

Fingerboards Critical Minerals Project

Application Number: **03005**

Commencement Date:

Status: **Locked**

21/07/2025

1. About the project

1.1 Project details

1.1.1 Project title *

Fingerboards Critical Minerals Project

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Mineral sand mine

1.1.4 Estimated start date *

01/01/2029

1.1.4 Estimated end date *

31/12/2055

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Gippsland Critical Minerals Pty Ltd (GCM) is proposing to develop the project in the East Gippsland region of Victoria (refer to **Attachment 1 –Figure 1: Project location**). The project would involve the extraction and processing of 156 million tonnes (Mt) of mineral sand ore to produce approximately 6.1 Mt of heavy mineral concentrate (HMC) over an approximate 22-year period using a mining technique incorporating progressive backfill and rehabilitation.

Progressive rehabilitation would fill open voids generally within 12 months with tailings, overburden and soils, to minimise the active mining footprint at any given point in time and then returning the majority of land back to pasture, with the remaining areas targeted for establishment of native vegetation communities closely resembling the naturally occurring ecosystems in the locality.

The overall duration of the Project is approximately 22 years, with an additional 18 months required for site preparation, construction and commissioning, and 2 to 3 years of decommissioning, further rehabilitation and post-closure management following the end of operations.

The Project area comprises the Mine Licence Area (MLA) and the Infrastructure Area (IA) and is presented in **Attachment 1 – Figure 2: Project overview**. The MLA includes approximately 1,900 hectares (ha) that is proposed to be directly disturbed by mining and associated activities. In the order of 210 ha is required for the IA over the life of the Project, not including the Latrobe Group Aquifer Borefield Investigation Area

The MLA would comprise:

- the process area
- administration offices, ablutions block, laboratory, workshop, back-up power plant and laydown areas
- temporary overburden stockpiles
- culvert road crossings for piping underneath roads and level crossings for the intermittent movement of equipment across public roads
- internal haul roads and associated drainage infrastructure
- boundary and security fencing
- mining contractors' area including offices, laydown area, maintenance facilities, workshop, wastewater treatment plant, fuel and lubricant storage, vehicle washdown and tyre change area.
- a temporary construction accommodation camp (within the MLA or wider Project area).
- non-process infrastructure such as overhead 22kV powerlines, water storage dams, pipelines, pump stations and radio repeater stations
- mining areas within:
 - the West Pit (490 ha, estimated ore reserve of 58.2 Mt)
 - the East Pit (380 ha, estimated ore reserve of 92.3 Mt)
 - four smaller satellite pits (collective area of 66 ha, estimated ore reserve of 6.3 Mt)
- overland and/or relocatable conveyors
- various water management dams and associated infrastructure
- site entrance and access road
- temporary partial relocation of the Bairnsdale Dargo Road

The IA would comprise ancillary infrastructure required to support mining operations located outside the MLA:

- a pump station and pipeline to supply water to the project from Mitchell River
- a groundwater borefield and associated pipeline to supply water to the project from the Latrobe Group Aquifer
- an offsite freshwater storage dam
- a purpose-built rail siding comprising trackwork, container hardstand areas and ancillary facilities such as a combination admin/ablution building of a demountable construction style.
- an infrastructure corridor from the ore processing plant to the rail siding which consists of
 - an internal haulage road
 - 66 kV and 22 kV powerlines

- a 66/22 kV substation
- a water pipeline from the groundwater borefield

Key construction activities

The site preparation and construction work to enable mining to occur will take approximately 18 months to complete and include:

- **Earthworks and Civil Works:** earthworks would take place across multiple sites including the ore processing plant, Mitchell River pump station, internal haul road, Fernbank East rail siding and water pipeline corridors. An on-site borrow pit would be used for local material extraction, with crushing and screening equipment on site. Subsoil and topsoil would be cleared and stockpiled, and pipelines, dams, roads, and carparks constructed progressively or in parallel depending on resource availability.
- **Structural, Mechanical and Piping Construction:** structural and piping works would follow earthworks. Once the processing plant site is ready, overland pipelines for ore slurry and tailings would be installed, followed by mechanical assembly from ground level up. High voltage cabling to the MLA would also be laid during this phase.
- **Electrical and Instrumentation Construction:** after lower-level mechanical works are done, electrical and instrumentation installation would begin. This includes cabling, trays, switch rooms, and instruments, preparing the plant for verification and commissioning.
- **Mine Development:** clearing of the initial mining commencement block, stripping and stockpiling of topsoil and subsoil followed by the removal of overburden and transporting it to an out of pit stockpile area. Ore would be mined and stockpiled adjacent to the mining area as commissioning ore.
- **Commissioning:** the commissioning phase starts once the plant is verified and powered. Required infrastructure like water storage and pipelines would be in place. Dry commissioning involves testing drives, systems, and controls without water or feed. Follow-up stages include water circulation tests and dry runs of conveyors and feeders to fine-tune performance.

Key operational activities

- **Mining:** Mining operations would occur 24 hours a day for 365 days a year. The various mine pits (**shown in Attachment 1 - Figure 3: Project Pit Layouts**) would be progressively mined to an average depth of 23 metres (m) with a maximum depth of approximately 58 m in the southern areas of the mining area. The mining is excluded from a 1.5 km buffer to the Lindenow Valley Horticulture Area and three large gullies that are located between the pits and the Mitchell River.
- **Ore processing:** Ore processing consists of three areas including the Mobile Mining Units (MMU), the Wet Concentrator Plant (WCP) and the product filtration and storage area. A combined average rate of 900 tonnes per hour of ore would be fed into two MMUs where oversize material is removed, and the remaining ore sand mixed with water and pumped to the WCP. After an initial feed preparation stage to remove further oversize material and fine particles, the heavy mineral would be separated from the ore in the WCP using gravity separation equipment before filtration and final product handling in the concentrate shed. Approximately 4-5 percent of the ore is separated as HMC while the remaining material, primarily tailings, is returned to tailings cells within the mine voids.
- **Tailings management:** Sand tailings and fine tailings from the WCP would be homogenised and placed into tailings cells within the mine voids in a continuous backfilling process known as co-disposal. Material will be pumped from the WCP to the tailings cell as a slurry using water as the fluid, with flocculant added immediately prior to deposition. Decant water recovered after deposition of the tailings into the void will be returned to the process water pond.
- **Transport:** HMC would be loaded into half height containers inside the concentrate shed and transported by truck from the MLA to a new proposed Fernbank East rail siding via an internal haul road. The covered shipping containers would be loaded onto the rail wagons and then transported by rail to the port (Melbourne or Geelong) for bulk shipment to mineral sand processors for further processing and separation into final mineral products.

- **Water management:** The project requires approximately 3.0 gigalitres (GL) of make-up water each year to support construction earthworks, ore processing, tailings management, dust suppression, rehabilitation and contingency. To reduce system pressure and strengthen regional water security, GCM is pursuing a diversified supply strategy. Sources under assessment include a surface water winter offtake from the Mitchell and/or Macalister River systems, groundwater from the Latrobe Group Aquifer via a borefield south of the mine, and recycled water from the Bairnsdale Wastewater Treatment Plant. A freshwater storage dam would also be built to hold water harvested under the winter-fill licence.

Key decommissioning activities

Progressive rehabilitation would occur during operation and include the following activities:

- progressive backfilling of mined areas with tailings and overburden
- allowing disposed tailings and overburden material in the pit to consolidate and dry sufficiently to support earthmoving machinery
- contouring the area to landforms designed for productivity and long-term stability and to re-establish drainage patterns
- preparation and placement of ameliorated subsoil
- applying and replacing topsoil
- applying gypsum and other required soil conditioners
- planting cover crop and/or pasture or native vegetation

Apart from the Fernbank East rail siding and the freshwater storage dam with its associated pump and pipe infrastructure, all other mine infrastructure and services would be decommissioned and removed as part of mine closure activities. The following activities would be undertaken as part of decommissioning:

- decontamination of all plant and equipment through draining and removal of all liquids, solids and any potentially hazardous materials
- dismantling and removal of mine infrastructure
- demolition of buildings / structures and appropriate disposal of building materials, foundations and other waste
- decommissioning and removal of services infrastructure
- recycling of scrap metal and other recyclable materials at offsite recyclers
- decommissioning of the 14 water management dams across the project area once it has been determined that runoff from the catchment does not require active management
- contamination assessments to identify any potential soil contamination and remediation as required to a standard compatible with post-mining land use / acceptance criteria

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

No

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

The Project area is located entirely within the East Gippsland Shire and is covered by the East Gippsland Planning Scheme.

The relevant zoning in the Project area comprises:

- FZ - Farming Zone is the predominant zoning of the MLA and IA, including the land currently used for agricultural and timber production, and local roads Fernbank-Glenaladale Road, Chettles Road and Limpyers Road
- TRZ2 – Principal Road Network for Bairnsdale-Dargo Road

Zoning of land surrounding the Project area includes:

- PCRZ - Public Conservation and Resource Zone for the state forest to the northwest of the Project area, reserves to the west and Saplings Morass near the southern section of the IA, and Perry River and Mitchell River frontage
- TRZ1 – State Transport Infrastructure for the Bairnsdale Railway Line south of the Fernbank East rail siding
- TRZ2 – Principal Road Network for Princes Highway south of the Latrobe Group Aquifer borefield

These zones are depicted in **Attachment 1 - Figure 5: Planning Zones**.

