KALBAR
OPERATIONS PTY LTD

Fingerboards Mineral Sands Project

Environment Effects Statement

~~August 2020~~June 2021

Kalbar Update 15 June 2021
Comments / references provided in square brackets [xxx] for context

Chapter 12

Environmental management framework

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12 Environmental management framework

This chapter presents the environmental management framework (EMF) that would be implemented for the Fingerboards Mineral Sands Project (the project).

12.1 Introduction

Kalbar Operations Pty Ltd (Kalbar) is committed to implementing practices that prevent, minimise, mitigate or remediate any harmful effects of the project on the environment. This EMF would be implemented to manage the impacts of project construction, operations and closure (including decommissioning, rehabilitation and post-closure) to achieve this objective. The EMF applies to the whole of the project, as described in Chapter 3: Project description.

This chapter addresses Section 5 of the environment effect statement (EES) scoping requirements which require the preparation of an EMF for the project.

12.1.1 Scoping requirements

Section 5 of the EES scoping requirements states the following:

The proponent needs to provide a transparent environmental management framework (EMF) for the project in the EES with clear accountabilities for managing and monitoring environmental effects and hazards associated with construction, operation, decommissioning, rehabilitation and post-closure phases of the project in order to achieve acceptable environmental outcomes.

The EMF should describe the baseline environmental conditions to be used to monitor and evaluate the residual environmental effects of the project, as well as the efficacy of applied environmental management and contingency measures. The framework should include:

- *The context of required approvals and consents, in particular requirements for the mine work plan.*
- *Any existing or proposed environmental management system to be adopted.*
- *Organisational responsibilities and accountabilities for environmental management.*
- *A register of environmental risks associated with the project which is to be maintained during project implementation (including matters identified in preceding sections in these directions as well as other pertinent risks).*
- *The environmental management measures proposed in the EES to address specific issues.*
- *The proposed objectives, indicators and monitoring requirements, including for managing or addressing:*
  - *Social, health and wellbeing outcomes and community engagement.*
  - *Biodiversity values, including offsets and establishing a sustainable vegetation cover.*
  - *Maintenance of the ecological character of the Gippsland Lakes Ramsar site.*
  - *Groundwater and/or surface water resources usage and stormwater runoff.*
  - *Geotechnical and geochemical landform stability, including potential erosion and sedimentation.*
  - *Solid and liquid waste, including recycling and handling of potentially hazardous or contaminated waste, including radioactive materials.*
  - *Noise, vibration, and emissions to air, including dust and greenhouse gases.*

  - *Aboriginal and cultural heritage values.*
  - *Traffic during construction and operation.*
  - *Disruption of and hazard to the existing infrastructure.*
  - *Requirements for protection of the environment from radiation.*
  - *Site rehabilitation, including handling of topsoil, tailings and mining by-products.*
  - *Fire management and emergency response.*
- *Arrangements for management of and access to baseline and monitoring data, to ensure the transparency and accountability of environmental management and to contribute to the improvement of environmental knowledge.*
- *The procedures for monitoring or verifying compliance with performance requirements and review of the effectiveness of the environmental management framework for continuous improvement.*
- *Procedures for auditing and reporting of performance including compliance with relevant statutory conditions and standards.*

The EMF should outline:

- *The relevant environmental management plans for construction, operation, decommissioning and rehabilitation phases of the project.*
- *A program for community consultation, stakeholder engagement and communications during the construction, operation, decommissioning and rehabilitation of the project, including opportunities for local stakeholders to engage with the proponent to seek responses to issues that might arise if the project is undertaken.*

12.1.2 Baseline data

The baseline environmental conditions to be used to monitor and evaluate the residual environmental effects of the project are summarised in Chapter 8: Environmental and socioeconomic context. Additional detail is provided in the specialist study reports appended to the EES. Key references are as follows:

- Biodiversity:
  - EES Section 8.2: Terrestrial and aquatic biodiversity.
  - Detailed Ecological Investigations (EES Appendix A005), and its appendices, including:
    - Groundwater Dependent Ecosystem Impact Assessment.
- Groundwater and surface water:
  - EES Section 8.3: Groundwater and Section 8.4: Surface water.
  - Groundwater and Surface Water Impact Assessment (EES Appendix A006) and its appendices and related reports, including:
    - Conceptual Surface Water Management Strategy and Water Balance.
    - Groundwater Modelling Report.
    - Landscape Stability and Sediment Transport Regime Assessment.
    - Geochem Testing of Fingerboard Tailings and Overburden.
    - Surface Water Assessment - Site Study.
    - Surface Water Assessment - Regional Study.

