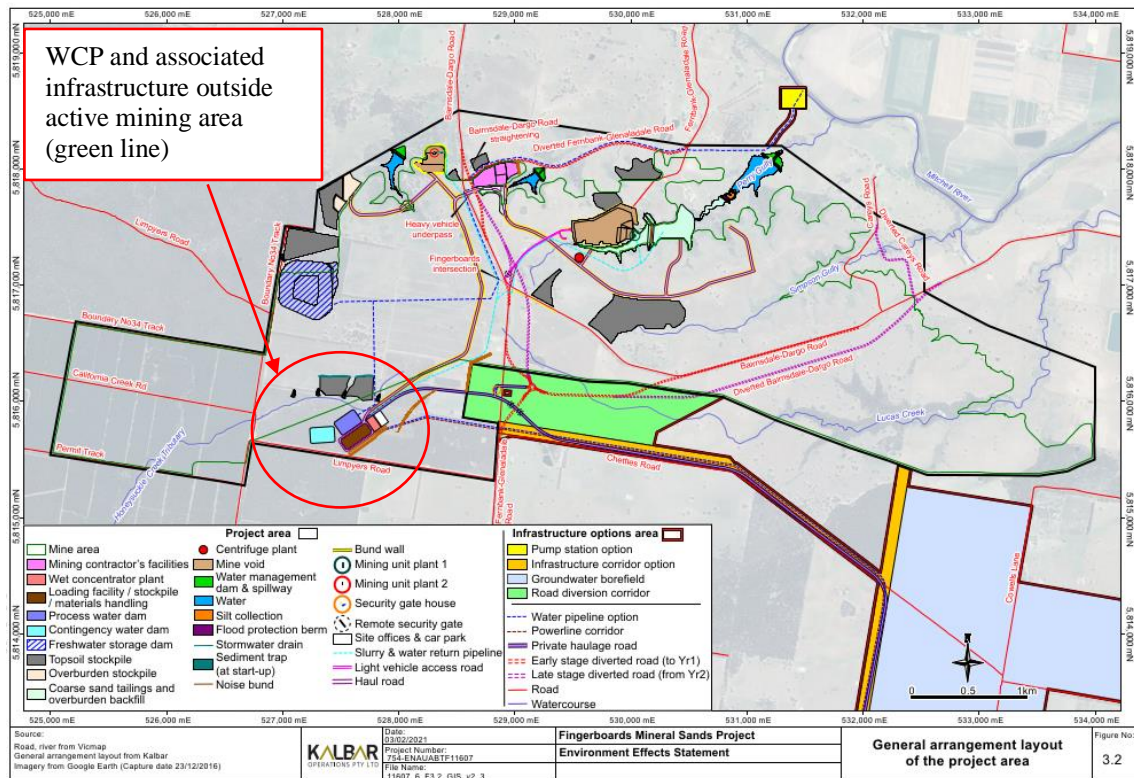
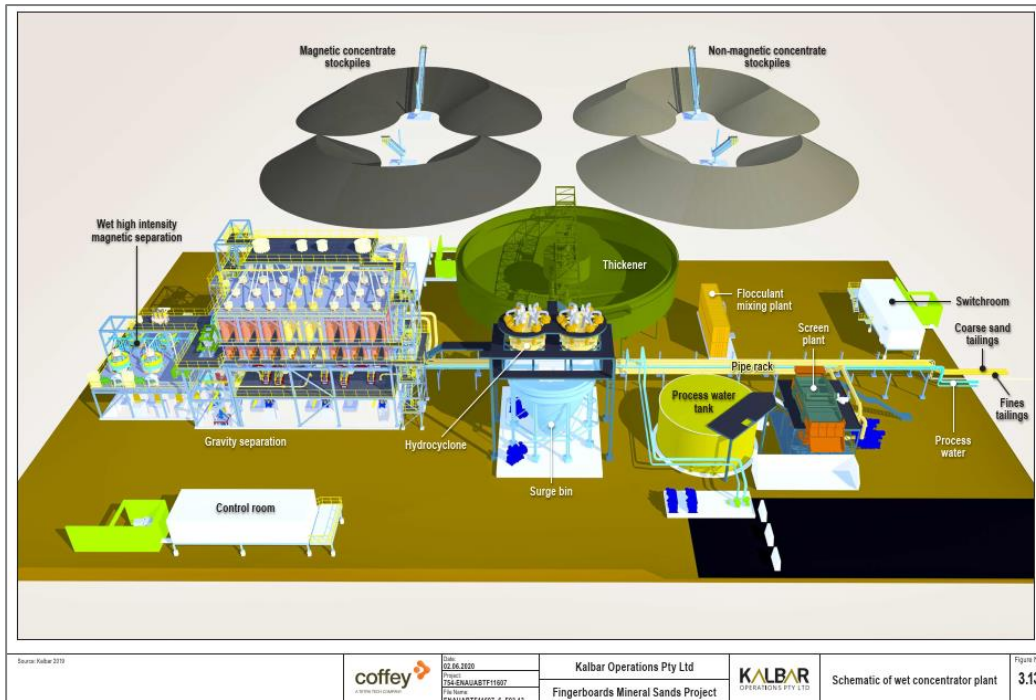


Figure 12 Extract from general arrangement plan (source: EES Map Book, Figure 3)

- 41 A schematic illustration of the WCP is extracted in Figure 13. (Whilst generally representative, it is noted this figure shows HMC being stockpiled, whereas it is intended to be captured directly in silos and loading from these into containers.)



**Figure 13 Schematic illustration of the Wet Concentrator Plant<sup>31</sup>**

42 The WCP uses a range of gravity and centrifugal techniques to separate the Heavy Mineral Concentrate from the ore, separating fine and coarse tailings, removing water (including for reuse), and generating the Heavy Mineral Concentrate.

#### *Water use*

43 The Project will require water for ore processing, dust suppression, rehabilitation, wash down and onsite drinking water and ablutions. The proposed site water management concept is shown in Figure 14 below.

44 Water for the project is planned to be sourced from surface water (winterfill from the Mitchell River when the river is flowing at >1,400 ML/day) and groundwater from a borefield.

45 A borefield is proposed to supply water from the Latrobe aquifer as a supplementary water supply source to the winterfill licence abstraction from the Mitchell River. The borefield includes bore headworks, power supply infrastructure, and below and above ground pipelines located within the infrastructure corridor.

46 Allocations and licences for both groundwater and surface water for the project will need to be sought from Southern Rural Water or purchased from existing licence holders. Water from these sources is proposed to be stored in a 2.2GL freshwater

<sup>31</sup> Source: EES Chapter 3 (Project Description), Figure 3.13, pdf p 24.



storage dam which will be used in ore processing (e.g., in MUPs and the WCP), firefighting (if required), dust suppression and as the site's potable water supply.

47 Overall water management arrangements are illustrated in Figure 14.

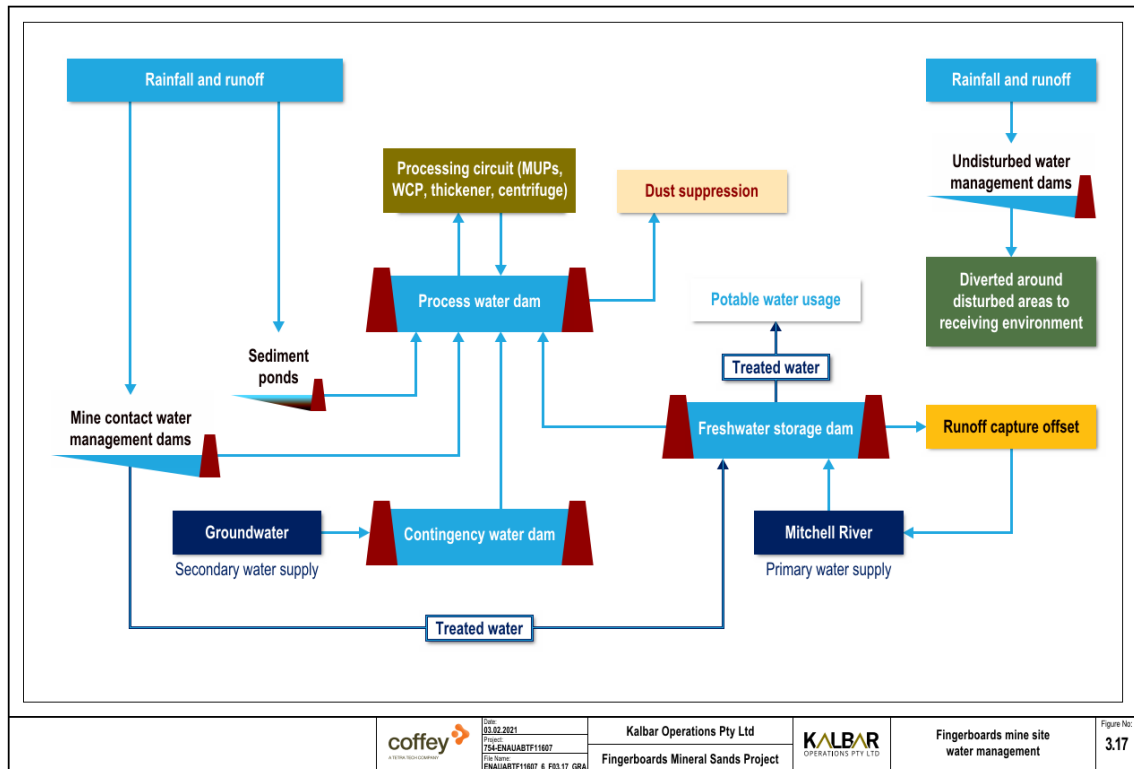


Figure 14 Fingerboards mine site water management<sup>32</sup>

### Surface water management

48 The site contains ephemeral waterways that channel runoff from and across the site to the Mitchell River and Perry Creek.

49 Water management dams (19 in total) are proposed upstream of and at outfall points from the site. The purpose of the dams is to prevent mine contact water from flowing directly to receiving waterways. This is achieved by:

- a) capturing and redirecting runoff from undisturbed catchments away from disturbed catchments (i.e., limiting the generation of mine contact water in the first instance); and
- b) collecting mine contact water from disturbed catchments and reusing this for processing or treating it in the DAF.

<sup>32</sup> Source: Tabled Document 122, EES Chapter 3 (Project Description – tracked changes update re centrifuges), Figure 3.17, p 3.1 (pdf p 39).