Land within the Project area is subject to the following overlays:

- EMO - Erosion Management Overlay applies to much of the east and northeast of the Project area.
- VPO - Vegetation Protection Overlay applies to parts of some of the road reserves within the Project area.
- ESO51 - Environmental Significance Overlay applies to patches of vegetation within road reserves in and adjacent to the Project area.
- BMO - Bushfire Management Overlay applies to much of the Project area, predominantly in the eastern and western ends of the MLA.
- DDO - Design and Development Overlay applies to areas of the Latrobe Group Aquifer borefield investigation area adjacent to the Princes Highway
- ESO38 - Environmental Significance Overlay applies to and adjacent to the Mitchell River frontage, which intersects with a small section of the IA

Additional overlays in land adjacent to the Project area include:

- LSIO - Land Subject to Inundation Overlay applies to land adjacent to the Mitchell River Pump Station and Pipeline Corridor, within the Mitchell River floodplain

These overlays are depicted in **Attachment 1 - Figure 6: Planning Overlays**:

The approvals that will or are likely to be required for the project are listed below. The approvals will generally require evidence of the proponent's assessment of the potential environmental impacts, continued stakeholder engagement and consultation and approval of relevant environmental management and planning documents.

Under the Victorian approval process, the Minister for Planning's assessment of the project under the EE Act informs the decision of other statutory decision-makers with statutory approval responsibilities for the project.

Commonwealth

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act): An EPBC Act referral will be submitted for the project. If the project is determined to be a 'controlled action', assessment and approval under the EPBC Act will be required. As the Victorian Minister for Planning has determined that the project requires an Environment Effects Statement (EES) under the Victorian

Environment Effects Act 1978, the EES can be used as the accredited assessment process under the bilateral agreement between the Commonwealth and the state of Victoria.

State

- *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act): GCM requires a mining licence and an approved work plan under the MRSD Act to construct, operate and rehabilitate the project.
- *Planning & Environment Act 1987* (P&E Act): Approval to use and develop land under the P&E Act is required for associated infrastructure on land that is not covered by a mining licence.
- *Aboriginal Heritage Act 2006*: A Cultural Heritage Management Plan (CHMP) approved by FP-SR (in consultation with GLaWAC) will be required.
- *Environment Protection Act 2017*: An A18 permit may be required for the deposition of tailings into tailings cells within the mine void.
- *Radiation Act 2005*: An operator licence, a management licence, or both, will be required for managing radiation safety aspects of the mining and mineral sands processing operations, including waste disposal. An approved radiation management plan, radioactive waste management plan and radiation environment plan will also be required for the project.
- *Water Act 1989*: A number of licences and permits are required for this project under this act:
 - The project will require licences to take and use water from the Mitchell River and to construct catchment dams. A licence to construct works (on a waterway) will also be required for the Mitchell River offtake structure, pump station and pipeline.
 - A take and use licence and bore construction permits will also be required to extract groundwater from the Latrobe Group Aquifer.
 - Works on waterways permits will be required for all waterway crossings outside the mining area, including pipeline and access crossings associated with the borefield.
- *Flora and Fauna Guarantee Act 1988*: A permit is required to take, keep or move protected flora and fish from public land and where protected flora needs to be removed or recovered and translocated to allow mining to occur, or where fish need to be captured and relocated to enable diversion of watercourses.
- *Wildlife Act 1975*: A licence to undertake fauna surveys and a permit to take or destroy endangered, notable and protected wildlife including translocation activities will be required.
- *Road Management Act 2004*: Road closure, diversion and/or opening permits may be required.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

GCM recognised the need to modify the engagement approach from that undertaken with the larger scale project prepared by Kalbar Operations Pty Ltd and exhibited under the *Environment Effects Act (Vic)* (the 2021 project). Engagement activities during this period focused primarily on one-on-one meetings with landowners, neighbours, key local stakeholders and Victorian Government meetings, as well as email and website communications. Further detail regarding the changes to the design and scope between the 2021 project and the current project are provided in **Attachment 2 - GCM Design Changes to Address Impacts**.

In February 2023, to reflect the new investment from Appian Capital and associated governance arrangements, Kalbar was renamed as Gippsland Critical Minerals to better describe the project and its geographic location.

In 2023, sentiment analysis and surveys were undertaken by a third party to establish a baseline for community sentiment about the project, as well as to guide GCM's approach to engaging with and communicating with the community and key stakeholders. At this time GCM also undertook engagement and consultations via a third party with a representative sample of the local community and key stakeholder groups to inform the development of its community engagement plan.

Following renewal of the Retention Licence (RL) RL2026 in October 2024, GCM has commenced the implementation of a program of community engagement events that has the initial objective of the following:

- inform on the changes to the project to address the issues from the 2021 project
- allow community to relay issues and concerns to GCM on any aspect of the project

The community engagement activities have been expanded across East Gippsland and Wellington Shires, to include a mix of drop-in sessions, targeted briefings, and one-on-one engagements with key community stakeholders including landowners, farming groups and Traditional Owner groups.

These meetings are supported by clear and consistent messaging to address common questions with new materials such as maps, fact sheets, and consistent website updates assisting with the dissemination of transparent information. To further support GCM's commitment to transparency, additional engagement materials have been made available on the project's website, including videos & transcripts of webinars, presentation materials, and meeting speaking notes where appropriate.

GCM has also advanced efforts to engage the broader community by hosting eight (as of February 2026) GCM Community Reference Group meetings. The Community Reference Group is a community body made up of a diverse group of members. The Group's meetings provide a forum for detailed project briefings and the opportunity to ensure the community's views shape key project milestones.

To further support GCM's broader community engagement there has also been program of high-visibility community communications including bi-monthly newsletters & flyers, advertising, social media posts and local media releases and interviews.

In summary, since RL renewal, and using a wide range of tools to engage, GCM has logged the following number of interactions relative to 434 individuals and 195 organisations:

- Website visits: 9,500
- AskMe Chatbot: 339 individuals exchanging 3,100 messages
- Emails: 1,868
- Phone Calls: 465
- Events: 16 (estimated 320 individuals)
- Meetings: 312

GCM will continue to consult and engage with the community and stakeholders to improve transparency and build awareness of the project, provide opportunities to be involved in the project development and decision-making process and to address community and stakeholder concerns about the project.

GCM has developed a Preliminary Consultation Activities Plan which provides the strategic framework that will underpin the communication and engagement requirements for the project and outlines the specific actions to be taken throughout the development of the project.

A more formal Stakeholder Engagement and Consultation Plan which outlines the methods and materials to be used during the engagement process will be developed. Once dates and activities are confirmed, a formal schedule of activities with accountabilities will be developed and incorporated into the plan to facilitate the appropriate dissemination of information and provide stakeholders with the opportunity to communicate concerns. It is likely that this plan will need formal approval by the relevant regulatory authority(s) as part of the formal approvals process required for the project.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

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Confirm that you have read and understand this Privacy Notice *

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN 20093846925
Organisation name AECOM Australia Pty Ltd
Organisation address Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008

Referring party details

Name Yasiru Karunaratne
Job title Principal Environmental Engineer
Phone 1800 868 654
Email yasiru.karunaratne@aecom.com
Address Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN 30635720759
Organisation name Gippsland Critical Minerals Pty Ltd
Organisation address 1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

Person proposing to take the action details

Name Stefan Wolmarans
Job title Project Director
Phone 1800 791 396
Email swolmarans@gippslandcriticalminerals.com
Address 1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

Gippsland Critical Minerals Pty Ltd (GCM) has been established to develop the Fingerboards Critical Minerals Project (the Project). GCM is jointly owned by Australian-owned REZir Ltd and Appian Capital Advisory (Appian Capital), a leading global investor in critical minerals projects, with a track record of high-quality project delivery. Work to develop part of the Glenaladale Deposit, has been under development for nearly two decades – first by Rio Tinto and then by Kalbar Operations Pty Ltd who submitted an EES on the 2021 project.

The Project is led by a team of in-house professionals with extensive experience across the full lifecycle of resources and construction projects. This includes planning, social license and community engagement, benefit sharing, legal governance, environmental sustainability, design, construction, operation, rehabilitation and decommissioning, both in Australia and internationally. The team has proven expertise in the design, construction and operation of critical minerals mining projects, project governance, communications and community engagement.

GCM recognises the need to do things differently to create a successful project and the project development is being re-scoped to reduce and mitigate environmental impacts and include a major commitment to community consultation and benefit sharing. Since the establishment of GCM, the project team has undertaken numerous investigations to develop a comprehensive understanding of the existing conditions of the area and to design a project that avoids and minimises impact to the existing environment. GCM aims to set the standard as a sustainable and environmentally-responsible mining project that successfully co-exists with East Gippsland's agricultural and horticultural industry, the local community and First Nations peoples

GCM holds and successfully manages two retention licences, RL2023 and RL2026, with the Project located within the RL2026 retention licence area. The retention licence gives GCM tenure over the land, which requires GCM to continue to investigate the viability of the Project, progress environmental studies and apply for the approvals required for the Project.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

The project will be undertaken in accordance with leading national and international standards that GCM have adopted for environmental and social sustainability, including:

- the 'Towards Sustainable Mining' ESG Framework developed by the Minerals Council of Australia
- the International Finance Corporation World Bank Group, Performance Standards on Environmental and Social Sustainability, and
- the Equator Principles international framework for assessing and managing environmental and social risks in projects.