- Air quality:
  - EES Section 8.5: Air quality.
  - Stage Two Air Quality and Greenhouse Gas Assessment (EES Appendix A009).
- Noise and vibration:
  - EES Section 8.6: Noise and vibration.
  - Noise and Vibration Assessment (EES Appendix A010).
- Radiation:
  - EES Section 8.7: Radiation.
  - Radiation Assessment Report (EES Appendix A011).
- Traffic and transport:
  - EES Section 8.8: Roads, traffic and transport.
  - Traffic and Transport Impact Assessment (EES Appendix A012).
- Socioeconomic:
  - EES Section 8.11: Agriculture and horticulture and Section 8.13: Socioeconomic.
  - Consultation and Stakeholder Engagement Report (EES Attachment G).
  - Agriculture Impact Assessment (EES Appendix A015).
  - Horticultural Impact Assessment (EES Appendix A016).
  - Socioeconomic Impact Assessment (EES Appendix A018) and its appendices, including:
    - Economic Impact Assessment.
    - Bushfire Risk Summary.
  - Human Health Risk Assessment (EES Appendix A019).
- Cultural heritage:
  - EES Section 8.12: Cultural heritage.
  - Cultural Heritage Impact Assessment (EES Appendix A017).
- Closure:
  - EES Section 8.1: Geology, landforms and soils.
  - Landform, Geology and Soil Investigation (EES Appendix A001), and related reports including:
    - Geochemistry and Mineralogy Summary Report (EES Appendix A002).
    - Geotechnical Assessment (EES Appendix A003).
    - Glenaladale Starter Pit Preliminary Geotechnical Investigation (EES Appendix A004).
  - Rehabilitation (EES Appendix A020).
  - Soil Profile Reconstruction Study. 1. Productivity and Properties of Subsoils Constructed of Coarse and Fine Tailings Mixtures (EES Appendix A021).
  - Soil Profile Reconstruction Study. 2. Productivity and Properties of Subsoils Constructed using Haunted Hills Formation Overburden and Coarse Tailings Mixtures (EES Appendix A022).

12.2 Statutory approvals and consents

A range of approvals and consents are required for the project, as discussed in Chapter 5: Regulatory framework. Different aspects of the project are regulated under different legislation and require different approvals. For example, mining activities are regulated under the *Mineral Resources (Sustainable Development) Act 1990* (Vic) (MRSD Act), while infrastructure outside of the mining licence area is regulated under the *Planning and Environment Act 1987* (Vic) (Planning and Environment Act). Table 12.1 identifies which approval applies to the different project activities, as well as how each approval relates to the EMF.

The key approvals required for the project are:

- Approval under the *Environment Protection and Biodiversity Conservation Act 1999* (C~~wl~~th) (EPBC Act).
- Work plan under the MRSD Act.
- ~~Works approval~~Development licence under the *Environment Protection Act ~~1970~~ 2017* (Vic).
- Planning scheme amendment and the associated incorporated document, under the Planning and Environment Act.
- Cultural heritage management plan (CHMP) under the *Aboriginal Heritage Act 2006* (Vic).
- Management licence, Radiation Management Plan, Radioactive Waste Management Plan and Radiation Environment Plan under the *Radiation Act 2005* (Vic).

Further detail on the statutory approvals and consents required for this project are presented in Chapter 5: Regulatory framework.

Table 12.1 Statutory approvals and consents

Project activities	Relevant approval	Regulatory authority and decision maker	Relevance to EMF
All activities	EPBC Act approval	Commonwealth Department of Agriculture, Water and the Environment, Minister for the Environment	The EPBC Act approval would set out conditions to be addressed through the plans and associated management sub-plans described in the EMF.
All activities within mining licence area	Work plan	Earth Resources Regulation in Department of Jobs, Precincts and Regions (ERR)	The work plan would include details of how the project would operate and must include a risk management plan and risk treatment plans setting out how potential impacts would be controlled. The work plan and risk management plan are key components of the EMF.
Management and discharge of water from project area	~~Works approval~~Development licence	Environment Protection Authority (EPA)	Conditions of the ~~works approval~~development licence would be addressed through the plans and associated management sub-plans described in the EMF.
Infrastructure outside of mining licence area	Planning scheme amendment and incorporated document	Department of Environment, Land, Water and Planning (DELWP), Minister for Planning and~~/or~~ East Gippsland Shire Council	The incorporated document would include requirements for environmental management of the project for the area covered by the planning scheme amendment as designated by the specific control overlay. The EMF documents how these requirements are to be addressed