50 The locations of catchments, waterways and the proposed water management dams across the site are shown in Figure 15.

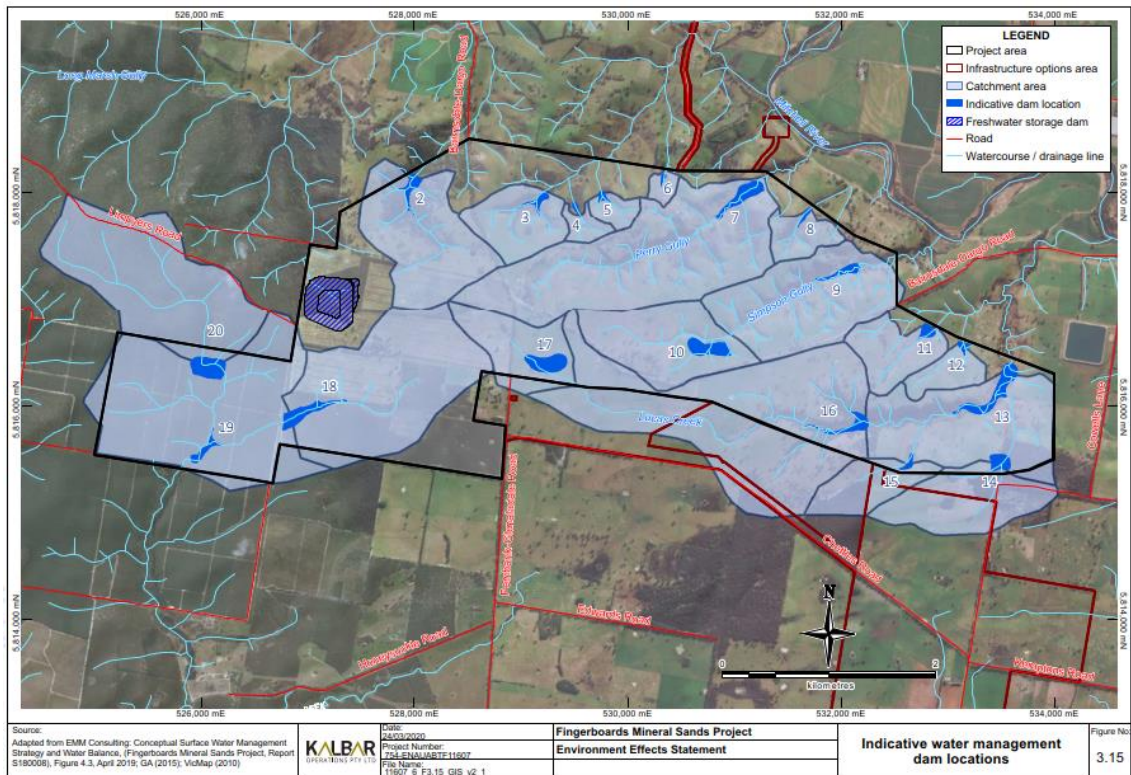
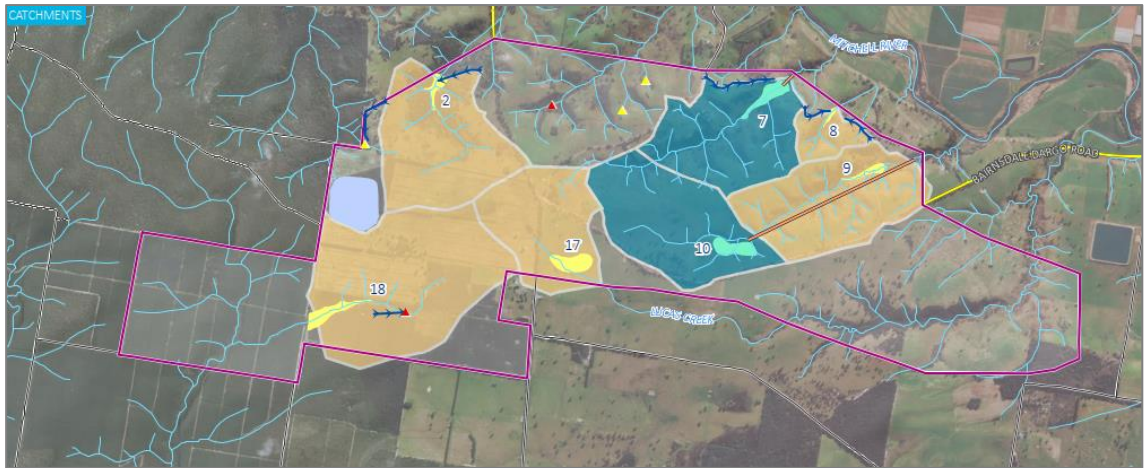


Figure 15 Indicative water management dam locations<sup>33</sup>

51 The proposed water management arrangements can be illustrated (based on year 5 operations) by reference to Figure 16. This plan shows water passing through undisturbed catchments coloured blue. This ‘clean’ water is collected in dams 7 and 10 and piped directly back to the Mitchell River.

52 For disturbed catchments (shown in orange), water will be collected in dams 2, 17 and 18 and reused as process water or treated in the DAF before returning to the freshwater storage dam.

<sup>33</sup> Source: EES Chapter 3 (Project Description), Figure 3.14, pdf p 31.

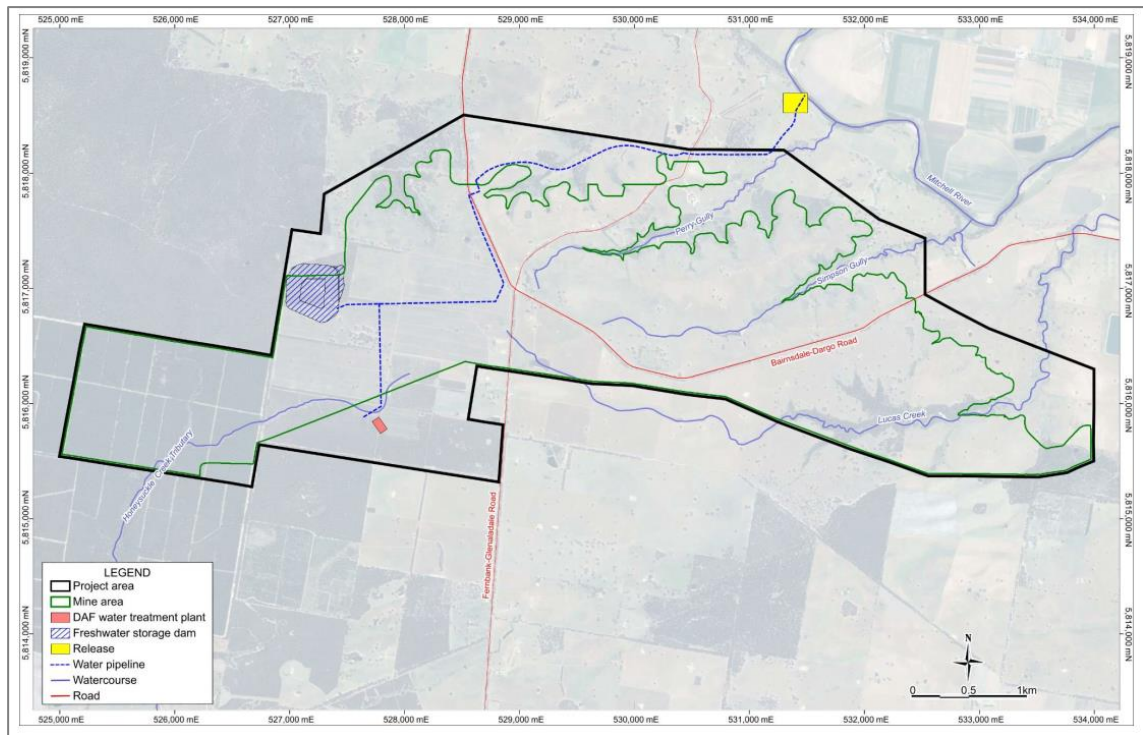


**Figure 16 Year 5 water management concept<sup>34</sup>**

*Treated water discharges*

- 53 Mine contact runoff that is collected will need to be offset by managed releases of clean water from the freshwater storage dam to the environment so that there is no net harvest of rainfall runoff from the site.
- 54 These discharges are subject to works approval, as proposed in the works approval application at Attachment D of the EES.
- 55 Water collected in the mine water contact dams will be treated in the DAF at a rate of up to 24 ML/day.
- 56 Treated water from the DAF will then be pumped to the freshwater storage dam and reused as process or drinking water or released to the environment. Releases to the environment will be needed both:
- a) to offset collected water, so there is no net harvest of water on the site; and
  - b) to maintain adequate dam freeboard and storage capacity in accordance with the site’s proposed water balance arrangements.
- 57 The location of the DAF, freshwater storage dam and piping arrangements are shown in Figure 17.

<sup>34</sup> Source: Appendix A to Appendix A006 – Conceptual Surface Water Management Strategy and Water Balance, p 53.



**Figure 17 Water treatment components of the mine<sup>35</sup>**

### *Vegetation removal and offsets*

58 Approximately 90% of the mining licence area contains non-remnant vegetation including introduced grazing pastures, with the remaining 10% supporting native vegetation, generally concentrated around roadsides and in gullies.<sup>36</sup>

59 The Draft Work Plan summarises the extent of proposed vegetation removal as:<sup>37</sup>

- “Removal of 160.30 hectares of remnant patches (including DELWP mapped ‘current wetlands’) 461 impacted large and small scattered trees;
- Removal of 704 large trees, which comprise 373 large trees within a patch and 331 scattered trees;
- Removal of 1.74 hectares of the nationally significant Grassy Woodland and Associated Native Grassland (GRGGW) ecological community;
- Removal of 14.54 hectares of the State significant (FFG Act-listed) Forest Red Gum Grassy Woodland ecological community; and
- Removal of three State significant flora species, including Slender Wire-lily (33 plants), (Blue Mat-rush three plants) and Sandfly Zieria (10 plants).”

<sup>35</sup> Source: EES Attachment B (Works Approval Application), Figure 5-3, p 15 (pdf p 22).

<sup>36</sup> Draft Work Plan, Section 2.7.1 (Vegetation and flora), p 2-23 (pdf p 50).

<sup>37</sup> Draft Work Plan, Section 2.7.1 (Vegetation and flora), p 2-24 (pdf p 51).

60 This removal is proposed to be offset as outlined in the Biodiversity Offset Strategy at Attachment E of the EES. The Offset Strategy explains that:

- a) the Project is proposed to impact 1.74 hectares of the EPBC Act listed Gippsland Red Gum, giving rise to an expected offset area in 8-10ha; and
- b) State offset requirements determined in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017) estimated to require an offset of 1.001 General Habitat Units (GHU) with a minimum Strategy Biodiversity Value of 0.253, along with 704 Large Trees.

61 These offsets will be secured by a combination of Offset Credits from the Native Vegetation Offsets Register and agreements with relevant landholders to secure and protect native vegetation in accordance with the *Guidelines for the removal, destruction and lopping of native vegetation* (DELWP, December 2017). Kalbar is in the process of signing Memoranda of Understanding with the owners of five properties landowners to secure, protect and offset all of the required native vegetation offsets. These Memoranda will prevent the removal of any native vegetation until a decision is made on Project approval. If the Project is approved, more comprehensive agreements will be entered into which will secure the protection of the native vegetation in question and transfer the Offset Credits for that vegetation to Kalbar.