A summary of GCM's approach to environmental management of the project is provided below:

- **Establishing buffer zones:** GCM will establish a 1.5 km buffer zone and protect the Simpson, Lucas Creek, and Perry gullies to provide further separation from the Lindenow Valley Horticultural District (LVHD) and reduce the impact of the project on biodiversity.
- **Re-examining mine processing to reduce impact:** GCM will continually seek to iterate and improve the project mining methodology to incorporate technical advances in mineral sands mining, minimise environmental and other impacts and allow for continuous backfill and land rehabilitation.
- **Conducting new technical studies:** GCM will undertake new studies and use the best available information and evidence to identify how the project can be re-baselined to prevent, minimise, mitigate or remediate impacts specifically from dust and noise, and protect native vegetation and biodiversity. The studies will be undertaken by qualified independent experts. Where necessary, to provide surety to the local community and government, GCM will seek independent involvement and peer review.
- **Seeking out community input to identify opportunities to improve:** GCM will engage with stakeholders during planning and operations to identify further opportunities to improve local outcomes.
- **Reducing water usage and minimising waste:** GCM will undertake further studies to investigate ground and surface water to strengthen the understanding of water availability and opportunities to minimise water requirements in mining operations. GCM will work to ensure the efficient use of water, energy and other natural resources is embedded into design and operational practices with a focus on reducing waste and maximising recycling.
- **Restoration and Rehabilitation:** GCM is committed to rehabilitate the mining area including restoring land for future agriculture use. Some selected areas will be rehabilitated with native vegetation.
- **Reducing emissions and offsetting climate impacts:** GCM intends to focus on opportunities to use renewable energy, implement low carbon solutions and use carbon offsets to reduce climate impacts in the extraction of the minerals, recognising critical minerals and rare earth elements are a vital part of enabling Australia's transition to net zero.
- **First Nations engagement:** GCM will conduct further studies, working with Indigenous groups, on local cultural heritage values. Listening to and engaging with First Nations Peoples will also be an essential part of ensuring the project's approach to environmental management, benefits from traditional knowledge systems.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	30635720759
Organisation name	Gippsland Critical Minerals Pty Ltd
Organisation address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

Proposed designated proponent details

Name	Stefan Wolmarans
Job title	Project Director
Phone	1800 791 396
Email	swolmarans@gippslandcriticalminerals.com
Address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

1.3.4 Identity: Summary of allocation

✔ Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	20093846925
Organisation name	AECOM Australia Pty Ltd
Organisation address	Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008
Representative's name	Yasiru Karunaratne
Representative's job title	Principal Environmental Engineer
Phone	1800 868 654
Email	yasiru.karunaratne@aecom.com
Address	Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008

✔ Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	30635720759
Organisation name	Gippsland Critical Minerals Pty Ltd
Organisation address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864
Representative's name	Stefan Wolmarans
Representative's job title	Project Director
Phone	1800 791 396
Email	swolmarans@gippslandcriticalminerals.com
Address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

✔ Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

Yes

1.4.10 Enter purchase order number *

PO-0369

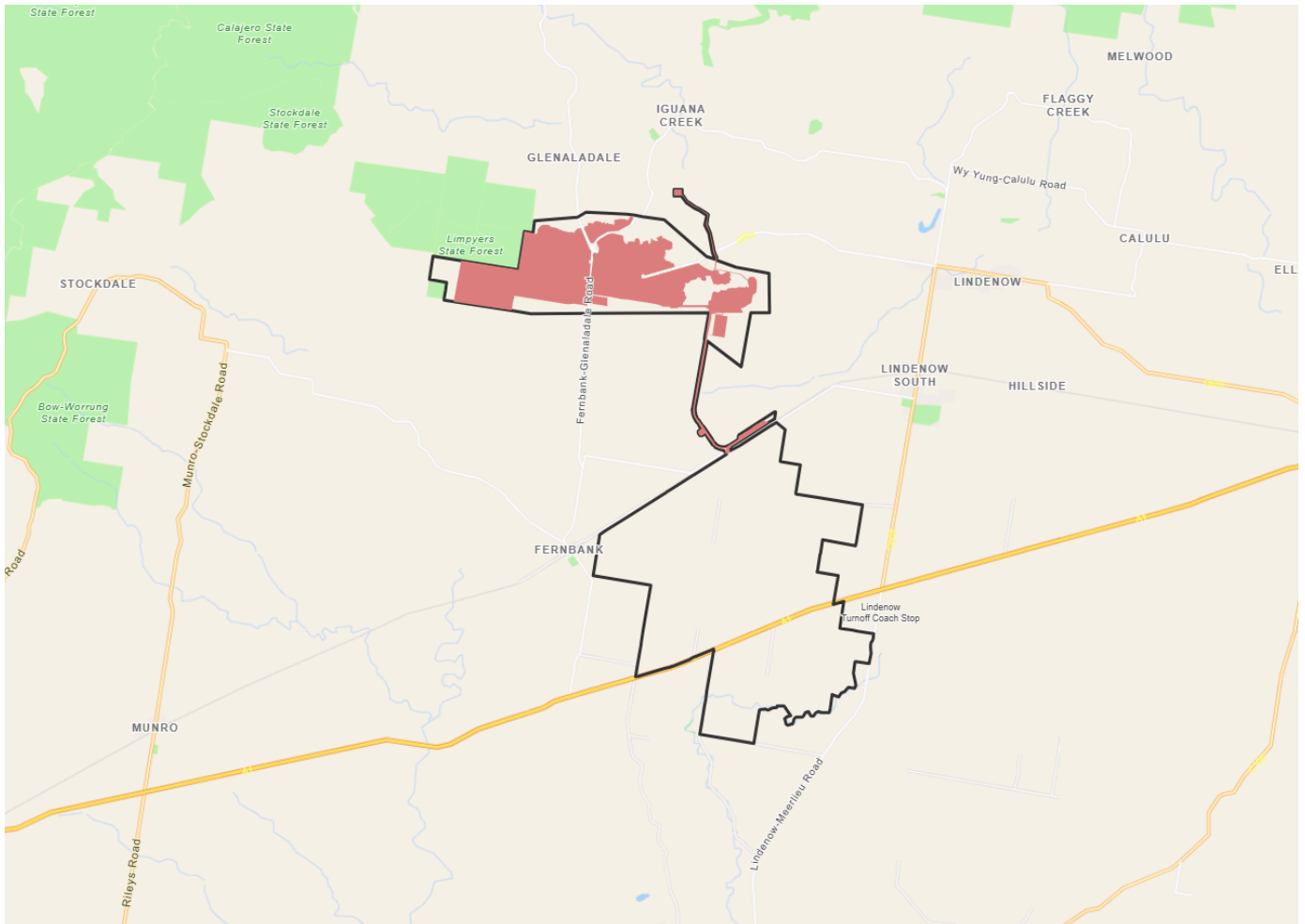
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 6140.63 Ha Disturbance Footprint: 1283.98 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

1265 Fernbank-Glenaladale Road, Fernbank VIC 3864 Australia

2.2.2 Where is the primary jurisdiction of the proposed action? *

Victoria

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The majority of the project area is located on freehold land (owned privately) for agriculture and plantation forestry. However, there are several parcels on Crown land which are shown in **Attachment 1 – Figure 10: Land tenure**. Crown land parcels in the project area include road reserves that are administered by the Department of Transport and Planning (DTP) and East Gippsland Shire Council. Crown land agreements, leases or licenses would be established with the State for these road reserves prior to the commencement of construction.

GCM has purchased the majority of land required for development within the project area as shown in **Attachment 1 – Figure 10: Land tenure**. All landowners whose property would be impacted by mining would be compensated in accordance with relevant legislation and guidelines.

In 2010, the Federal Court determined under the *Native Title Act 1993 (Cth)* that the Gunaikurnai people hold native title over much of Gippsland. In addition to this, the Gunaikurnai people have entered into an agreement with the Victorian Government under the *Traditional Owner Settlement Act 2010 (Vic)*, which formally recognises them as the traditional owners over land the Project area intersects. The Gunaikurnai hold native title interests over parcels of Crown land throughout the Project area

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The project is situated in the East Gippsland region of Victoria, approximately 200 km east of Melbourne and 25 km west of Bairnsdale. The Project is located on Gunaikurnai Land in the East Gippsland Shire (**Attachment 1 – Figure 1: Project location**). The project area is located on dry grazing farmland and timber plantations on an elevated pastoral plateau adjacent to the Mitchell River at an altitude of approximately 100-150 m above sea level.

Geology and soil types

The project area is located within the eastern lowlands subregion of the Gippsland Lakes Basin, which consists of fans, terraces and floodplains. The Haunted Hills Gravels outcrop extensively across the project area. Overlying soils are sodic and affected by gully and tunnel erosion in areas of steeper gradient. Underlying the Haunted Hill Formations are the fine sands of the Coongulmerang Formation which host the Glenaladale mineral sands deposit. Geologically, the oldest exposed rocks are Cambrian submarine basic volcanics, associated sediments and intrusive rocks (Aldrick et al., 1984).

The Gippsland Lakes Basin is broadly divided into two regions; the hills and mountains on consolidated rocks (high and the relatively flat terrain at low elevations (lowlands)). Within the project area soils are characterised by pale sands and duplex soils (brown kurosols and sodosols) with low compaction and high leaching (DEECA, 2024b). Soils in the western portion of the project area were observed to be shallow or absent of topsoil, nutrient poor, rocky and with dispersive subsoil (Coffey 2015 study). Soils in the eastern lowlands are prone to gully, wind, rill and tunnel erosion and are moderately well drained (DEECA, 2024b).

Drainage/waterways

The project area is located on a tableland to the west of the lower floodplains of the Mitchell River. A number of small, ephemeral tributary streams drain the central and eastern half of the project area to the Mitchell River which flows to the east of the project area and outlets into Lake King south east of Bairnsdale. The far southwestern part of the project area drains south to the Perry River. The Perry River flows south to join the Avon River at Lake Wellington east of Sale.