Project activities	Relevant approval	Regulatory authority and decision maker	Relevance to EMF
			through plans and associated management sub-plans.
All activities	CHMP	Aboriginal Victoria	The CHMP would include procedures and requirements for managing impacts and protecting Aboriginal heritage that would be implemented through the plans and associated management sub-plans described in the EMF.
All activities	Management licence	Department of Health	The Radiation Management Plan, Radioactive Waste Management Plan and Radiation Environment Plan approved under a management licence will, in accordance with the *Code of Practice Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing* (ARPANSA, Radiation Protection Series No. 9), set requirements relating to, amongst other matters, monitoring radiation exposure, assessing doses received by the public and workers, baseline radiological monitoring, prediction of environmental concentrations of radionuclides, decommissioning and rehabilitation (see Code, clauses 2.7.2, 2.8.2).

~~The Victorian Parliament recently passed the new *Environment Protection Act 2018* (Vic), which comes into force from July 2020. The new act includes a general environmental duty (GED) that applies to all Victorians. The GED requires that Kalbar understand the risks from the project to human health and the environment and take reasonably practicable steps to eliminate or minimise these risks. The approach described in this EMF has been prepared to address this requirement and will be updated and revised as further guidance is provided on implementation of the new act.~~

12.3 Roles and responsibilities

Kalbar, as the proponent for the project, is responsible for environmental management and for complying with all relevant approval and regulatory requirements across all project activities. Specific roles and responsibilities for Kalbar implementing this EMF are set out in Table 12.2.

Table 12.2 Kalbar roles and responsibilities

Organisation/position	Responsibilities
Management	Kalbar's board and management would be ultimately accountable for the environmental performance of the project. Kalbar management would be responsible for ensuring adequate resources are provided to support the implementation of the EMF. This includes providing the necessary infrastructure, equipment, training, personnel and time.

Operations manager	The primary responsibility for the implementation of the EMF would be held by the operations manager. The operations manager would be responsible for communicating the requirements of the EMF to personnel and contractors. The operations manager would also have the responsibility of reporting environmental incidents, audit results and other EMF matters of significance to Kalbar management. The operations manager would be assisted by suitably qualified technical and management staff to fulfil the above responsibilities.
Project staff and contractors	All Kalbar staff and contractors would be responsible for ensuring project activities are conducted in accordance with the requirements of the EMF. Everyone required to undertake a task relating to the project would be provided with adequate training and resources to allow them to fulfil their responsibilities in accordance with the EMF. Key project staff include the Health, Safety and Environment (HSE) Specialist(s), Environmental Officer(s) and Community Liaison Officer(s). The HSE Specialist(s) would: • Assess resourcing and training needs for implementation of environmental management requirements. • Schedule and coordinate implementation of environmental management plans.

Organisation/position	Responsibilities
	• Coordinate planning, design and monitoring for rehabilitation and closure works. • Review and sign off on incident reports. • Assist line managers to incorporate environmental management requirements into procedures and tasks. • Be responsible for regular performance and compliance reviews of environmental control systems. • Report non-compliances to relevant regulators. • Provide periodic (annual) performance reports (including reporting of non-compliances) to regulators and stakeholders in accordance with the Community Engagement Plan. • Liaise with stakeholders and environmental staff and contractors. The Environmental Officer(s) would: • Coordinate and deliver environmental training and inductions. • Conduct or coordinate environmental monitoring. • Manage baseline and monitoring data to ensure transparency and accountability of environmental management and manage access to these data. • Review monitoring data and prepare periodic compliance and performance reports. • Manage and maintain environmental records and databases. • Assist in incident investigation and resolution. • Assist in planning and monitoring of rehabilitation and closure works. The Community Liaison Officer(s) would: • Distribute project information. • Maintain a communications register. • Monitor effectiveness of social impact mitigation measures. • Liaise with stakeholders. • Assist in incident investigation and resolution. • Conduct routine reporting on engagement outcomes.
Visitors	All visitors to the project site would be required to undergo an induction and follow the instructions of the operations manager and other designated Kalbar staff. This includes adhering to site induction instructions regarding health, safety and environment requirements, standards and procedures and any relevant emergency response procedures.