#### *Roads*

62 Internal mining haul routes within the site will be unsealed and constructed using overburden and local stone material. Dust suppression on these unsealed routes will be required.

63 If the Fernbank rail siding transport option is approved (see below), a sealed HMC product haul road is proposed to connect the Project site to the siding. This road commences from the loading facility adjacent to the WCP, crosses the Fernbank-Glenaladale Road and heads generally east and parallel to, but north of, Chettles Road for about 3km before turning south toward the rail siding.

64 Public roads through the site are proposed to be diverted and realigned in stages as shown in Figure 18. Key changes include:

- a) permanent relocation of the existing Fingerboards intersection by approximately 1km to the south and construction of a four-arm roundabout;
- b) Fernbank-Glenaladale Road diverted as it crosses Chettles Road, to intersect with the new Fingerboards roundabout;
- c) Bairnsdale-Dargo Road diverted in year 5 and reinstated in year 8, allowing the land underneath to be mined;
- d) Careys Road will be temporarily diverted (year 3) and reinstated (year 10).

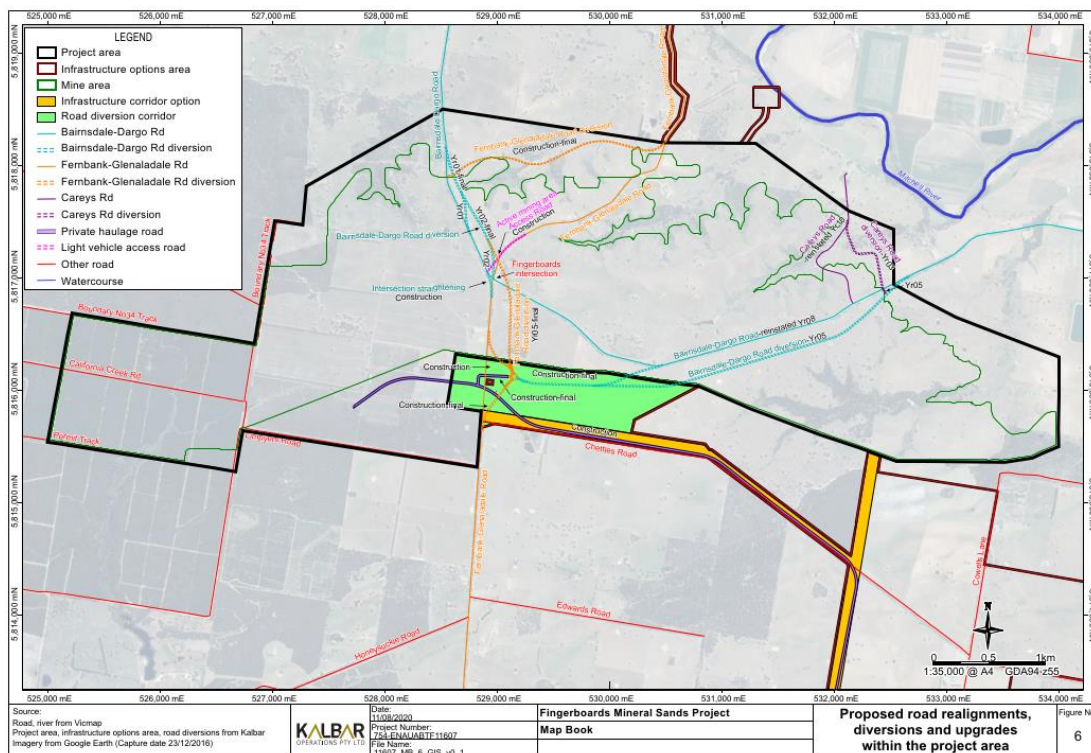
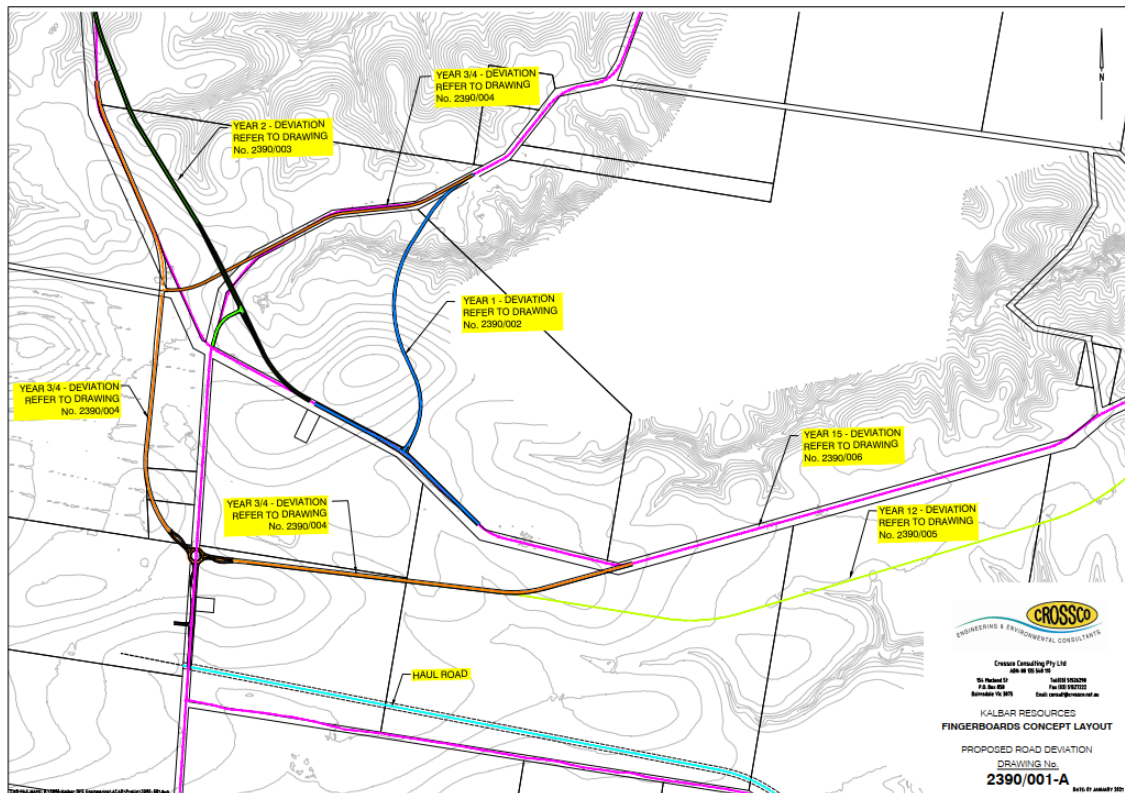


Figure 18 Proposed road realignments, diversions and upgrades within the project area<sup>38</sup>

65 Following the publication of the EES, the Proponent has developed alternative road layouts as shown in Figure 19 (and shown in Tabled Documents 44-59), which it is considering and discussing with the Department of Transport and East Gippsland Shire Council.

<sup>38</sup> Source: EES Map Book, Figure 6.



**Figure 19 Updated road concept layout (Tabled Document 45)**

*HMC haul routes*

- 66 HMC will be transported to a port for export overseas via road and rail.
- 67 The following transport routes have been considered in the EES:
- a) transport by truck to a rail siding in Bairnsdale;
  - b) if the Avon River Bridge had not been completed in time (noting that this was unknown at the date the EES was prepared, but the bridge is now completed):
    - i. transport of about half of the HMC in containers by truck to a siding in Maryvale, then transport to Port of Melbourne by rail;
    - ii. transport of the other half of HMC in bulk by truck to Port Antony or the adjacent Barry Beach Marine Terminal;
  - c) transport by truck via private haul roads to a new siding to be constructed at Fernbank.
- 68 These routes are shown in Figure 7 of the EES Map Book, extracted in Figure 20.

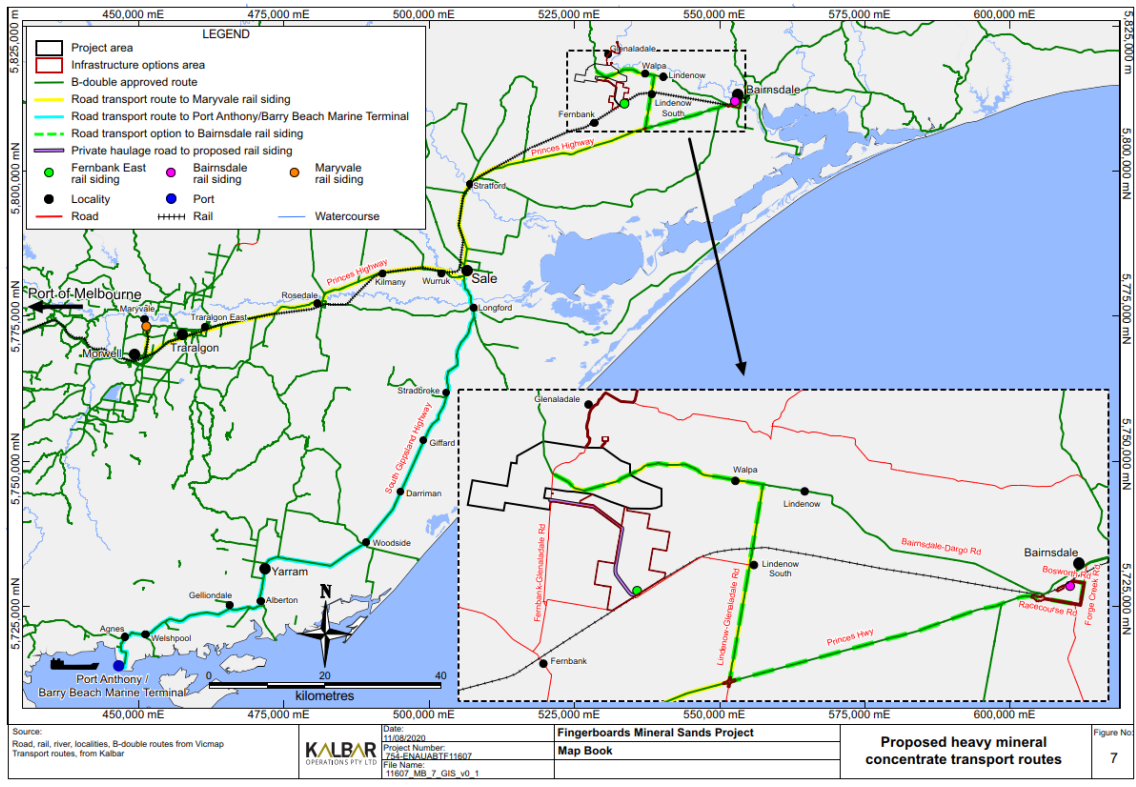


Figure 20 Transport route options<sup>39</sup>

- 69 Since publishing the EES, the Proponent has settled on the use of either Port of Melbourne or the Port of Geelong, and shipping from Port Antony is no longer being pursued.
- 70 For the road transport options, the Project will generate approximately 40 return B-double trips per day, or 80 total B-double movements per day.
- 71 The Proponent’s preferred option is to transport HMC onto the rail system via a siding at Fernbank. Concept designs for the Fernbank rail siding are contained in Tabled Document 59, extracted in Figure 21.