Native/exotic vegetation cover

The project area spans two Victorian bioregions, Gippsland Plain and East Gippsland Lowlands. The west of the project area lies within the East Gippsland Lowlands bioregion, which transitions to the Gippsland Plain bioregion in the south and east of the project area. The Gippsland Plain bioregion consists of flat low lying coastal and alluvial plains with gently undulating terrain dominated by barrier dunes and floodplains and swampy flats generally below 200 m above sea level (DEECA 2024b). The bioregion retains native vegetation in a highly fragmented pattern, reflecting a variety of land-use histories in the region.

The Project area reflects typical East Gippsland landscapes, featuring farmed and grazed farmed and grazed pastures, derived native grasslands, remnant vegetation, and regrowth from past clearing. A timber plantation occupies around 450 ha in the western section of the project area. The majority of the land within the project area is classified as modified or disturbed due to agricultural practices and is dominated by pasture supporting non-indigenous grasses and weeds. Native vegetation remains primarily along roadsides and gullies. These areas contain well-connected remnants, alongside smaller fragmented patches and scattered trees in more altered zones (EHP, 2020).

Physical features

No notable physical features are located within or adjacent to the project area other than those mentioned in the previous sections.

Built structures

Four residential properties lie within the MLA, three of which are owned by GCM. A further six properties are located within the IA.

There are 12 dwellings within 1km of the MLA, including two owned by GCM. There are a further 14 dwellings within 1km of the IA.

There is a range of agricultural infrastructure (e.g. water tanks, farm dams, existing groundwater bores, sheds, access roads, fences and channels) located within the project area. Other built structures within the project area include a communication tower, powerlines and underground telecommunications cables.

Road frontages

The two main roads that traverse the project area include the Fernbank-Glenaladale Road (local road) and the Bairnsdale-Dargo Road (declared road) as shown in **Attachment 1 – Figure 2: Project overview**. There are a number of other minor roads within or in proximity to the Project area including local roads, farm access tracks and plantation access tracks.

3.1.2 Describe any existing or proposed uses for the project area.

The project area is located on dry grazing farmland and timber plantations on a plateau adjacent to the Mitchell River at an altitude of approximately 100-150 m above sea level. Dryland agricultural uses within the project area include grazing of livestock (beef cattle and sheep for wool). There are two remaining areas of blue gum plantation (approximately 120 ha) within the western portion of the project area. Previous fire damaged areas of blue gum on the western side of the Fernbank-Glenaladale Road, were cleared a decade ago and are currently used for cattle grazing.

Two main roads traverse the project area, the Bairnsdale-Dargo Road and the Fernbank-Glenaladale Road, which meet at the Fingerboards intersection, roughly in the centre of the MLA. There are areas of remnant native vegetation and large trees on the road reserves within the project area. A number of erosional gullies, containing some remnant vegetation, drain north and east from the project area into the Mitchell River catchment.

Surrounding land uses include wool and meat sheep production, grazing beef and dairy cattle, vegetable production and broadacre cropping, timber production and areas of native vegetation suitable for conservation, recreation and tourism purposes. The settlements around the project area include Walpa, Lindenow South and Lindenow to the east, Fernbank to the south, Glenaladale to the north, and the Melbourne - Bairnsdale railway passes to the south of the project. The Mitchell River National Park lies approximately 4 km northeast of the project area.

Private residences are the main sensitive human receptors within a 5 km radius of the project, along with one school at Lindenow South and a number of industrial packing sheds for vegetables and produce. No hospitals or churches are located within a 5 km radius of the project. The locations of residential properties within and around the project area are shown in **Attachment 1 – Figure 4a to 4h: Sensitive receptors**. Four residential properties lie within the project Area, three of which are owned by GCM. There are 12 dwellings within 1 km of the MLA, including two owned by GCM. There are a further 14 dwellings within 1 km of the IA.

Horticultural businesses are located on the opposite side of the Mitchell River (adjacent to the northeastern boundary of the project area and within the Mitchell River flats). Further to the east the horticultural area extends to both sides of the river. A 'buffer zone' of 1.5 km is part of the project to increase the separation distance between these businesses (within the Lindenow Valley) and any mining activities.

Other types of sensitive receptors include nearby surface water bodies, existing groundwater bores and public roads and infrastructure. A telecommunications tower is located within the southern boundary of the MLA and would not be disturbed by mining. Other types of public infrastructure surrounding the project area include electrical transmission lines, optic fibre networks and copper telecommunications lines.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

Much of the indigenous vegetation and good quality terrestrial fauna habitat remaining within and around the project area is confined to roadsides and the dissecting gullies, which have been less affected by past land clearing and sustained agricultural land use. The large and relatively well-connected remnants in these areas are complimented by smaller, fragmented patches of native vegetation and scattered trees which persist in modified areas.

Gullies in the eastern half of the project area have been identified as avoidance areas and direct impacts on the native vegetation and potential habitat in these areas will be avoided where possible. These gullies are typically dominated by the Plains Grassy Forest and Valley Grassy Forest vegetation types, while the tributary streams in the western part of the project area are fringed by Lowland Herb-rich Forest. The road reserves of Bairnsdale-Dargo Road and Fernbank-Glenaladale Road support linear, contiguous patches of Plains Grassy Woodland and Plains Grassy Forest. Aquatic Herbland and Plains Grassy Wetland vegetation occurs around farm dams and pools along the tributary streams. Lowland Forest is confined to the southern section of the project area, occurring within the Fernbank-Glenaladale Road reserves and private property to the south-east of the project area.

Scattered remnant trees are prevalent throughout the project area, commonly occurring in farm paddocks with little or no associated indigenous vegetation, and around the tributary streams. These trees consist mainly of large old (>100 years) Gippsland Red-gums *Eucalyptus tereticornis* subsp. *Mediana*, Red Box *Eucalyptus polyanthemos* and White Stringybarks *Eucalyptus globoidea*, with a few occurrences of other locally common eucalypt species.

The project area supports a mosaic of fauna habitat types. Each of these habitat types are unique in their habitat provisions and subsequently are likely to support a unique suite of fauna species.

A preliminary terrestrial ecology desktop assessment was undertaken by GHD in 2025 to provide an initial characterisation of the existing terrestrial ecological values in the project area. The desktop assessment found that the project has the potential to have effects on ecological values protected under Commonwealth and Victorian legislation. Modelled native vegetation suggests that up to eight Ecological Vegetation Classes (EVC) could potentially be impacted. These EVCs and their relevant conservation status for the bioregions in which they are present are outlined below:

- 16 Lowland Forest (Least concern – East Gippsland Lowlands (EGL))
- 19 Riparian Shrubland (Endangered – Gippsland Plain (GipP))
- 47 Valley Grassy Forest (Vulnerable – GipP)
- 55 Plains Grassy Woodland (Endangered – GipP and EGL)
- 151 Plains Grassy Forest (Vulnerable – GipP, Endangered – EGL)
- 259 Plains Grassy Woodland/Gilgai Wetland Mosaic (Endangered – GipP)
- 795 Lowland Forest/Damp Sands Herb-rich Woodland Mosaic (Vulnerable – GipP)
- 877 Lowland Herb-rich Forest (Depleted – GipP and EGL)

Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) which have either been previously recorded within proximity to the project area or have potential to occur within 10 km of the project area include:

- three threatened ecological communities
 - Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) Grassy Woodland and Associated Native Grassland
 - River-flat eucalypt forest on coastal floodplains
 - Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains
- 19 listed threatened species made up of:
 - 14 fauna species
 - Regent Honeyeater (*Anthochaera phrygia*)
 - Australasian Bittern (*Botaurus poiciloptilus*)
 - Gang-gang Cockatoo (*Callocephalon fimbriatum*)

- Latham's Snipe (*Gallinago hardwickii*)
- Painted Honeyeater (*Grantiella picta*)
- Pilotbird (*Pycnoptilus floccosus*)
- Australian Painted-snipe (*Rostratula australis*)
- Diamond Firetail (*Stagonopleura guttata*)
- Grey-headed Flying-Fox (*Pteropus poliocephalus*)
- New Holland Mouse (*Pseudomys novaehollandiae*)
- Giant Burrowing Frog (*Heleioporus australiacus*)
- Green and Golden Bell Frog (*Litoria aurea*)
- Growling Grass Frog (*Litoria raniformis*)
- Martin's Toadlet (*Uperoleia martini*)
- 5 flora species
 - River Swamp Wallaby-grass (*Amphibromus fluitans*)
 - Dwarf Kerrawang (*Commersonia prostrata*)
 - Clover Glycine (*Glycine latrobeana*)
 - Gaping Leek-orchid (*Prasophyllum correctum*)
 - Swamp Everlasting (*Xerochrysum palustre*)
- 11 migratory species (inclusive of threatened listed species)
 - Fork-tailed Swift (*Apus pacificus*)
 - White-throated Needletail (*Hirundapus caudacutus*)
 - Yellow Wagtail (*Motacilla flava*)
 - Common Sandpiper (*Actitis hypoleucos*)
 - Sharp-tailed Sandpiper (*Calidris acuminata*)
 - Curlew Sandpiper (*Calidris ferruginea*)
 - Pectoral Sandpiper (*Calidris melanotos*)
 - Latham's Snipe (*Gallinago hardwickii*)
 - Eastern Curlew (*Numenius madagascariensis*)
 - Osprey (*Pandion haliaetus*)
 - Common Greenshank (*Tringa nebularia*)
- Gippsland Lakes Ramsar Site.