Several government authorities have roles and responsibilities relevant to the EMF. In some instances, these roles and responsibilities differ for different aspects of the project, due to the legislation that applies. The mining licence area will be regulated by Earth Resources Regulation under the MRSD Act. Activities outside of the mining licence area, covered by the specific controls overlay (defined in the planning scheme amendment) are regulated by the responsible authority, East Gippsland Shire Council, under the Planning and Environment Act.

Table 12.3 describes the roles and responsibilities for the mining licence area. Table 12.4 describes the roles and responsibilities for the area subject to the specific controls overlay. Figure 12.1 shows the location of the proposed mining licence area and specific controls overlay.

Table 12.3 Government roles and responsibilities for activities within mining licence area

Organisation/position	Responsibilities
Minister for Planning	• Issue Minister's assessment of the EES.
Minister for the Environment, Department of Agriculture, Water and the Environment (Cth)	• Approval decision under EPBC Act. • Compliance with conditions of approval for matters of national environmental significance, including nuclear actions and offsets and mitigations in relation to listed threatened species and communities.
ERR	• Regulation of activities within mining licence area. • Review and approval of work plan. • Review and approval of risk management plan. • Review and approval of environmental noise risk treatment plan, biodiversity risk treatment plan, airborne and deposited dust risk treatment plan, water quality and hydrology risk treatment plan, mine rehabilitation plan, community engagement plan and emergency preparedness and response plan. • Referral authority for radiation management plan, radioactive waste management plan and radiation environment plan. • Regulation of compliance with conditions and requirements in work plan and associated plans listed above.
EPA	• Approval decision for works approvaldevelopment licence application. • Referral authority for work plan. • Referral authority for environmental noise risk treatment plan, airborne and deposited dust risk treatment plan, water quality and hydrology risk treatment plan, mine rehabilitation plan, community engagement plan and emergency preparedness and response plan. • Regulation of compliance with conditions of works development licence approval. • Compliance with requirements of new the *Environment Protection Act 2017*8 (Vic), including obligations under the GED.
DELWP	• Management of the EES process. • Referral authority for work plan. • Referral authority for works approval application. • Referral authority for biodiversity risk treatment plan, radiation management plan, radioactive waste management plan, radiation environment plan, mine rehabilitation plan and community engagement plan. • Approval of native vegetation offsets.
Department of Health and Human Services (DHHS), Secretary of DHHS	• Issue of radiation management licence. • Review and approval of radiation management plan, radioactive waste management plan and radiation environment plan. • Regulation of compliance with requirements of radiation management licence. • Referral authority for airborne and deposited dust risk treatment plan, water quality and hydrology risk treatment plan and mine rehabilitation plan.
East Gippsland Shire Council	• Referral authority for works approvaldevelopment licence. • Referral authority for work plan. • Referral authority for environmental noise risk treatment plan, biodiversity risk treatment plan, airborne and deposited dust risk treatment plan, water quality and hydrology risk treatment plan, mine rehabilitation plan, community engagement plan and emergency preparedness and response plan.

Organisation/position	Responsibilities
Southern Rural Water	• Approvals under *Water Act 1989* (Vic). • Referral authority for work plan. • Referral authority for ~~works approval.~~development licence. • Referral authority for mine rehabilitation plan.
Catchment management authorities	• Referral authority for work plan. • Referral authority for ~~works approval~~development licence. • Referral authority for water quality and hydrology risk treatment plan. • Approval for works on waterways.
Department of Transport	• Approval authority for traffic management plan.