<sup>39</sup> Source: EES Map Book, Figure 7.



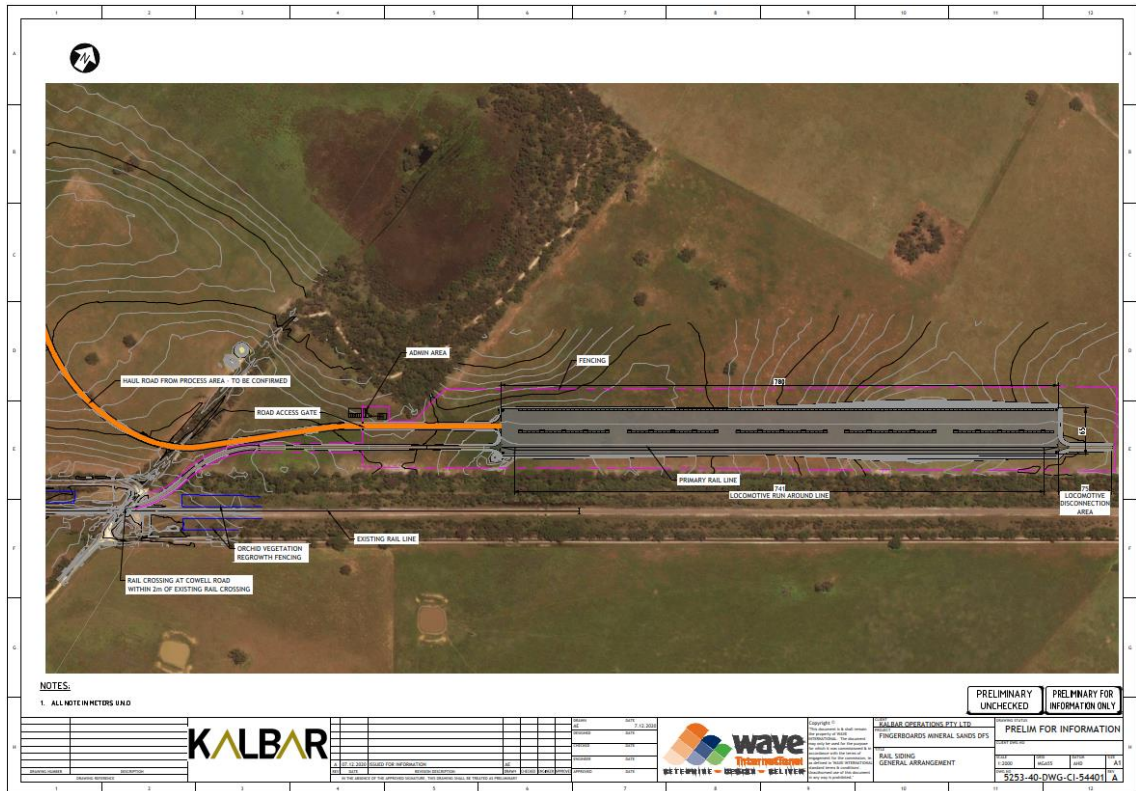


Figure 21 Concept plan for Fernbank Rail Siding<sup>40</sup>

### Power Supply

- 72 Power supply for the Project will be sourced from the existing AusNet Services 66kV network near Fernbank through a new overhead transmission line that is adjacent to the proposed haul road. A 66kV/22kV substation will be constructed adjacent to the WCP, from where power will be distributed through a 22kV network to the mining area, centrifuge plant and WCP.
- 73 Network strengthening capital works will be undertaken to the existing Ausnet network at the Proponent's cost, prior to the Project connection to the network.

### Closure and rehabilitation

- 74 The closure and rehabilitation arrangements for the Project are explained in Chapter 11 (Closure) of the EES and detailed in the rehabilitation plan at Appendix C of the Draft Work Plan.
- 75 The proposed post closure land uses are shown in Figure 22 and described further in Figure 23.

<sup>40</sup> Source: Tabled Document 59. See tabled documents at: <https://engage.vic.gov.au/fingerboards-IAC/Fingerboards-IAC-tabled-documents>

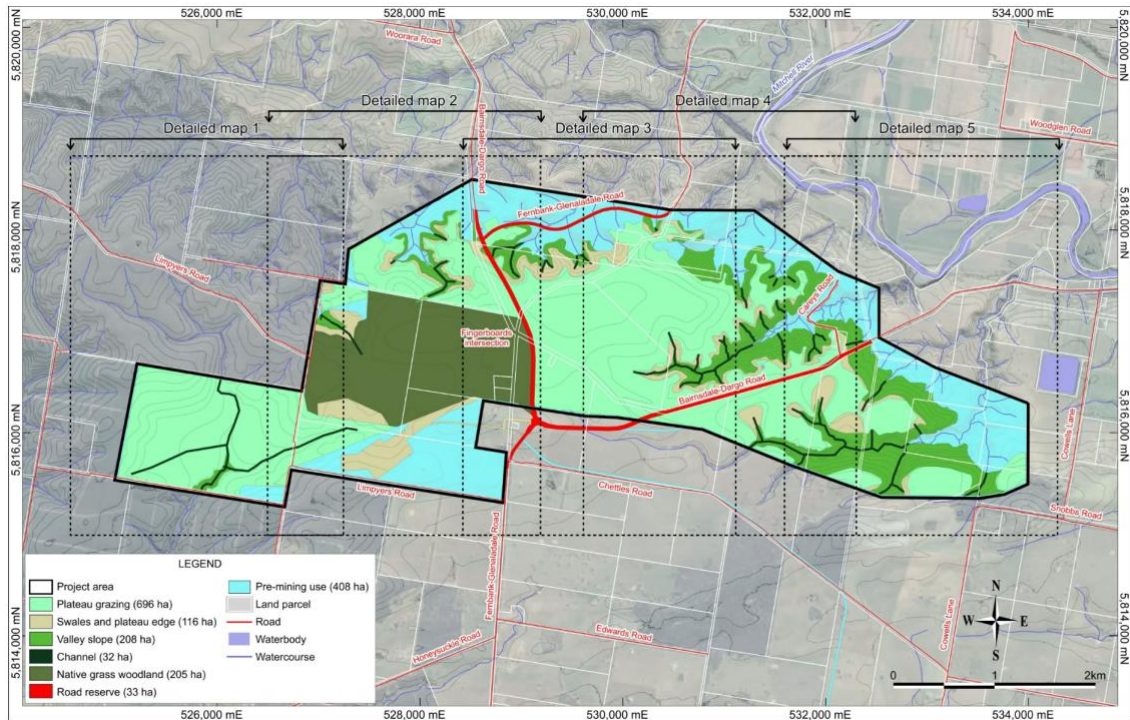


Figure 22 Proposed post-closure land uses<sup>41</sup>

76 The six zones shown in Figure 22 correspond with the ‘zone names’ in Figure 23.

Zone code	Zone name	Zone area (ha) (%)	Final land use	Description/example
A	Plateau grazing	696 (55%)	Grazing	Large area of open woodland, native and improved pasture on broad undulating plateau top. Typical gradients, horizontal to 1:10
B	Swales and plateau edges	116 (9%)	Grazing/native vegetation	Relatively small area bordering plateau slopes where gradients begin to increase and runoff flows concentrate prior to discharge onto plateau slopes, supporting native trees and shrubs and native and exotic grasses. Typical gradients, 1:12 to 1:5
C	Valley slopes	208 (17%)	Native vegetation	Native vegetation (trees, shrubs, groundcover species and exotic and native grasses) on more steeply sloping plateau edges. Typical gradients, 1:8 to 1:3
D	Channels	32 (2%)	Riparian areas and associated waterways	Riparian zones and their associated channels (waterways) (whether existing or re-established), vegetated with native riparian and/or aquatic plant species Typical gradient along channel, 1:50 to 1:1
E	Native grass woodland	205 (16%)	Native vegetation	Native grass woodland in western part of project area broadly consistent with EVC 55 (Plains Grassy Woodland), EVC 47 (Valley Grassy Forest), and EVC 877 (Lowland Herb-rich Forest). Located on plateau landform. Typical gradients, Horizontal to 1:10
F	Road Verge	33 (3%)	Road verge. Predominantly native vegetation	Verges of realigned public roads vegetated with predominantly native grass with low-density trees and shrubs. Typical gradients, Horizontal to 1:10

Figure 23 Post-closure land use zones<sup>42</sup>

<sup>41</sup> Source: EES Attachment B (Draft Work Plan), Appendix C (Remediation Plan), Figure 6.1, p 6-4 (pdf p 396 of the Draft Work Plan).

<sup>42</sup> Source: EES Attachment B (Draft Work Plan), Appendix C (Remediation Plan), Table 6-1, p 6-2 (pdf p 394 of the Draft Work Plan).

- 77 Broadly, the rehabilitation strategy aims to reinstate grazing land on the flatter plateau areas of the site and vegetate valley slopes, gullies and waterways with native grasses, shrubs and trees. Native planting is also proposed along road verges.
- 78 One change from existing conditions is the replacement of an area of current Blue Gum plantation with approximately 205ha of native grassy woodland. The development of this area as a woodland is in addition to flora offsets required for the Project.
- 79 Mined areas will be progressively rehabilitated, with the total time from initial stripping to completion of rehabilitation seeding planned to take between two to five years.<sup>43</sup>
- 80 The draft Rehabilitation Plan explains that progressive rehabilitation will include:<sup>44</sup>
- “Applying gypsum and other soil amendments, as required to topsoil before it is removed ahead of mining.
  - Allowing the deposited coarse and fine tailings material to consolidate and dry sufficiently to support earthmoving machinery.
  - Placing overburden above the sand tailings.
  - Manufacture, placement and blending of subsoil horizon above overburden.
  - Replacing topsoil stripped from the area above the overburden.
  - Establishing cover crops/pasture or native vegetation, consistent with post-mining land use agreements.”
- 81 A small proportion (estimated as 1.3%)<sup>45</sup> of disturbed material (overburden and ore) will be removed from the site as HMC, meaning that bulk material volumes on the site are not materially reduced. An overall increase of 5% of the volume of the landform is expected due to swelling of backfill material. As a result, the post-mining landform will be on average 1.3m higher than the existing pre-mining landform.<sup>46</sup>
- 82 The post-mining landform is planned to be broadly similar to the pre-mining condition, except for Perry Gully which will be backfilled to form a broad plateau

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<sup>43</sup> Draft Work Plan, Appendix C (Remediation Plan), Section 9.3.1 (Progressive rehabilitation), p 9-2 (pdf p 432 of the Draft Work Plan). See also the updated Remediation Plan, Tabled Document 215.