A total of 86 flora species and 30 fauna species listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) some of which are also listed under the EPBC Act were also identified with records within 10 km of the Project area.p

The ecological values within and around the project area including EPBC listed and FFG listed species are shown in **Attachment 1 – Figure 7: Ecological values**. Modelled native vegetation within and around the project area is shown in **Attachment 1 – Figure 8: Modelled native vegetation**. Further information relevant to the assessment of potential impacts to flora and fauna are contained in **Attachment 3 - Ecology Scope**.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The landscape within the project area has been modified due to agricultural, horticultural and forestry activities. Currently, the topography is generally flat to gently undulating plateau with ridges, spurs and deep, narrow valleys draining into the surrounding rivers ranging in elevation from 30 to 300 m. The southern and western parts of the project area occupy the higher topography, and along the north and north-east are incised valleys leading down to the Mitchell River valley to the northeast. The central portion of the project area is dominated by a tableland which is incised in the west by the headwaters of the Perry River catchment. To the east of the project area there are sharply rising river terraces, eroded gullies and waterways that drain into the Mitchell River. Several kilometres to the north of the project area this increases to hill landforms with a relief of around 300 m.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

The project area spans two Victorian bioregions, Gippsland Plain and East Gippsland Lowlands. The west of the project area lies within the East Gippsland Lowlands bioregion, which transitions to the Gippsland Plain bioregion in the south and east of the proposed site. The Gippsland Plain bioregion consists of flat low lying coastal and alluvial plains with gently undulating terrain dominated by barrier dunes and floodplains and swampy flats generally below 200 m above sea level. The bioregion retains native vegetation in a highly fragmented pattern, reflecting a variety of land-use histories in the region.

The project area reflects typical East Gippsland landscapes, featuring improved pastures, derived native grasslands, remnant vegetation, and regrowth from past clearing. A timber plantation occupies around 450 hectares in the western section. The majority of the land within the project area is classified as modified or disturbed due to agricultural practices and is dominated by pasture supporting non-indigenous grasses and weeds. Native vegetation remains primarily along roadsides and gullies. These areas contain well-connected remnants, alongside smaller fragmented patches and scattered trees in more altered zones (Ecology and Heritage Partners. (2020). *Detailed Ecological Investigations for the Proposed Fingerboards Mineral Sands Project, Glenaladale, Victoria*. (Technical Appendix A005). Prepared for Kalbar Operations Pty Ltd.

Preliminary desktop assessments undertaken by GHD in 2025 have identified threatened species and ecological communities considered present or with potential to occur within and around the project area. These are outlined below.

Threatened ecological communities

The desktop assessment considered four ecological communities listed under the EPBC Act. Following a review of available data, the assessment concluded that White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is not considered likely to occur. The remaining three communities now considered either present or with potential to occur within and around the project area are:

- Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) Grassy Woodland and Associated Native Grassland, critically endangered.
- River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria, critically endangered.
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains, critically endangered.

Two further ecological communities listed under the *Flora and Fauna Guarantee Act 1988* (FFG Act) are also of relevance to the project area and surrounds.

Flora

The desktop assessment found that five EPBC listed species are considered either present or with potential to occur within and around the project area:

- Dwarf kerrawang (*Commersonia prostrata*), endangered.
- Gaping leek-orchid (*Prasophyllum correctum*), endangered.
- Clover Glycine (*Glycine latrobeana*), vulnerable.
- River Swamp Wallaby-grass (*Amphibromus fluitans*), vulnerable.
- Swamp everlasting (*Xerochrysum palustre*), vulnerable.

26 further flora species listed under the FFG Act are also of relevance to the project area and surrounds.

Fauna

The desktop assessment found that 14 EPBC listed species are considered either present or with potential to occur within and around the project area including:

- 8 birds (including both migratory and threatened species)
- 4 frogs

- 2 mammals

These species will be discussed in detail in Section 4.2 of this referral.

11 further fauna species listed under the FFG Act are also of relevance to the project area and surrounds.

Further information relevant to the assessment of potential impacts to flora and fauna are contained in **Attachment 3 - Ecology Scope**.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Vegetation

Refer to Section 3.1.3 for a description of the existing vegetation conditions within and around the project area.

Soil types

Refer to Section 3.1.1 for a description of the geology and soil within and around the project area

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

There are no recorded Commonwealth heritage places or objects of historical significance within the project area. Note that the Mitchell River has a special listing under the Victorian *Heritage Rivers Act 1992* due to its rich ecological and cultural heritage and unique social and recreational value.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The Indigenous inhabitants of the East Gippsland region are known as the Gunaikurnai people. Pre-European settlement, the Gunaikurnai comprise five tribal groups: the Krowathunkooloong, Brataualong, Tatungalong, Brabralong, Brayakaulung peoples (ALA, 2020). Traditionally, Gunaikurnai territory occupied most of present-day Gippsland, between Wilson's Promontory and far East Gippsland, including the coastal and inland areas and much of the southern slopes of the Victorian Alps. Aboriginal artefacts present in the region provide evidence of this occupation. GLaWAC is the Registered Aboriginal Party (RAP) for the Gippsland area.

A review of Victorian Department of Premier and Cabinet cultural heritage sensitivity mapping indicates that there are areas of cultural heritage sensitivity within and adjacent to the project area, particularly near watercourses.

An assessment of Aboriginal cultural heritage was undertaken by Andrew Long and Associates Pty Ltd (ALA) in 2020 in consultation with the GLaWAC within and around the project area. The assessment identified both tangible and potential intangible Aboriginal cultural heritage values associated with the project area, based on environmental, archaeological, and historical research, predictive modelling and fieldwork.

The cultural heritage values within the project area are associated with known and unknown places, and include:

- known (i.e., recorded or registered) Aboriginal cultural heritage sites, including:
 - a destroyed scar tree.
 - a silcrete stone artefact located in a road reserve.
 - a low-density artefact distribution comprising eight artefacts identified at four locations within the project area during field surveys.
 - a low-density artefact distribution comprising 60 surface and 63 subsurface artefacts, recorded during field surveys.
 - Fingerboards Artefact Scatter comprising greater than 10 artefacts per 10 m² over several concentrations totaling 218 subsurface artefacts recorded during field surveys.
- unknown Aboriginal cultural heritage sites or oral tradition places potentially located within the project area, based on the predictive model.

The known (i.e., recorded or registered) Aboriginal cultural heritage sites within the project area are shown in **Attachment 1 – Figure 9: Aboriginal cultural heritage sites**. Note that this figure will not be made publicly available due to cultural heritage sensitivity reasons.

No formal statement regarding intangible values had been received from GLaWAC at the time of the previous report.

GCM is engaging qualified cultural heritage advisors to undertake further investigation into the Indigenous heritage values of the project area. This expanded assessment will be carried out in collaboration with the GLaWAC and will incorporate both tangible cultural heritage and intangible cultural and spiritual values. Importantly, the scope of the investigation now includes the Latrobe Group Borefield Investigation Area, which was not considered as part of the 2020 assessment.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

Groundwater

A previous groundwater investigation was undertaken by Coffey in 2020 (Coffey, 2020b). This assessment reported that the project would be located within the Central Gippsland groundwater basin which is regulated by Southern Rural Water (SRW) and the Department of Energy, Environment and Climate Action (DEECA). The project area is located at the northern margin of the Central Gippsland groundwater basin where basement rock rises to form the Great Dividing Range approximately 5 km to the north.

Mining operations would have pit depths averaging 23 m and reaching a maximum of 58 m and thus would remain at least 10 m above the regional water table.

Shallow groundwater resources are generally confined to Quaternary alluvial aquifers associated with major surface water features outside the project area. These sand, gravel and clay deposits, shaped by ancestral rivers and drainage lines, support local irrigation needs and include high-value zones like the Wy Yung Water Supply Protection Area. These systems are primarily recharged by high flows in the Mitchell River and secondarily by rainfall infiltration. While smaller alluvial aquifers may exist near creeks north and west of the project area, alluvial sediments are absent within the project boundary, which is instead marked by eroded gullies cutting into the Haunted Hill Formation.

Within the project area, deeper formations include the Coongulmerang and Haunted Hill units, both of which exhibit low permeability and limited groundwater availability. Groundwater in the Coongulmerang unit is typically encountered at a level of 30 - 45 m above height datum (AHD) (approximately 70 m below surface on average) and is non-potable without treatment due to slightly elevated salinity and slightly acidic pH conditions. These formations do not support active aquifers locally.

The deeper Latrobe Valley Group and Balook Formation are present beneath the ore zone and provide moderate yields in permeable units, though aquifer productivity may be constrained near the basin margin. The Latrobe Group Aquifer (Traralgon Formation) is being considered as an option to meet the construction and operational water requirements of the project. Consequently, further investigations into the Latrobe Group Aquifer would be undertaken to inform the location of water bores. Regionally, groundwater within this aquifer flows south eastward from recharge zones toward the Gippsland Lakes and Victorian coastline.

Surface water

The project area is located within the catchments of the Mitchell River Basin to the east and the Thomson River Basin to the west on a tableland to the west of the floodplains of the lower Mitchell River. The main natural drainage features within and around the project area are the Mitchell River, and the Perry River and their tributaries. A number of small, ephemeral tributary streams drain the central and eastern half of the project area to the Mitchell River which passes to the east of the project area and outlets to Lake King, while the far southwestern part of the project area drains south to the Perry River. The Perry River flows south to join the Avon River at Lake Wellington. Surface water drainage within the project area consists of modified and impacted ephemeral creeks or gullies many of which drain to small farm dams. These drainage features activate only after high-rainfall storm events and drain to either the Mitchell River or Perry River catchments.