Table 12.4 Government roles and responsibilities for activities within areas subject to the specific controls overlay

Organisation/position	Responsibilities
Minister for Planning	• Issue Minister's assessment of the EES. • Approval of planning scheme amendment (planning authority).
Minister for the Environment, Department of Agriculture, Water and the Environment (Cth)	• Approval decision under EPBC Act. • Compliance with conditions of approval for matters of national environmental significance, including nuclear actions and offsets and mitigations in relation to listed threatened species and communities.~~.~~
East Gippsland Shire Council	• Responsible authority for implementation of requirements of planning scheme amendment. • Approval of management plans developed for the planning scheme amendment and the associated incorporated document, including the traffic management plan, construction noise management plan, operational noise management plan, environmental management plan, construction management plan, native vegetation management plan and fire management plan. • Approval of traffic management plan.
~~Wellington Shire Council~~	~~• Approval of traffic management plan.~~
EPA	• Referral authority for construction environmental management plan, environmental management plan, construction noise management plan, operational noise management plan, native vegetation management plan, air quality sub-plan, surface water and groundwater sub-plan, radiation management plan, radioactive waste management plan, radiation environment plan and community engagement plan. • Compliance with requirements of ~~new~~ *Environment Protection Act 2017*~~8~~ (Vic), including obligations under the GED across all project activities.
DELWP	• Management of the EES process. • Review of planning scheme amendment. • Referral authority for work plan and works approval application. • Referral authority for biodiversity sub-plan, radiation management plan, radioactive waste management plan, radiation environment plan, rehabilitation sub-plan, fire management plan and community engagement plan.

	• Approval of Native Vegetation Management Plan, including avoid – minimise statement and offsets.
Department of Health~~HHS~~	• Issue of radiation management licence. • Review and approval of radiation management plan, radioactive waste management plan and radiation environment plan.

Organisation/position	Responsibilities
	• Regulation of compliance with requirements of radiation management licence. • Referral authority for air quality sub-plan, surface water and groundwater sub-plan and rehabilitation plan.
Southern Rural Water	• Approvals under *Water Act 1989* (Vic). • Referral authority for surface water and groundwater sub-plan and rehabilitation sub-plan. • Regulation of compliance with approvals issued under *Water Act 1989* (Vic).
Catchment management authorities	• Approval of permit for works on waterways. • Regulation of compliance with works on waterway permit. • Referral authority for surface water and groundwater sub-plan.
Department of Transport	~~• Referral authority for construction environmental management plan.~~ ~~• Referral authority for environmental management plan.~~ • ~~Referral~~ Approval authority for traffic management plan.