<sup>44</sup> P 9-2 (pdf p 432 of the Draft Work Plan).

<sup>45</sup> Draft Remediation Plan, p 9-5 (pdf p 435 of the Draft Work Plan).

<sup>46</sup> Draft Remediation Plan, p 9-13 (pdf p 443 of the Draft Work Plan).

and Honeysuckle Creek which will be broader and flatter in the post rehabilitation landform (refer Figure 24).

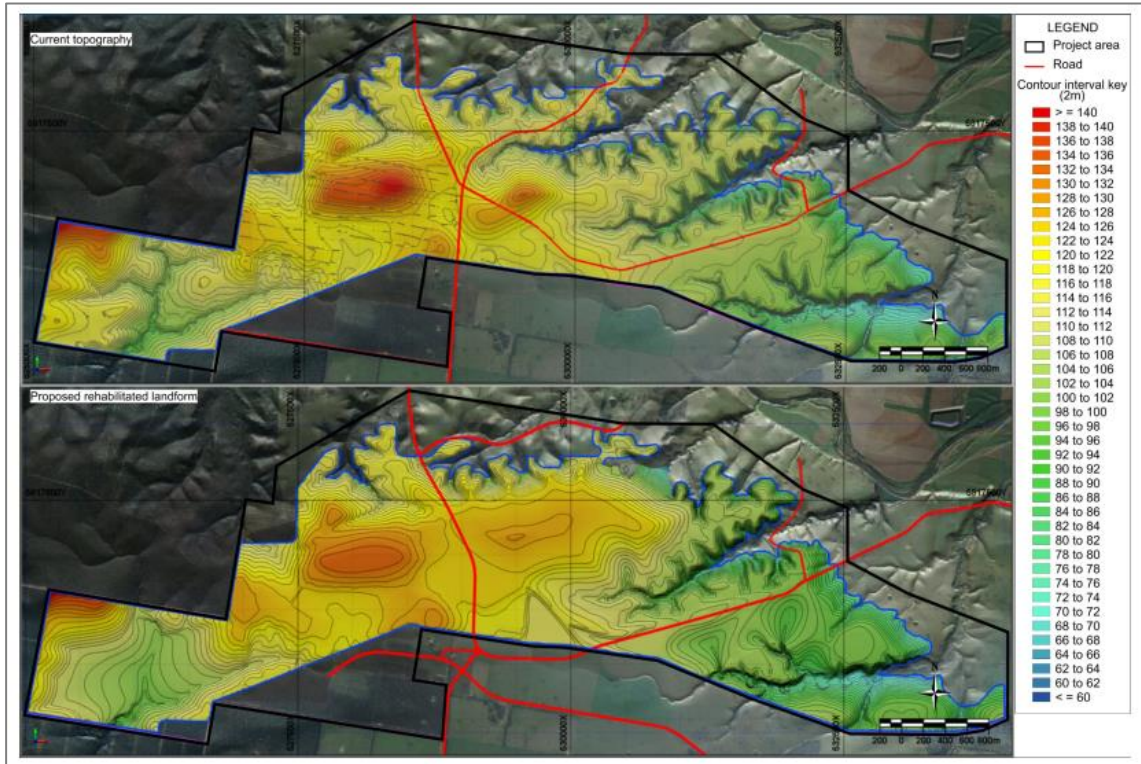


Figure 24 Proposed rehabilitation landform<sup>47</sup>

83 The Proponent will be under a statutory obligation to rehabilitate the mine land<sup>48</sup> and provide a bond to cover the cost of rehabilitation as determined by the Minister for Resources.<sup>49</sup>

## EES PROCESS

### Introduction

84 The EES process is established under *Environment Effects Act 1978 (EE Act)* and further developed through the Minister’s Guidelines made under s 10 of this Act.

85 The current guidelines that are applicable under s 10 of the EE Act are the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978*, edition 7, 2006 (**Guidelines**).<sup>50</sup>

<sup>47</sup> Source: Rehabilitation Plan, Figure 9-3, p 9-1 (pdf p 456 of the Draft Work Plan).

<sup>48</sup> Section 78(1) *Mineral Resources (Sustainable Development) Act 1990*.

<sup>49</sup> Section 80 *Mineral Resources (Sustainable Development) Act 1990*.

<sup>50</sup> The Guidelines are available from the State Government’s website (DELWP), at: <https://www.planning.vic.gov.au/environment-assessment/what-is-the-ees-process-in-victoria>

- 86 The Guidelines set the process for:<sup>51</sup>
- a) referral of projects by proponents to the Minister for a decision about the need for an EES;
  - b) establishment of a technical reference group comprising key Government stakeholders and authorities;
  - c) scoping and preparing an EES;
  - d) public review of an EES;
  - e) considering public submissions;
  - f) requiring a supplementary statement (if necessary); and
  - g) making the final assessment.
- 87 Projects which could have a significant effect on the environment can be voluntarily referred by a proponent to the Minister for Planning,<sup>52</sup> who determines whether an EES is required and the procedures and requirements to be followed if an EES is required.
- 88 Section 9 of the EE Act empowers the Minister to require an inquiry to be conducted to assess the environmental effects of a project. The IAC has been appointed pursuant to this provision.
- 89 Following public submissions and a hearing, the IAC is to prepare a report to inform the Minister's assessment of the project. The Minister's assessment is not a statutory approval but is used to inform approvals and assessments required under other legislation, for example, as relevant in this case, a work plan and a Planning Scheme Amendment.
- 90 The Victorian EES process also interacts with Commonwealth processes under the EPBC Act, relevantly as an accredited assessment process that allows the relevant Commonwealth Minister to determine whether to approve a project which has been determined to be a 'controlled action'.
- 91 A schematic outlining the EES process and its interaction with the EPBC Act is extracted in Figure 25.

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<sup>51</sup> See the Guidelines under the heading 'What do these guidelines do?', p 2.

<sup>52</sup> EE Act, s8(3).

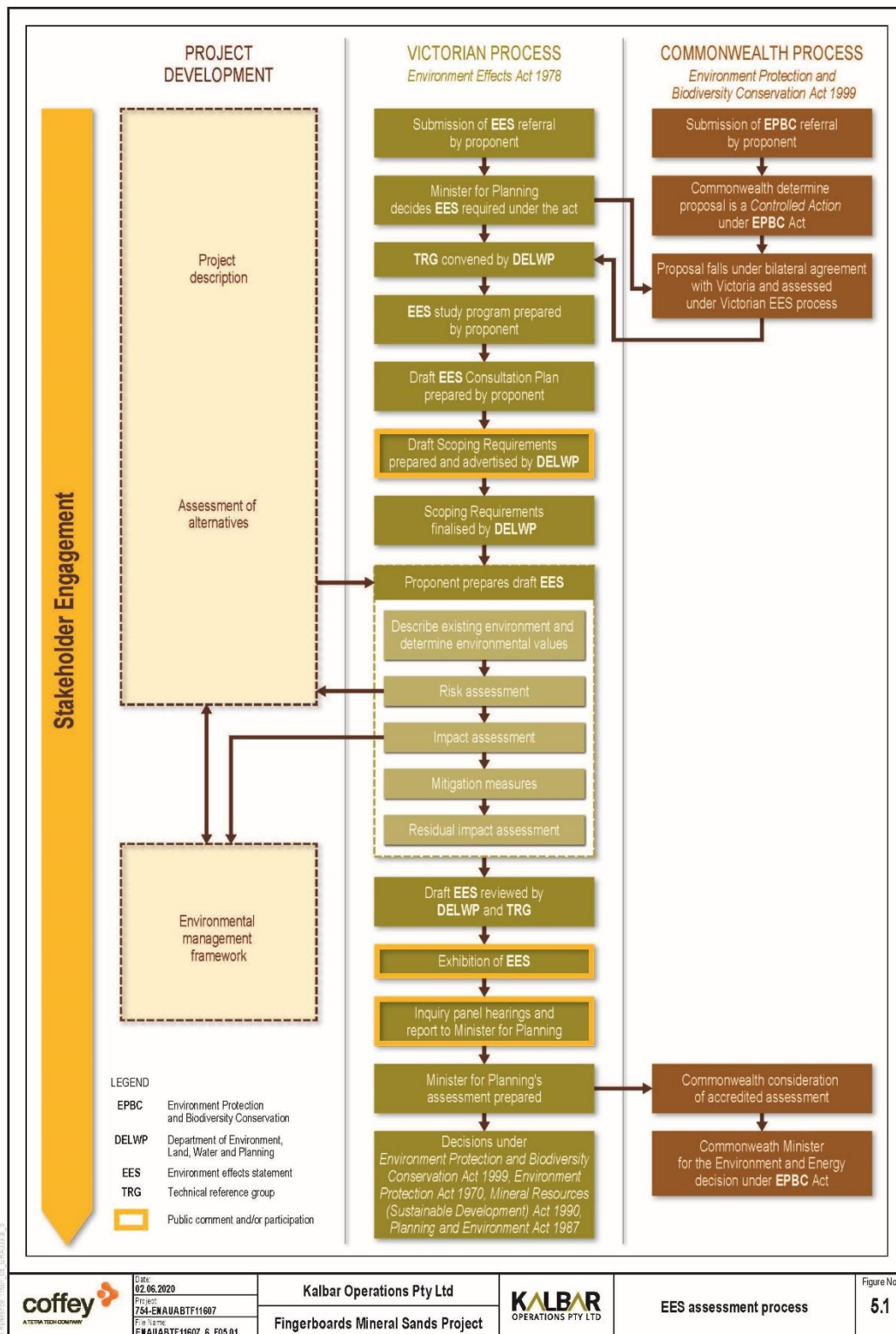


Figure 25 EES assessment process<sup>53</sup>

92 Key steps taken to date in relation to the Fingerboards EES are outlined briefly below.

<sup>53</sup> Source: EES Chapter 5 (Regulatory Framework), pdf p 4.

### *Referral and decision*

93 In November 2016, pursuant to s 8 of the EE Act, the Proponent sought advice from the Minister for Planning on whether an EES should be prepared for the Project.

94 On 18 December 2016, the Minister decided that an EES was required, providing the following reasons:<sup>54</sup>

#### **“Reasons for Decision:**

- The project has the potential for a range of significant environmental effects. In particular the project as proposed is likely to have significant effects on:
  - a very large extent of native vegetation and associated biodiversity values, including listed threatened species and communities;
  - surface water and groundwater (i.e. hydrology, quality, availability) and protected beneficial uses;
  - existing land uses, amenity and landscape values of the project area and those associated with the broader area, including the Mitchell River National Park; and
  - Aboriginal cultural heritage values.
- An integrated assessment is necessary to ensure the range of likely adverse effects and related uncertainties are sufficiently investigated, in terms of both their extent and significance, and how significant effects can be avoided and minimised to acceptable levels.
- An EES would enable a transparent and rigorous process for consideration of potentially significant adverse effects of the project, prior to any relevant statutory decision-making, including under the *Mineral Resources (Sustainable Development) Act 1990*, *Aboriginal Heritage Act 2006* and *Water Act 1989*.”