The eastern part of the project area is situated in the Mitchell River catchment. The Mitchell River passes to the northeast of the project area and has an estimated average annual stream flow of 777,733 ML (DELWP, 2022). The upper catchment is predominantly undisturbed, forested, public land including sections of the Alpine National Park and Mitchell River National Park. In the lower reaches of the catchment, the river transitions to floodplains where deposited sediment has created fertile agricultural land.

The floodplains have been extensively cleared for agriculture and are highly modified from their natural state.

The Mitchell River catchment falls under the management of the East Gippsland Catchment Management Authority and is listed as a Heritage River under the Victorian Heritage Rivers Act 1992. Flooding occurs across the low-lying plains with approximately 60 square km of land prone to flooding. The Mitchell River discharges into Jones Bay and Lake King which form part of the Gippsland Lakes.

A western section of the project area lies within the Perry River catchment which is a tributary of the Avon River. The Avon River catchment drains an area of approximately 2,000 square km and extends from the foothills of the Great Dividing Range to Lake Wellington, which forms part of the Gippsland Lakes. The Avon River catchment is primarily used for agricultural and irrigation land uses on its lower floodplains.

The Gippsland Lakes Ramsar Site consist of a series of coastal lagoons along the Gippsland coast separated from the sea by a barrier system of sand dunes. They represent internationally significant, high value surface water features in the area, contain internationally and nationally listed wetlands, and receive both groundwater and surface water discharge from systems emanating from or passing through the project area. The Gippsland Lakes are located approximately 50 km and 35 km downstream of the project area via the Mitchell River and Perry River respectively.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	Yes	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

There are no world heritage sites within the project area or within proximity to the project area that could be subject to direct and/or indirect impacts.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

There are no national heritage sites within the project area or within proximity to the project area that could be subject to direct and/or indirect impacts. Note that the Mitchell River has a special listing under the Victorian *Heritage Rivers Act 1992* due to its rich ecological and cultural heritage and unique social and recreational value. Potential impacts on the Mitchell River will be investigated as part of the surface water and groundwater studies.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	Yes	Gippsland Lakes

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.3.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The Gippsland Lakes Ramsar site is located 25 km downstream, south of the project area. This site will receive both groundwater and surface water discharge from systems emanating from or passing through the project area. Potential impacts include alteration/degradation of water quality due to sedimentation, runoff and altered flow regimes due to changes in landscape topography and drainage.

The project requires approximately 3.0 gigalitres (GL) of make-up water each year to support construction earthworks, ore processing, tailings management, dust suppression, rehabilitation and contingency. To reduce system pressure and strengthen regional water security, GCM is pursuing a diversified supply strategy. Sources under assessment include a surface water winter offtake from the Mitchell and/or Macalister River systems, groundwater from the Latrobe Group Aquifer via a borefield south of the mine, and recycled water from the Bairnsdale Wastewater Treatment Plant. A freshwater storage dam would also be built to hold water harvested under the winter-fill licence.

Water would be recycled and reused where practicable (including flood runoff and water from the decant pond in tailings cells within the mine pit) and operations would be optimised to maximise water use efficiency. GCM will undertake a water supply options assessment to investigate all the potential water supply options for the project before a final decision is made about the final water sources that will make up the 3.0 GL of make-up water per annum.

Of the project's total 3.0 GL/year water requirement, approximately 2.0 GL/year is proposed to be sourced from the Mitchell River. If unregulated, this could alter stream flows and affect ecosystem health or other licensed users. To avoid this, water would only be taken during winter-fill months under a licence arrangement, and only when flows exceed 1,400 ML/day. To reduce potential impacts on the Mitchell River, alternative sources are under investigation including surface water from the Macalister River system, groundwater from the deep Latrobe Group Aquifer and/or recycled water from treatment plants in Bairnsdale and Paynesville.

GCM has updated its baseline water monitoring program that covers both the project area and receiving waters upstream and downstream. A range of surface water studies will investigate potential effects related to the surface water environment and water supply and consider local conditions and potential future climate scenarios to provide a high degree of confidence in the assessments.

4.1.3.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

*

No

4.1.3.6 Describe why you do not consider this to be a Significant Impact. *

The potential impacts are not considered significant as the project has been specifically designed to minimise adverse effects on water quality, manage indirect impacts on stream flows in accordance with site topography, and ensure rehabilitation of the site with an emphasis on achieving positive surface water outcomes. The following section provides a brief description of the avoidance and minimisation measures adopted.

Water quality

It is the aim of the project to operate as a zero discharge site, utilising strategies such as diverting unimpacted run-off away from active areas and capturing any impacted run-off and using as part of the process water circuit. This is achieved through various surface water management measures including water management dams and diversion drains.

Wastewater discharge requirements and the potential for surface water runoff to water environments will be determined in the project surface water study(s).

Landform and rehabilitation

It is the aim of the project to operate as a zero-discharge site, utilising strategies such as diverting unimpacted run-off away from active areas, capturing impacted run-off and using as part of the process water circuit, and in-pit freeboard available as emergency storage. Wastewater would be managed via wastewater treatment plant(s) located on site. The treatment plant would have its own spray field for the safe reticulation and disposal of treated wastewater, with no discharge to water environments.

Following the final overburden contouring to the final landform levels, formulated subsoil mixes and topsoil would be replaced to replicate the natural soil profile and prepare the area for revegetation. This approach aims to re-establish drainage patterns, minimise alterations to surface water runoff regimes and facilitate rehabilitation of the site and surrounds.

Overall, these measures ensure that any potential impacts to water quality and stream flow regimes are effectively avoided, minimised, or offset through rehabilitation, such that the project is not expected to result in significant adverse impacts on the Gippsland Lakes Ramsar Wetlands.

4.1.3.7 Do you think your proposed action is a controlled action? *

Yes

4.1.3.8 Please elaborate why you think your proposed action is a controlled action. *

Although the project will not result in a significant impact on the Ramsar site if the appropriate management measures are implemented, due to the potential direct and/or indirect impacts on the Ramsar site, the project is considered to be a controlled action.

4.1.3.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Measures to reduce potential impacts on water environments will be assessed and proposed in the surface water and groundwater studies. Mitigation measures to be adopted will be based on the hierarchy of:

- Avoidance or 'designing out' impacts during design of the project concept.
- Mitigation and management of impacts.
- Monitoring the performance of management measures.

As mining activities will be in proximity to surface water features, measures will need to be implemented during the life of the project to reduce, manage and monitor impacts to water environments. These are also outlined in section 4.1.3.6 of this form. Management and mitigation of water impacts are likely to revolve around:

- Optimising project concept to reduce water use and discharge.
- Implementing surface water flow control to minimise erosion and runoff.
- Implementing controls to prevent chemical or sediment contamination of water sources.

Monitoring the effectiveness of water management controls and improving them where necessary.

4.1.3.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

Construction activities will be designed to minimise native vegetation impacts, particularly around the banks of the Mitchell River where the pump station and associated pipeline is proposed. However the extent of native vegetation to be cleared will not be determined until a preferred design is confirmed and the preferred construction technique and methodology is selected. At this time, a site assessment will be undertaken to confirm the values along the pipeline alignment and at the bank of the Mitchell River, and to ensure that avoidance and minimisation techniques can be implemented to the greatest extent possible. Native vegetation losses will need to be offset in accordance with Commonwealth and State guidance. Native vegetation losses and offset calculations as well as identification of appropriate offsets will be undertaken following site assessments.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
Yes		<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
Yes		<i>Anthochaera phrygia</i>	Regent Honeyeater
Yes		<i>Aprasia parapulchella</i>	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard
Yes		<i>Botaurus poiciloptilus</i>	Australasian Bittern
Yes		<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid, Daddy Long-legs
Yes		<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
Yes		<i>Calidris ferruginea</i>	Curlew Sandpiper
Yes		<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo
Yes		<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo
Yes		<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)
Yes		<i>Commersonia prostrata</i>	Dwarf Kerrawang
Yes		<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
Yes		<i>Dianella amoena</i>	Matted Flax-lily
Yes		<i>Falco hypoleucos</i>	Grey Falcon
Yes		<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias, Dwarf Galaxias
Yes		<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
Yes		<i>Glycine latrobeana</i>	Clover Glycine, Purple Clover
Yes		<i>Grantiella picta</i>	Painted Honeyeater
Yes		<i>Heleioporus australiacus flavopunctatus</i>	Southern Owl Frog, Southern Giant Burrowing Frog

Direct impact	Indirect impact	Species	Common name
Yes		<i>Hirundapus caudacutus</i>	White-throated Needletail
Yes		<i>Isodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
Yes		<i>Lathamus discolor</i>	Swift Parrot
Yes		<i>Lissolepis coventryi</i>	Swamp Skink, Eastern Mourning Skink
Yes		<i>Litoria aurea</i>	Green and Golden Bell Frog
Yes		<i>Litoria raniformis</i>	Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog
Yes		<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin, Hooded Robin (south-eastern)
Yes		<i>Neophema chrysostoma</i>	Blue-winged Parrot
Yes		<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew
Yes		<i>Petauroides volans</i>	Greater Glider (southern and central)
Yes		<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)
Yes		<i>Prasophyllum correctum</i>	Gaping Leek-orchid
Yes		<i>Prototroctes maraena</i>	Australian Grayling
Yes		<i>Pseudomys novaehollandiae</i>	New Holland Mouse, Pookila
Yes		<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
Yes		<i>Pterostylis chlorogramma</i>	Green-striped Greenhood
Yes		<i>Pycnoptilus floccosus</i>	Pilotbird
Yes		<i>Rostratula australis</i>	Australian Painted Snipe
Yes		<i>Stagonopleura guttata</i>	Diamond Firetail
Yes		<i>Thesium australe</i>	Austral Toadflax, Toadflax
Yes		<i>Uperoleia martini</i>	Martin's Toadlet
Yes		<i>Xerochrysum palustre</i>	Swamp Everlasting, Swamp Paper Daisy