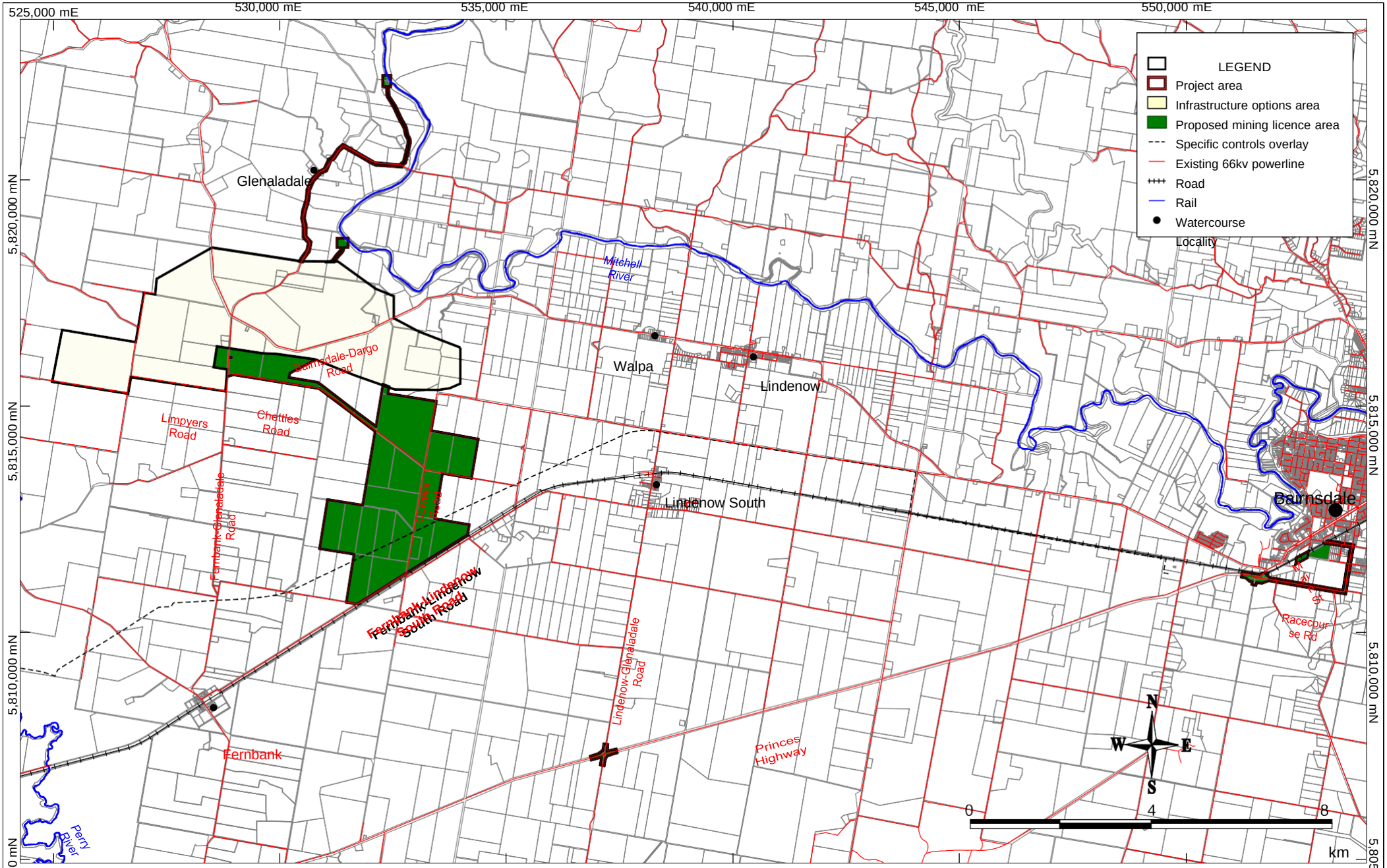
12.4 Environmental management framework

12.4.1 Overview

The EMF provides a governance framework for the management of environmental impacts from the project. The components of the EMF and how they relate to each other are shown in Figure 12.2. Table 12.5 provides a summary of each of these components. Where relevant, components of the EMF address the requirements of *AS/NZ/ISO 14001:2016 Environmental management systems – Requirements with guidance for use* (AS/NZS, 2016).

Table 12.5 Components of environmental management framework

EMF component	Description
Health, safety and environment policy	Primary document setting out Kalbar's policy for environmental management that defines environmental commitments and objectives for environmental performance.
Compliance obligations	Requirements of approvals, legislation, policy and guidelines that must be complied with.
Environmental aspects register	Register of project activities and assets that can interact with the environment.
Environmental risk assessment	Assessment of potential risk of harm from project activities using a combination of likelihood and consequence (residual impact magnitude and significance) to determine the probability of harm.
Management plans	Overarching management plans for different project phases and activities that identify relevant environmental impacts and provide details of mitigation measures, monitoring and reporting.
Sub-plans	Plans setting out detailed controls for aspects of the environment identified as key risks for the project.
Procedures	Specific details of how activities and controls are to be undertaken, e.g., water sampling.



525,000 mE 530,000 mE 535,000 mE 540,000 mE 545,000 mE 550,000 mE

Source:
Road, Rail, cadastre from Vicmap. Powerline from Ausnet
Prices Hwy / Lindenow-Glenaladale Rd roundabout from Crossco.

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All other specific control areas from Kalbar.

Date: 25/06/2020
Project Number: 754-ENAUABTF11607
File Name: 11607_6_12.1_GIS_v2_1