### *Technical reference group*

95 The Minister authorised DELWP to convene a Technical Reference Group (**TRG**) for the Fingerboards EES.

96 The role of the TRG, as explained in the EES Scoping Requirements, was to advise the Proponent on:<sup>55</sup>

- “applicable policies, strategies and statutory provisions;

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<sup>54</sup> Minister’s Reasons for Decision, EES referral number 2016-06, 18 December 2016.

<sup>55</sup> See Fingerboards EES Scoping Requirements (March 2018), under the heading ‘Technical Reference Group’, pdf p 9.

- the scoping requirements for the EES;
- the design and adequacy of technical studies for the EES;
- the proponent’s public information and stakeholder consultation program for the EES;
- responses to issues arising from the EES investigations;
- the technical adequacy of draft EES documentation; and
- coordination of statutory processes.”

97 The TRG was chaired and managed by a representative from DELWP and included representatives from the Proponent, its lead environmental consultant Coffey, and the following government agencies:

- a) Aboriginal Victoria.
- b) Department of Jobs, Precincts and Regions (previously Department of Economic Development, Jobs, Transport and Resources), including Earth Resources Regulation and Agriculture Victoria.
- c) Department of Environment, Land, Water and Planning.
- d) Department of Health and Human Services.
- e) East Gippsland Catchment Management Authority.
- f) East Gippsland Shire Council.
- g) East Gippsland Water.
- h) Environment Protection Authority Victoria.
- i) Heritage Victoria.
- j) Parks Victoria.
- k) Southern Rural Water.
- l) Wellington Shire Council.
- m) West Gippsland Catchment Management Authority.
- n) VicRoads.



## *Scoping Requirements*

98 Draft scoping requirements for the Project were released for public comment between 13 September 2017 and 6 October 2017 and finalised in March 2018 (**Scoping Requirements**).<sup>56</sup>

99 The Scoping Requirements set the following ‘draft evaluation objectives’ for the Project.<sup>57</sup>

**“Resource development** – To achieve the best use of available mineral sands resources, in an economic and environmentally sustainable way, including while maintaining viability of other local industries.

**Biodiversity** – To avoid or minimise potential adverse effects on native vegetation, listed threatened and migratory species and ecological communities, and habitat for these species, as well as address offset requirements for residual environmental effects consistent with state and Commonwealth policies.

**Water, catchment values and hydrology** – To minimise effects on water resources and on beneficial and licensed uses of surface water, groundwater and related catchment values (including the Gippsland Lakes Ramsar site) over the short and long-term.

**Amenity and environmental quality** – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.

**Social, land use and infrastructure** – To minimise potential adverse social and land use effects, including on, agriculture (such as dairy irrigated horticulture and grazing), forestry, tourism industries and transport infrastructure.

**Landscape and visual** – To avoid adverse effects on the landscape and recreational values of the Mitchell River National Park and minimise visual effects on the open space areas.

**Cultural heritage** – To avoid or minimise adverse effects on Aboriginal and non-Aboriginal cultural heritage.

**Rehabilitation** – To establish safe progressive rehabilitation and post-closure stable rehabilitated landforms capable of supporting native ecosystems and/or productive agriculture that will enable long-term sustainable use of the project area.”

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<sup>56</sup> *Scoping Requirements for the Fingerboards Mineral Sands Project Environment Effects Statement*, State Government Victoria, March 2018, available from: <https://www.planning.vic.gov.au/environment-assessment/browse-projects/projects/fingerboards-mineral-sands>

<sup>57</sup> Scoping Requirements, Table 1, pp 12-13.

*Public exhibition of the EES and submissions*

- 100 The EES, Draft Work Plan, works approval application and Draft Planning Scheme Amendment were placed on public exhibition for 40 business days from 3 September 2020 to 29 October 2020. A total of 910 submissions were received, of which 146 submitters have requested to appear before the IAC.
- 101 A summary of issues raised in submissions was prepared by the Proponent in response to direction 26 of the IAC's directions dated 23 December 2020 and is Tabled Document 25. The Proponent's initial response to submissions is set out in Tabled Document 107<sup>58</sup> and the Proponent's response to submissions about the use of centrifuges is being submitted as a separate document.

**EPBC ACT**

*Introduction*

- 102 The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) requires an environmental impact assessment to be prepared for projects that the Commonwealth Minister has determined are likely to have a significant impact on any of the nine 'matters of national environmental significance' listed in Part 3 of the Act (**controlled action**).
- 103 In 2014, Victoria signed a bilateral agreement<sup>59</sup> with the Commonwealth Government allowing controlled actions to be assessed through Victorian accredited processes. An EES is an accredited process.

*Commonwealth referral and decision in relation to the Project*

- 104 The Project was referred to the Commonwealth under the EPBC Act.
- 105 On 6 July 2017, the delegate for the Commonwealth Minister for the Environment and Energy determined that the Project is a controlled action under the EPBC Act, as it is likely to have a significant effect on the following matters of national environmental significance:
- a) Ramsar wetlands (ss 16 and 17B);

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<sup>58</sup> Dated 8 February 2021.

<sup>59</sup> *Agreement between the Commonwealth of Australia and Victoria relating to environmental assessment*, 27 October 2014, accessible from: <https://www.environment.gov.au/protection/environment-assessments/bilateral-agreements/vic>

- b) listed threatened species and communities (ss 18 and 18A);
- c) listed migratory species (ss 20 and 20A); and
- d) nuclear actions (ss 21 and 22A).

106 Variations to the referred Project were accepted by the delegate of the Commonwealth Minister for the Environment under s 156B of the EPBC Act on 13 July 2018 and 14 June 2019. Following a corporate restructure, the identity of the Proponent was changed from Kalbar Resources Ltd to Kalbar Operations Pty Ltd. Notification of this change was provided to the Commonwealth under s 156F of the EPBC Act on 16 March 2020.

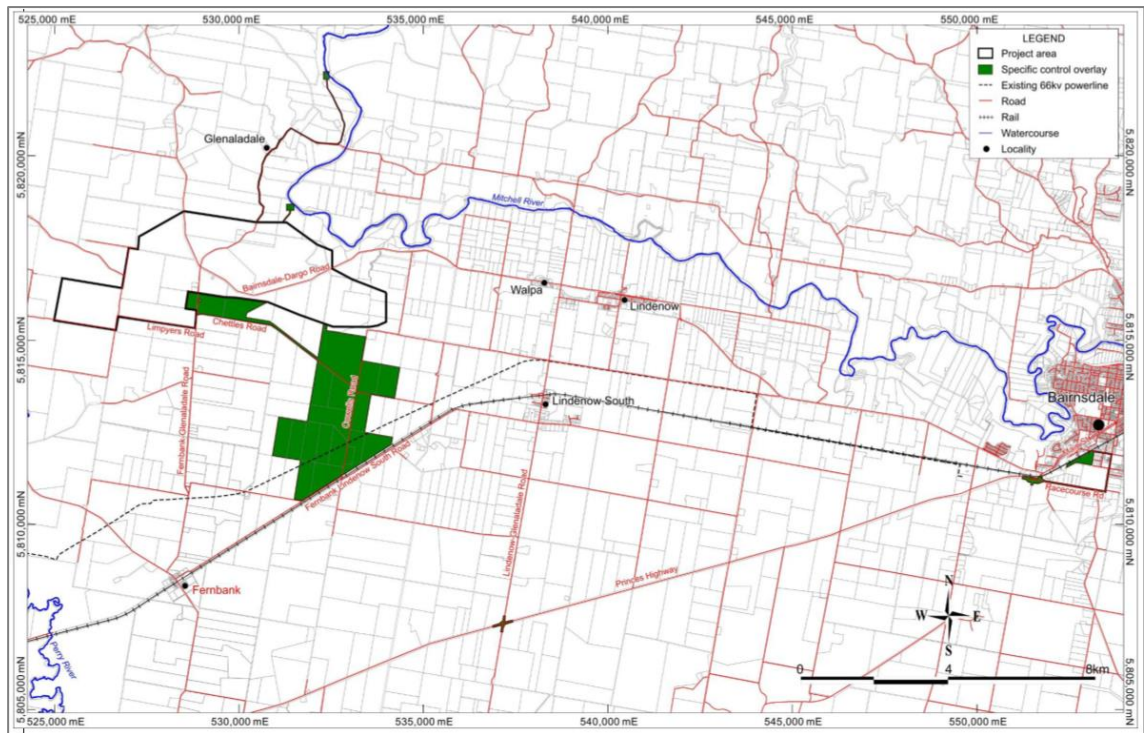
107 On 24 March 2021, the Proponent applied to the Commonwealth Minister for the Environment to vary the referred Project based on the use of centrifuges. On 21 April 2021, the Minister's delegate advised that the variation is approved.

#### **PLANNING SCHEME AMENDMENT C156**

108 Draft Planning Scheme Amendment C156 to the East Gippsland Planning Scheme (**Planning Scheme**) applies to land associated with Project outside of the proposed mining licence area (**Amendment Land**).

109 The Proponent modelled Amendment C156 on Amendment C130 to the Planning Scheme, approved by the Minister for Planning on 11 May 2017, save for the fact that the Amendment proposes to apply the Special Control Overlay to the Amendment Land (which did not exist at the time of Amendment C130). Amendment C130 incorporated an Incorporated Document into the Planning Scheme to regulate and control the use and development of land, including the removal of native vegetation, for infrastructure outside the mining licence area for the Stockman Base Metal Project. This infrastructure included a groundwater borefield and water supply pipeline, overhead powerlines, rail siding, road upgrades and improvements.

110 The Amendment Land is the land coloured green in Figure 26.



**Figure 26 Area to which the proposed Incorporated Document applies to (green)<sup>60</sup>**

111 By virtue of s 42(7) of the *Mineral Resources (Sustainable Development) Act 1990*, planning permits are not required for the Project for works within the mining licence area, following the completion of an EES. Section 42(7) of the MRSD Act states:

“(7) If under subsection (6) or any planning scheme a permit is required to be obtained for carrying out mining on the land covered by a mining licence or prospecting licence in accordance with that licence, the licensee is not required to obtain a permit for that work if—

(a) an Environment Effects Statement has been prepared under the *Environment Effects Act 1978* on the work proposed to be done under the licence; and

(b) an assessment of that Statement by the Minister administering the *Environment Effects Act 1978* has been submitted to the Minister.”