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Gippsland Red Gum (<i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>) Grassy Woodland and Associated Native Grassland
Yes	Yes	River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
Yes	Yes	Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Based on the desktop assessments conducted to date, the following threatened species and ecological communities listed under the EPBC Act have the potential to occur within the study area:

- 3 threatened ecological communities
- 5 threatened flora species
- 14 threatened fauna species, including
 - 8 birds
 - 4 frogs
 - 2 mammals

Threatened ecological communities

The project is located both within the Gippsland Plain and East Gippsland Lowlands Victorian Bioregions. Based on the preliminary desktop assessment, up to three threatened ecological communities listed under the EPBC Act are considered likely to occur within the project area. The EPBC Act listed threatened ecological communities that have the potential to occur include:

- Gippsland Red Gum (*Eucalyptus tereticornis subsp. mediana*) Grassy Woodland and Associated Native Grassland
- River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains

In addition, a range of EVCs may be present within the project area. The 8 EVCs that could be impacted as a result of the project include: Lowland Forest, Riparian Shrubland, Vally Grassy Forest, Plains Grassy Woodland, Plains Grassy Forest, Plains Grassy Woodland/Gilgai Wetland Mosaic, Lowland Forest/Damp Sands Herb-rich Woodland Mosaic, Lowland Herb-rich Forest, and Sedge Wetland.

The primary impact on native vegetation will be due to the clearing required to facilitate the construction of the mining pits and the supporting project infrastructure including the Mitchell River Pump Station and Water Pipeline Corridor, Freshwater Storage Dam, Services Corridor, Fernbank East Rail Siding, and Onsite Process Facilities. Native vegetation impacts will be minimised where possible in the Latrobe Group Borefield through micrositing of bore locations.

Modelled native vegetation suggests that up to **156.06** hectares of remnant, native vegetation are present within the project area.

The preliminary assessment has been based on a desktop analysis only and is considered likely to overstate potential impacts. In addition, the extent of native vegetation to be cleared will not be determined until a preferred alignment is chosen. A site assessment will be undertaken to confirm the values along the onshore pipeline alignment, and to ensure avoidance and minimisation are implemented to the greatest extent possible.

Threatened flora

Flora surveys have not yet been carried out, however, the preliminary desktop assessment identified that there are 5 EPBC Act listed flora species which are either present or with potential to occur in the study area (GHD. (2025). *Ecology Survey Scope*. Prepared for Gippsland Critical Minerals). These include:

- Dwarf kerrawang (*Commersonia prostrata*), endangered.
- Gaping leek-orchid (*Prasophyllum correctum*), endangered.
- Clover Glycine (*Glycine latrobeana*), vulnerable.
- River Swamp Wallaby-grass (*Amphibromus fluitans*), vulnerable.
- Swamp everlasting (*Xerochrysum palustre*), vulnerable.

The project area supports a range of habitat suitable for these listed flora species. Potential impacts on listed flora species are most likely to occur as a result of clearing of vegetation for mining activities and construction of project infrastructure. Other threats to listed flora species include the introduction of weeds,

pests and pathogens.

Threatened fauna

Fauna surveys have not yet been carried out, however, the preliminary desktop assessment identified that there are 14 EPBC Act listed fauna species which are either present or with potential to occur in the study area (GHD. (2025). *Ecology Survey Scope*. Prepared for Gippsland Critical Minerals). In addition, 5 EPBC Act listed migratory species which are either present or have the potential to either occur or utilise resources (e.g. for foraging) in the study area.

- Grey-headed Flying-Fox (*Pteropus poliocephalus*), vulnerable.
- New Holland Mouse (*Pseudomys novaehollandiae*), vulnerable.
- Regent Honeyeater (*Anthochaera phrygia*), critically endangered.
- Australasian Bittern (*Botaurus poiciloptilus*), endangered.
- Gang-gang Cockatoo (*Callocephalon fimbriatum*), endangered.
- Latham's Snipe (*Gallinago hardwickii*), vulnerable.
- Painted Honeyeater (*Grantiella picta*), vulnerable.
- Pilotbird (*Pycnoptilus floccosus*), vulnerable.
- Australian Painted-snipe (*Rostratula australis*), endangered.
- Diamond Firetail (*Stagonopleura guttata*), vulnerable.
- Giant Burrowing Frog (*Heleioporus australiacus*), endangered.
- Green and Golden Bell Frog (*Litoria aurea*), vulnerable.
- Growling Grass Frog (*Litoria raniformis*), vulnerable.
- Martin's Toadlet (*Uperoleia martini*), endangered.

The project area supports a range of habitat suitable for these listed fauna species. Potential impacts on listed fauna species are most likely to occur as a result of clearing of vegetation, which provides suitable habitat for threatened fauna species, for mining activities and construction of project infrastructure.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?

*

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Threatened species and ecological communities have the potential to occur in the project area, making them susceptible to direct and indirect impacts. Without the implementation of appropriate mitigation measures, the project could have a significant impact on listed threatened species and ecological values. Potential significant impacts include the following:

- Removal of approximately 156.06 hectares of remnant, native vegetation (based on maximum modelled extent of native vegetation within project disturbance footprint)
- Removal of listed threatened flora species leading to a reduction to the area of occupancy of these species
- Removal of habitat that is critical to the survival of listed threatened species
- Introduction of weeds, pests and pathogens resulting in displacement of listed threatened species, land degradation and a reduction in the quality and ecological value of the area.

Field investigations will be undertaken to assess the presence and use of the study area by threatened species and ecological communities, and to evaluate the potential for significant impacts. The outcomes of these investigations will inform detailed design, with mitigation measures incorporated to minimise impacts where feasible.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

As the project has the potential to have significant direct and/or indirect impacts on EPBC Act listed threatened species and ecological communities, the project is considered to be a controlled action.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

An updated biodiversity assessment will be undertaken to inform the detailed design and support any necessary project approvals. This study will consider terrestrial biodiversity values as well as any aquatic values associated with waterways within the study area. The assessment will also inform design to avoid and minimise potential impacts and will recommend appropriate mitigation measures to be implemented during the various stages of the project.

Following completion of field investigations, the proposed project design will be reviewed to consider opportunities to further avoid direct impacts on threatened species or ecological communities, Targeted fauna surveys will also be undertaken and will inform the design of the project. Consideration will be given to various construction techniques and methods throughout the design phase and where possible, A summary of the mitigation measures that could be applied to avoid, minimise and manage potential impacts is provided below:

- Field investigations of native vegetation, and listed flora and fauna within the project area will be undertaken to inform sensitive design approaches
- Implement the three step approach of avoid, minimise and offset
- Design to avoid and minimise potential impact on native vegetation and listed flora and fauna, and offset residual impacts
- Manage and monitor impacts during construction, operation and maintenance activities, with the approach to be detailed in Environmental Management Plans.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The requirements for offsets in relation to threatened species and ecological communities are currently unknown. Once site assessments and field surveys are completed, offset requirements for the project will be confirmed in consultation with State and Commonwealth regulators.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
Yes		<i>Actitis hypoleucos</i>	Common Sandpiper
Yes		<i>Apus pacificus</i>	Fork-tailed Swift
Yes		<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
Yes		<i>Calidris ferruginea</i>	Curlew Sandpiper
Yes		<i>Calidris melanotos</i>	Pectoral Sandpiper
Yes		<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
Yes		<i>Hirundapus caudacutus</i>	White-throated Needletail
Yes		<i>Motacilla flava</i>	Yellow Wagtail
Yes		<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew
Yes		<i>Pandion haliaetus</i>	Osprey

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

There is potential for the environments around the project area to support listed threatened and migratory species, in particular at the Gippsland Lakes Ramsar Site located approximately 25 km south of the project area. A search of the Protected Matters Search Tool indicates that there are a range of migratory species (approximately 11) listed under the EPBC Act that have the potential to occur within 5km of the project area. Project ecologists have undertaken a review of this list and of these 11 and only 5 are considered to be present or have potential to occur in the study area, including:

- White-throated Needletail (*Hirundapus caudacutus*)
- Great Egret (*Ardea alba modesta*)
- Latham's Snipe (*Gallinago hardwickii*)
- White-bellied Sea-Eagle (*Haliaeetus leucogaster*)
- Rufous Fantail (*Rhipidura rufifrons*)

Migratory species may use the project area and surrounds in a range of ways, including occasional foraging or flyovers, particularly where woodland and wetland habitats are present. The construction and operation of the project will involve activities and associated processes that will, or have the potential to, lead to loss, reduction or reduced viability of potential habitat for migratory species within the project area and locality. Proposed actions including land clearing, the development of roads, pipelines and powerlines, disturbances to existing waterbodies, use of vehicles/machinery and a general increase in human activity could result in potential impacts.

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?

*

Yes

4.1.5.5 Describe why you consider this to be a Significant Impact. *

As described above, there is potential for EPBC Act listed migratory species to utilise the project area. In the absence of appropriate mitigation measures to avoid, minimise and manage impacts, there is potential for significant impact on these listed migratory species.