Fingerboards Mineral Sands Project
Environment Effects Statement

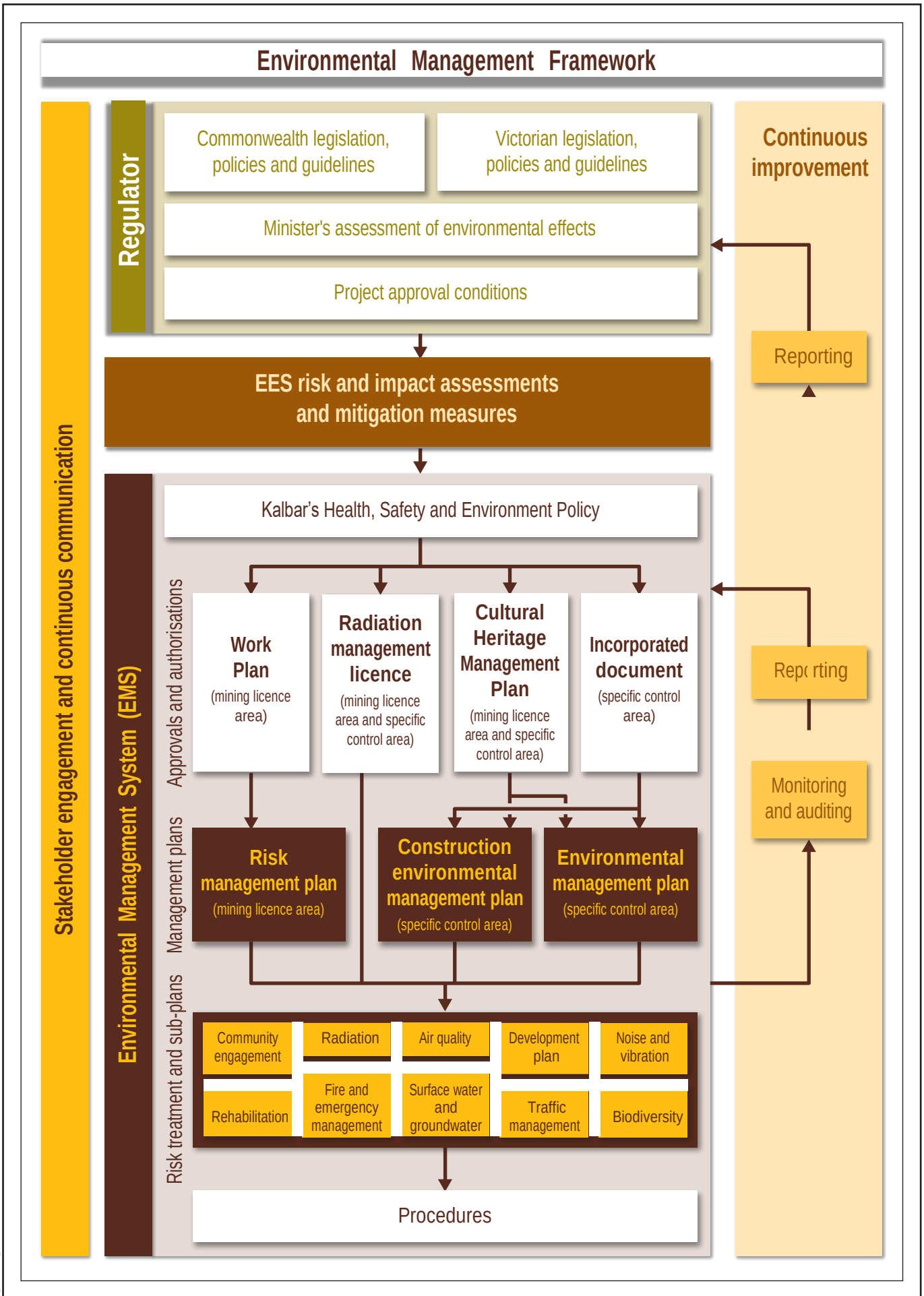
Location of

WOR Reference: 754-ENAUABTF11607_6_GIS_12.1_v2_1

proposed specific controls overlay and proposedmining licence area

Figure No:

12.1



coffey A TETRA TECH COMPANY	Date: 25.06.2020 Project: 754-ENAUABTF11607 File Name: ENAUABTF11607_6_F12.02	Kalbar Operations Pty Ltd Fingerboards Mineral Sands Project	KALBAR OPERATIONS PTY LTD	Environmental management framework	Figure No: 12.2

12.4.2 Health, safety and environmental policy

Figure 12.3 presents Kalbar's health, safety and environmental policy (HSEP). The policy covers all activities related to the project.

12.4.3 Environmental risk assessment

The EES identifies potential risks to environmental, socioeconomic (including human health) and cultural values from the project, and the associated residual impacts. Mitigation measures will be implemented to manage, and reduce where necessary, the identified residual risks (and predicted impacts). This assessment forms a key part of the EMF and would be used to manage environmental risks to the identified values during all phases of the project.