112 This permit exemption for mining works is mirrored in cl 52.08-1 and cl 62.02-1 of the Planning Scheme.

113 The Amendment applies the Specific Controls Overlay to the Amendment Land with an accompanying Incorporated Document containing the controls on use and development that will apply.

114 Clause 1 of the Incorporated Document relevantly provides:

<sup>60</sup> Source: Draft Incorporated Document, Attachment 1.

“The specific control in this Incorporated Document allows the project land to be used and developed for the purpose of the project, and excludes any other control in the East Gippsland Planning Scheme insofar as they apply to the project components listed in clause 3”.

115 Clause 3 lists the permissible ‘project components’ as follows:

**“3 THIS DOCUMENT ALLOWS**

Despite any provision to the contrary or any inconsistent provision of the Planning Scheme this document allows the project land to be used and developed for the following purposes:

- A new water pipeline in or adjacent to existing road reserves to an existing pumping station to the north of the project land (Option 1) with an easement in or adjacent to the road reserve to accommodate it;
- A new water pipeline and a 30 metres wide easement over private land to a new pumping station constructed on private land by Kalbar (Option 2);
- A water pipeline and associated bore pumps to the south of the project land;
- Construction and use of a new road adjacent to Chettles Road, and new roads continuing south from Chettles Road over private land to the new railway siding and north from Chettles Road;
- New 66kV and 22kV powerlines adjacent to Chettles Road and the new road extensions south and north of Chettles Road;
- A new water pipeline adjacent to Chettles Road and the new road extensions south and north of Chettles Road;
- Creation of easements to accommodate the above three matters;
- Noise bunding including earthworks along sections of the new road extensions south and north of Chettles Road and the haulage route to the rail siding;
- A rail siding (one of two options) adjacent to the Bairnsdale railway line;
- Road diversions, road widenings and roadworks including intersection upgrades (local and Road Zone Category 1) and use of land for road;
- Any temporary construction works offices;
- Subdivision for the purposes of acquiring land for road and roadworks improvements and upgrades;
- Vegetation removal associated with any of the above.”

116 Clause 4 of the Incorporated Document requires the use and development to be in accordance with several plans required to be approved to the satisfaction of the Responsible Authority, relevantly:

- a) a Development Plan;
- b) Traffic management plan;
- c) Noise management plan;
- d) Environmental Management Plan;
- e) Construction Management Plan;
- f) Native Vegetation Management Plan; and
- g) Fire Management Plan.

117 East Gippsland Shire Council provided without prejudice proposed changes to the Incorporated Document on 2 February 2021 (Tabled Document 69) and an additional version on 19 April 2021.<sup>61</sup> The Proponent's response to the Council's suggested changes, provided in accordance with the IAC's directions dated 19 February 2021, order 37, is being prepared and will be circulated shortly.

#### **THE IAC'S TERMS OF REFERENCE**

118 The IAC's Terms of Reference were signed by the Minister for Planning on 19 July 2020 (**ToR**).

119 Key aspects of the ToR which inform the nature of the Inquiry before the IAC are identified below.

120 The purpose of the IAC is set by clauses 5 and 6 of the ToR which provide:

“5. The IAC is appointed by the Minister for Planning under section 9(1) of the EE Act to hold an inquiry into the environmental effects of the project. The IAC is to:

- a. review and consider the environment effects statement (EES), public submissions received in relation to the environmental effects of the project and the reports and advice from the appointed Department of Environment, Land, Water and Planning (DELWP) independent peer reviewers;
- b. consider and report on the potential environmental effects of the project, their significance and acceptability, and in doing so have regard to the draft evaluation objectives in the EES scoping requirements and relevant policy and legislation;

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<sup>61</sup> Yet to be allocated a Tabled Document number.

- c. identify any measures it considers necessary and effective to avoid, mitigate or manage the environmental effects of the project within acceptable limits, including any necessary project modifications;
  - d. advise on how this relates to relevant conditions, controls and requirements that could form part of the necessary approvals and consent for the project;
  - e. report its findings and recommendations to the Minister for Planning to inform his assessment under the EE Act; and
  - f. review the works approval application and relevant submissions and provide advice that can be used to inform the EPA's consideration of the WAA prepared by the proponent for the project.
6. The IAC is appointed as an advisory committee under section 151 of the P&E Act to:
- a. review draft planning scheme amendment (PSA) C156EGIP, which have been prepared to facilitate the project, along with any public submissions received in relation to the draft PSA;
  - b. provide a report to the Minister for Planning as to whether the draft PSA contains provisions and controls that are appropriate for the project; and
  - c. recommend any changes to the draft PSA that it considers necessary.”

121 In relation to the works approval application, the ToR state:

“The IAC will provide advice that can be used to inform the Environment Protection Authority's (EPA) consideration of the works approval application (WAA) prepared by the proponent for the project.”

122 After considering submissions and conducting public hearings, the IAC is to prepare a written report addressing the following matters (ToR, clause 34):

- a. “conclusions with respect to the environmental effects of the project and their significance and acceptability;
- b. findings on whether acceptable environmental outcomes can be achieved, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
- c. recommendations and/or specific measures that it considers necessary and appropriate to prevent, mitigate or offset adverse environmental effects to acceptable environmental outcomes, having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
- d. recommendations as to any feasible modifications to the project (e.g. extent, design, alternative configurations, or environmental management) that would enable more appropriate environmental outcomes;

- e. recommendations for any appropriate conditions that may be lawfully imposed on any approval for the project, including with respect to the content of the draft work plan or conditions that might appropriately be attached to approval of a work plan if issued under the MRSD Act;
- f. recommendation on changes, including to the structure and content, that should be made to the draft PSA in order to ensure that the environmental effects of the project are acceptable having regard to legislation, policy, best practice, and the principles and objectives of ecologically sustainable development;
- g. recommendations as to the structure and content of the proposed environmental management framework, including with respect to monitoring of environmental effects, contingency plans and site rehabilitation;
- h. recommendations with respect to the WAA, including recommendations about conditions that might appropriately be attached to a works approval if issued; and
- i. specific findings and recommendations about the predicted impacts and residual risks for matters of national environmental significance and their acceptability, including appropriate controls and environmental management.”

## SUMMARY OF STATUTORY APPROVALS REQUIRED FOR THE PROJECT

123 Key approvals that will be required for the Project following assessment under the *Environment Effects Act 1978* are summarised in Table 1.

**Table 1 Approvals required following the EES**

<b>Legislation</b>	<b>Approval(s) required</b>
<i>Mineral Resources (Sustainable Development) Act 1990 (Vic)</i>	Mining licence (see ss 14-15) and work plan (see Part 3 – Work Under Licence). A work plan must include a rehabilitation plan. <sup>62</sup> A draft work plan is exhibited as Appendix B to the EES (see also Tabled Document 197a, updated Draft Work Plan taking into account use of centrifuges).  (See also Tabled Document 11, Earth Resources Regulation, DJPR, response to IAC, which summarises approvals and processes under this legislation).
<i>Planning and Environment Act 1987 (Vic)</i>	Planning Scheme Amendment (for use and development outside the mining licence area).
<i>Environment Protection Act 1970 (Vic)</i>	Works approval (s19A, noting that the Project is a ‘scheduled premises’) <sup>63</sup> for discharges of treated water from the Dissolved Air Flotation plant / freshwater storage dam to the Mitchel River. The

<sup>62</sup> Section 40(3)(e) *Mineral Resources (Sustainable Development) Act 1990*

<sup>63</sup> Pursuant to Schedule 1 of the Environment Protection (Scheduled Premises) Regulations 2017.



	works approval application is Appendix D of the EES.
<i>Water Act 1989</i> (Vic)	To construct works on waterways within the site (s67) and to take and use water from mine voids from the Mitchell River and ground water (s51).  (See also Southern Rural Water’s submission (submission no. 291) and its response to IAC questions (Tabled Document 38) for a useful summary of these licencing requirements).
<i>Aboriginal Heritage Act 2006</i> (Vic)  Aboriginal Heritage Regulations 2018	Cultural heritage management plan (s49(2) of the Act and reg 51).
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)	Approval to proceed with the Project as the Project has been declared to be ‘controlled action’ (see Part 9 of the Act – Approval of Actions, in particular s133 – Grant of Approval).
<i>Radiation Act 2005</i> (Vic)	A ‘management licence’ to conduct a ‘radiation practice’ (s12), being the handling <sup>64</sup> of the Heavy Mineral Concentrate which has an ‘activity concentration’ sufficient to class this material as ‘radioactive material’ within the meaning of the Act.  (See also Department of Health and Human Services response to IAC questions, Tabled Document 40 for a further summary of radiation approvals and licencing).

## ENVIRONMENTAL MANAGEMENT FRAMEWORK

- 124 Chapter 12 of the EES (Environmental Management Framework) describes how the environmental performance of the Project will be regulated throughout the life of the Project.
- 125 The EMF is descriptive rather than having direct legal effect. The key controls that will apply to the Project will be contained in the mining licence and work plan, EPA works approval, Incorporated Document under the Planning Scheme and any additional requirements imposed by authorities in issuing other statutory approvals

<sup>64</sup> See definition of ‘radiation practice’ at s3 of the *Radiation Act 2005*.

required for the Project (e.g., management licence conditions under the *Radiation Act 2005* and water licence requirements under the *Water Act 1989*).

- 126 As Environmental Resources Regulation (**ERR**) stated in its response to IAC questions, it will consider an application for a work plan after the EES process and the contents of any finalised work plan will be required to take into account recommendations in the Minister’s Assessment of the EES. ERR relevantly explained:<sup>65</sup>

“The draft work plan exhibited in the EES is not an application for work plan and has not been assessed by Earth Resources Regulation. The assessment of any work plan follows the EES process, as detailed above.

Earth Resources Regulation expects that any application for a work plan following this EES process would demonstrate how any recommendations in the Minister for Planning’s Assessment (that are applicable under the MRSDA) have been addressed; including evidence of consultation with relevant agencies. Section 40A(3) requires a copy of the work plan to be provided to the Minister for Planning at least 10 days prior to approving the plan.”

- 127 The following section briefly outlines the statutory frameworks relating to mining licence and work plans and enforcement mechanisms under the *Planning and Environment Act 1987*.

- 128 The Proponent notes order 38 of the IAC’s directions dated 19 February 2021 which provide:

“38. The Proponent must update the PSA, Incorporated Document and EMF at regular intervals through the Hearing with ‘track changes’ to reflect the matters discussed, indicating with a note whether the change has been made in response to submissions or evidence.”

- 129 Accordingly, the EMF will need to be updated through the running of the hearing to accord with expert evidence and submissions, where appropriate. To this end, Technical Notes 02 (Tabled Document 109) and 013 (Tabled Document 192) are of relevance, as they list expert recommendations in the EES and the Proponent’s expert evidence that will need to be factored in to the EMF, including any required updates.