Construction, operation and rehabilitation / closure of the project could result in significant impacts, including:

- Removal of habitat that is utilised by listed migratory species
- Insufficient reinstatement and/or rehabilitation of disturbed areas
- Disturbance to migratory species that utilise the project area as a result of construction noise and vibration (including underwater noise and vibration) and lighting
- Sedimentation, reduced water quality and disturbance to flows of important waterways which provide habitat for listed migratory species
- Introduction of weeds, pests and pathogens resulting in the displacement of suitable habitat for listed migratory species.

Field investigations will be undertaken to determine the presence and utilisation of the project area and surrounds by migratory species and to determine the potential for significant impacts to occur. An impact assessment will be undertaken to support the detailed design process as well as any approvals required for the project. Following field investigations, impact assessment and designing to avoid and minimise potential impacts to migratory species, the project is unlikely to have a significant impact.

Next steps:

Further desktop and field investigations are required to confirm potential impacts and inform design and mitigation measures to be implemented during construction and operation activities. These investigations will include:

- The desktop assessment would be expanded to include further literature review and consultation with appropriate stakeholders
- Seasonally appropriate targeted field surveys for listed migratory species, particularly in areas with confirmed native vegetation likely to support these species. Surveys would be undertaken in accordance with Commonwealth and State standards
- Surveys to gain a better understanding of migratory species utilisation of the study area.

4.1.5.7 Do you think your proposed action is a controlled action? *

Yes

4.1.5.8 Please elaborate why you think your proposed action is a controlled action. *

As the project has the potential to have significant direct and/or indirect impacts on EPBC Act listed migratory species, the project is considered to be a controlled action.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

A biodiversity assessment will be undertaken to inform the detailed design and support any necessary project approvals. This study will consider terrestrial biodiversity values as well as any aquatic values associated with waterways within the study area. The assessment will also inform design to avoid and minimise potential impacts and will recommend appropriate mitigation measures to be implemented during the various stages of the project.

Following completion of field investigations, the proposed project design will be reviewed to consider opportunities to further avoid direct impacts on threatened species or ecological communities, Targeted fauna surveys will also be undertaken and will inform the design of the project. Consideration will be given to various construction techniques and methods throughout the design phase and where possible, A summary of the mitigation measures that could be applied to avoid, minimise and manage potential impacts is provided below:

- Field investigations of native vegetation, and listed flora and fauna within the project area will be undertaken to inform sensitive design approaches
- Implement the three step approach of avoid, minimise and offset
- Design to avoid and minimise potential impact on native vegetation and listed flora and fauna, and offset residual impacts
- Manage and monitor impacts during construction, operation and maintenance activities, with the approach to be detailed in Environmental Management Plans.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The requirements for offsets in relation to migratory species are currently unknown.. Once site assessments and field surveys are completed, offset requirements for the project will be confirmed in consultation with State and Commonwealth regulators.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

Mineral sands deposits in the East Gippsland region contain naturally occurring radioactive materials. Potential impacts related to radioactivity are associated with the excavation and transport of radioactive material. The most significant external radiation exposures are likely to arise from the direct handling, storage and transport of Heavy Mineral Concentrate (HMC). It is anticipated that the HMC would be diluted through the addition of oversize tailings material to maintain the activity concentration level below the transportable limit of 10 becquerel per gram (Bq/g). The amount of dilution would be controlled from online process control equipment and verified by shift samples testing in the on-site laboratory. The dilution amount is expected to be between 3 to 10% and varies depending on the content of naturally occurring radioactive material present in the ore.

Other potential pathways for radiation exposure of workers and the public living nearby include inhalation of airborne dust and radon gas from mining or handling of minerals. The previous radiation impact assessment undertaken as part of the 2021 EES for the 2021 project concluded that with the implementation of appropriate mitigation measures such as effective radiation health practices and an approved radiation management plan, personal doses from impact pathways would be below the public dose limit and potential impacts related to radiation can be effectively managed. It is also notable that the Minister's assessment of the 2021 project under the EE Act concluded that 'as the predicted dose rates to the public and workforce are considerably below the prescribed dose limits and there is a strong regulatory framework for the management of radiation in Victoria, the potential radiation impacts from the project are likely to be manageable to an acceptable level.'

To assist in assessing and managing the naturally occurring radioactive materials associated within the GCM Project's rare earths deposit, GCM has engaged a suitably qualified professional.

Proposed assessments will be guided by future site investigations but nominally involve collation and analysis of historic monitoring data, targeted agricultural and horticultural data collection, baseline radiological monitoring, and integration of relevant information from air quality, meteorological, and groundwater studies to support the Radiological Impact Assessment (RIA). The RIA will define the nature and extent of potential radiation impacts during construction, operation and rehabilitation / closure phases, assess compliance with applicable standards using modelling under worst-case meteorological and topographic conditions, identify mitigation measures where required, and address Ministerial requirements through dose modelling, early-warning trigger development, radiation management planning, and a transport risk assessment for HMC.

A summary of the Fingerboards Project processing relevant to radiological levels is provided in **Attachment 4 - Project Processing Summary**.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The project will not involve an action in the Commonwealth Marine Area and the project will not directly and/or indirectly impact the Commonwealth Marine Area.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The project will not involve an action in the Great Barrier Reef Marine Park and the project will not directly and/or indirectly impact the Great Barrier Reef Marine Park.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The project is not a large coal mining or coal seam gas development.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The project will not be undertaken, on, or close to Commonwealth land.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The project will not have any direct and/or indirect impact on Commonwealth Heritage places overseas.
The project will not be undertaken, on, or close to Commonwealth Heritage places overseas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

The project location represents the most strategic and efficient means of realising the economic and resource potential of the Glenaladale deposit. This conclusion is supported by extensive exploration drilling and geological investigations undertaken by GCM and previous tenement holders, which have confirmed the location, extent and quality of mineralisation.

Mining operations would focus on a targeted extraction strategy within the most prospective zones of the identified resource area, to maximise the efficiency of high-value HMC recovery while minimising environmental impact.

Various alternatives were comprehensively assessed against the recommendations of the IAC and Minister's assessment of the 2021 project to develop the project referred herein. The cornerstone design and scope changes include:

- The mining footprint and pit areas have been reduced as shown in **Attachment 1 – Figure 2: Project overview** and **Attachment 1 – Figure 3: Pit layouts**. Following the outcome of the 2021 EES process, the mine pit areas have been significantly changed compared to the 2021 project and are now 27% smaller.
- The mining rate has been reduced by 40% to minimise dust, noise and ecological effects.
- A mining exclusion buffer zone of at least 1.5 km from the Lindenow Valley Horticultural District (LVHD) would protect this sensitive area.
- Avoiding disturbance within the existing road reserves and Perry, Simpson and Lucas Creek gullies which results in avoiding a significant amount of the previously identified endangered and vulnerable Ecological Vegetation Classes (EVCs) that would have been directly impacted by the 2021 project.
- A revised water strategy focusing on securing water source diversity which gives greater certainty over how the project will meet its 3.0 GL per year water balance with a combination of winter-fill surface water, groundwater and recycled water.
- Other key changes include re-sequenced mining and in-pit tailings management to minimise dust generation and allow for faster progressive rehabilitation, and the addition of a concentrate shed to enable enclosed stockpiling and loading of HMC product.

Further detail regarding the changes to the design and scope between the 2021 project and the current project are provided in **Attachment 2 - GCM Design Changes to Address Impacts**.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	17/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	17/03/2026	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 2 - GCM Design Changes to Address Impacts.pdf Summary of changes to the project design since the withdrawal of the 2021 project.	06/03/2026	No	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in	16/03/2026	Yes	High

the EPBC referral form

#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High
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3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High

3.1.3 Natural features, important or unique values that applies to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High
#3.	Document	Att 3 - Ecology Scope Fingerboards Project_redacted.pdf A summary of the proposed ecology survey scope for the project	28/11/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 - Ecology Scope Fingerboards Project_redacted.pdf A summary of the proposed ecology survey scope for the project	27/11/2025	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High

#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High
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4.1.6.3 (Nuclear) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 - Project Processing Summary.pdf Outline of the proposed ore processing method	06/03/2026	No	High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 - Figures.pdf A compilation of all figures referred to in the EPBC referral form	16/03/2026	Yes	High
#2.	Document	Att 1 - Figures_redacted.pdf A compilation of all figures referred to in the EPBC referral form (redacted version)	16/03/2026	No	High
#3.	Document	Att 2 - GCM Design Changes to Address Impacts.pdf Summary of changes to the project design since the withdrawal of the 2021 project.	05/03/2026	No	High

5.2 Declarations

✔ Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	20093846925
Organisation name	AECOM Australia Pty Ltd
Organisation address	Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008
Representative's name	Yasiru Karunaratne
Representative's job title	Principal Environmental Engineer
Phone	1800 868 654
Email	yasiru.karunaratne@aecom.com
Address	Collins Square Tower 2 Level 10, 727 Collins Street, Docklands VIC 3008

Check this box to indicate you have read the referral form. *

Check this box to confirm these are the correct identification details. *

By checking this box, I, **Yasiru Karunaratne of AECOM Australia Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

✔ Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	30635720759
Organisation name	Gippsland Critical Minerals Pty Ltd
Organisation address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

Representative's name	Stefan Wolmarans
Representative's job title	Project Director
Phone	1800 791 396
Email	swolmarans@gippslandcriticalminerals.com
Address	1265 Fernbank-Glenaladale Road, Fernbank VIC 3864

Check this box to indicate you have read the referral form. *

Check this box to confirm these are the correct identification details. *

I, **Stefan Wolmarans of Gippsland Critical Minerals Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

Check this box to indicate you have read the referral form. *

Check this box to confirm these are the correct identification details. *

I, **Stefan Wolmarans of Gippsland Critical Minerals Pty Ltd**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