#### *Mining licence and work plan*

- 130 The *Mineral Resources (Sustainable Development) Act 1990* (**MRSD Act**) requires works to be undertaken in accordance with a mining licence and work plan.

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<sup>65</sup> Tabled Document 11, ERR response to IAC questions, 10 December 2020.

131 Section 39 relevantly provides:

**“39 Work must be approved**

(1) A person, other than the Crown, must not do any work under a licence otherwise than—

(a) in accordance with the licence; or

(ab) in accordance with the approved work plan”.

132 Section 40(3) prescribes what a work plan must achieve / include. It states:

“(3) A work plan must—

(a) be appropriate in relation to the nature and scale of the work proposed to be carried out; and

(b) identify the risks that the work may pose to the environment, to any member of the public, or to land, property or infrastructure in the vicinity of the work; and

(c) specify what the licensee will do to eliminate or minimise those risks as far as reasonably practicable; and

(d) if the licence is a mining licence or prospecting licence, in relation to the mining activities proposed to be carried out under the licence, include a plan for consulting with the community that demonstrates that the licence holder will use appropriate and effective measures to consult with the community throughout the period of the licence and is prepared in accordance with the regulations and any guidelines issued by the Minister relating to such plans (a community engagement plan); and

(e) if the licence is a mining licence or a prospecting licence under which mining activities are proposed to be carried out, include a rehabilitation plan for the land proposed to be covered by the licence”.

133 The Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019 further prescribe the content of a work plan (see Part 3, Division 6), relevantly requiring:

a) a description of the proposed work and the surrounding environment including identification of sensitive receptors within 2km of the project area (r 42);

b) minimum rehabilitation targets and content for rehabilitation plans including:

“(a) a land form that will be achieved to complete rehabilitation, which must –

(i) be safe, stable and sustainable; and

(ii) be capable of supporting the proposed land uses”

...

(d) criteria for measuring whether the objectives described in paragraph (c) have been met”

c) identification of hazards and risks associated with the proposal (r 44);

d) a ‘risk management plan’ which contains the following information (r 45):

“(a) measures to be applied to eliminate or minimise the risks as far as reasonably practicable;

(b) the performance standards to be achieved by either individual measures or some combination of measures;

(c) management systems, practices and procedures that are to be applied to monitor and manage risks and compliance with performance standards;

(d) an outline of the roles and responsibilities of personnel accountable for the implementation, management and review of the risk management plan.”

e) specified information concerning community engagement and consultation requirements in accordance with s 39A of the MRSD Act (r 46).

134 Guidance concerning the contents of work plans is provided in a document titled *Preparation of Work Plans and Work Plan Variations - Guideline for Mining Projects* (December 2020, version 1.3).<sup>66</sup>

135 Section 42 of the MRSD Act provides that the holder of a mining licence must not carry out any work unless:

a) an approved work plan is in place (s 42(1)(a));

b) the licensee has entered into a rehabilitation bond in accordance with section 80 (s 42(1)(b));

c) the licensee has “obtained all the necessary consents and other authorities required by or under this or any other Act” (s 42(1)(c)); and

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<sup>66</sup> Available from the following webpage: <https://earthresources.vic.gov.au/legislation-and-regulations/guidelines-and-codes-of-practice/work-plan-guidelines-for-mining-licences>. Note that p ii of the Guidelines state: “These Guidelines were first released in January 2019. They were updated in September 2019 to reflect changed requirements in the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019 and updated in December 2020 to clarify that the guideline should be used for an application for a work plan as an outcome of an Environmental Effects Statement.”

- d) if the land is private land (rather than Crown Land), the licensee has obtained landowner consent, purchased the land or entered a compensation agreement with the landowner pursuant to the Act (s 42(1)(h)).

136 Sections 42(6)-(7) ousts requirements under the *Planning and Environment Act 1987* in certain circumstances, providing:

“(6) Despite anything in any planning scheme approved under the *Planning and Environment Act 1987*, the holder of a mining licence or prospecting licence may be granted a permit under the scheme for carrying out mining on the land covered by the licence even if the scheme prohibits that use or development of the land (whether absolutely or unless specified conditions are complied with) and does not provide for the granting of a permit for that use or development.

(7) If under subsection (6) or any planning scheme a permit is required to be obtained for carrying out mining on the land covered by a mining licence or prospecting licence in accordance with that licence, the licensee is not required to obtain a permit for that work if—

(a) an Environment Effects Statement has been prepared under the *Environment Effects Act 1978* on the work proposed to be done under the licence; and

(b) an assessment of that Statement by the Minister administering the *Environment Effects Act 1978* has been submitted to the Minister.”

137 On the basis that none of the proposed activities associated with the Project within the mining licence area are prohibited under the Planning Scheme, but do require a planning permit, then sub-section (7) applies. Accordingly, a permit will not be required for Project works within the mining licence area, as the works are being assessed under the *Environment Effects Act 1978*. However, permit requirements would apply outside the mining licence area, hence Amendment C156 is being pursued to streamline and consolidate the various permit triggers that would arise under the existing controls in the Planning Scheme.

138 Part 7 of the MRSD Act sets out rehabilitation requirements for mines.

139 Section 78 requires a licence holder to rehabilitate land in accordance with a rehabilitation plan approved by the Department Head.

140 Section 79 sets out what a rehabilitation plan must include. It states:

**“79 Rehabilitation plan**

A rehabilitation plan must—

(a) take into account—

(i) any special characteristics of the land; and

(ii) the surrounding environment; and

(iii) the need to stabilise the land; and

(iv) the desirability or otherwise of returning agricultural land to a state that is as close as is reasonably possible to its state before the mining licence, prospecting licence or extractive industry work authority was granted; and

(v) any potential long term degradation of the environment”.

141 Section 80 requires a licensee to enter a rehabilitation bond for an amount determined by the Minister.

142 Section 81 requires a licence holder to “rehabilitate land in the course of doing work under the authority” and must “as far as practicable, complete the rehabilitation of the land before the authority or any renewed authority ceases to apply to that land.”

143 Section 81A establishes a certification process to determine whether the land has been rehabilitated.

144 Section 82 provides for the return of the rehabilitation bond if rehabilitation is satisfactory.

#### *Incorporated Document*

145 Requirements under the Incorporated Document, and the endorsed plans and reports under it, are enforceable the *Planning and Environment Act 1987*.

146 If the use or development of the land contravenes these controls, then a responsible authority or “any person” may apply to the Victorian Civil and Administrative Tribunal for an enforcement order.<sup>67</sup> An enforcement order is remedial in nature and may require remediation of land or other steps to bring about compliance with the Planning Scheme.<sup>68</sup>

147 In addition, it is an offence to use or develop land in contravention of the Planning Scheme.<sup>69</sup>

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<sup>67</sup> *Planning and Environment Act 1987*, s 114.

<sup>68</sup> *Planning and Environment Act 1987*, s 119.

<sup>69</sup> *Planning and Environment Act 1987*, s 126.

## IAC PROCESS TO DATE

### *Expert evidence*

148 All expert evidence filed in this matter is available on the Engage Victoria website with the key ‘groupings’ of this evidence summarised in the following table:<sup>70</sup>

<b>Date</b>	<b>Party</b>	<b>Comment</b>
2 February 2021	Proponent	No centrifuges
2 February 2021	MFG	No centrifuges
2 February 2021	Council	No centrifuges
8 and 9 February 2021	Proponent	Supplementary statements (re. centrifuges)
12 March 2021	MFG	Re. centrifuges
12 March 2021	Council	Re. centrifuges and updated ecology information (Mr Lane)
22 March 2021	MFG	Further statements re. centrifuges (Ms Drake and Ms Jasonsmith)

### *Technical notes*

149 Like previous EES advisory committee processes, the Proponent will use technical notes to provide additional information of a technical nature to the IAC and submitters concerning the Project/

150 To date, the following technical notes have been prepared and circulated to the IAC and submitters:

<b>Technical note</b>	<b>Tabled doc. no.</b>	<b>Date</b>	<b>Topic / title</b>
001	43	18 Jan 2021	<b>Centrifuges</b> Implementation of centrifuges for water recovery and tailings management
002	109	8 Feb 2021	<b>Expert recommendations</b> Response to IAC Request for Information – Part 2.1, questions 1 and 2
003	110	8 Feb 2021	<b>EMF implementation and enforcement</b> Response to IAC Request for Information – Part 2.3, questions 4-6

<sup>70</sup> <https://engage.vic.gov.au/fingerboards-IAC/Fingerboards-IAC-expert-evidence>

004	145	23 Feb 2021  Revised 19 April 2021	<b>Sensitive receptors map (includes air, noise and visual assessments)</b> Response to IAC Request for Information – Part 2.8, questions 23 and 24  19 April 2021 revision takes into account concept designs for haul road and rail siding (Tabled Documents 55-59)
005	111	8 Feb 2021	<b>Project scheduling</b> Response to IAC Request for Information – Part 2.2, question 3
006	112	8 Feb 2021	<b>Infrastructure design</b> Response to IAC Request for Information – Sections 2.4-2.5, questions 8, 10, 11, 12. Attachments include design of freshwater dam,
007	146	23 Feb 2021	<b>Dust deposition rates</b>
008	120	8 Feb 2021	<b>Cultural heritage</b> Response to IAC Request for Information – Part 12
009	121	8 Feb 2021	<b>Title details for land subject to Specific Controls Overlay</b> Response to IAC Request for Information – Part 15.1, question 139
010	147-148	23 Feb 2021	<b>Landscape and visual RFI response (with accompanying ‘graphics package)</b> Response to IAC Request for Information – Section 10 (Landscape and Visual), questions 79-92 and 95-98
011	140	11 Feb 2021	<b>Consultation for agricultural and horticultural assessments</b> Response to IAC Request for Information – Part 11.1, question 102
012	149	23 Feb 2021	<b>Lists of residences within certain distances of the Project (redacted for privacy reasons)</b> Response to IAC Request for Information – Questions 82 and 120
013	192	12 March 2021	<b>Expert recommendations arising from expert evidence</b> (with cross references to EMF and Mitigation Register)



014	194	12 March 2021	<b>Changes and impacts to Project resulting from centrifuges (includes test work on use of centrifuges with sample Fingerboards tailings)</b>
015	216	26 March 2021	<b>Visual impact – centrifuges</b> Response to IAC Second Request for Information — Centrifuges – C11
016	222	9 April 2021	<b>Water Infiltration Rate Monitoring and Soil Data Results</b>

## **NEXT STEPS**

- 151 This Part A submission comprises the introductory parts of the Proponent’s case and sets out relevant background information.
- 152 The Proponent also intends to present a Part B submission, likely after calling its evidence, which will focus more directly on issues and questions emerging from the evidence.

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**Sean McArdle**

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**Instructed by White & Case**  
**Date: 26 April 2021**