The environmental risk assessment is a live document and will be regularly updated to address project activities for the relevant phase of the project. New data and information obtained during, for example, monitoring activities would also inform updates of the risk assessment. By regularly updating the risk assessment, Kalbar would be able to identify whether additional or modified mitigation measures or monitoring activities are required to address project impacts throughout the various phases of the project. Chapter 7: Impact assessment framework provides details of the risk assessment framework used in the EES and Attachment F includes the completed environmental risk register for the EES.

12.4.4 Environmental objectives and indicators

The management plans and sub-plans would include environmental objectives, indicators and monitoring requirements for aspects of the environment relevant to each plan. Table 12.6 presents the draft evaluation objectives from the EES scoping requirements (where these are relevant to the EMF), draft EMF objectives, and indicators for aspects of the environment identified in the EES scoping requirements. The draft evaluation objectives in the EES Scoping Requirements and EMF objectives do differ in some cases. The draft evaluation objectives were developed prior to completion of the assessments for the EES, whereas the EMF objectives are based on the specific environmental risks identified in the EES.

The indicators and their associated criteria would be used to determine whether the objectives are being achieved. Details of the monitoring to be conducted against these objectives and indicators would be included in each relevant plan.

The objectives and indicators are informed by the following:

- Kalbar's HSEP and other relevant corporate policies and objectives.
- Requirements of relevant legislation, regulations, policies and guidelines as identified in the compliance obligations register.
- Relevant industry guidelines, such as the Leading Practice Sustainable Development Program for the Mining Industry program, including handbooks such as the Mine Rehabilitation: Leading Practice Sustainable Development Program for the Mining Industry (2016).
- Assessment of environmental impacts and risks completed for the EES and the Fingerboards risk management plan.
- Kalbar's business requirements.
- Financial and technological options considered by Kalbar.
- Outcomes of stakeholder engagement undertaken by Kalbar.

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Kalbar Operations
Health, Safety and Environment Policy

1. Introduction

Kalbar is committed to managing our business, focusing on the health, safety and the wellbeing of our people and in caring for the environment in which we operate. We do this by providing a safe work place where no injury or harm to health is considered acceptable and through acknowledging a responsibility to our environment by using resources efficiently and responsibly.

2. Policy objectives

Kalbar's Health, Safety and Environment objectives include:

- all of us going home from work without injury or illness;
- no business objectives taking priority over health and safety; and
- undertaking proactive environmental management practices.

3. Scope

This policy applies to all employees, directors, officers, contractors, agents, consultants and any other party representing Kalbar wherever it operates across the world.

4. Policy statements

- We all demonstrate a strong focus on health, safety and environmental behaviour and competence by maintaining a clear focus on safety leadership and accepting accountability for personal safety and the safety of others.
- We recognise that sustainability is an integral and multi-disciplinary part of our business that must be considered in all decisions.
- We will comply at all times with workplace health, safety and environmental laws and regulations and aim to go beyond compliance to undertake proactive health, safety and environment management practices.
- We continuously review our operations to identify, assess and control environmental impact and actively promote the reduction of waste within our operation.
- We will set company-wide health, safety and environment targets and performance against these targets will be monitored, measured and reported on to the Board.
- We will report any actual or potential environmental incidents or spills irrespective of the severity and report on our environmental performance.

5. To achieve these objective we will:

- Develop a culture that recognises the importance of demonstrating safety leadership behaviour by embedding this as an expectation in all our planning, systems and procedures;
- Work to ensure that we have technically sound plant and equipment; and work that is well designed, planned, executed, supervised and improved by trained and competent people;
- Undertaking all necessary environmental assessments for our operations and use the best available evidence to identify how we can prevent, minimise, mitigate or remediate any harmful effects of our operation on the environment;
- Provide appropriate levels of training, development and mentoring to ensure our employees and contractors are aware of this policy and how it is implemented;
- Encourage our people to collaborate and share learnings to proactively prevent incidents;
- Learn from incidents and strive to continually improve our health, safety and environmental performance; and
- Monitor, maintain and improve, where required, health, safety and environment risks through the use of robust systems, governance and assurance processes.

6. Policy Review

This policy will periodically be reviewed by the Board to ensure it continues to meet both regulatory and contemporary industry standards and practices.

Related documents:

- Kalbar Code of Conduct
- Misconduct Reporting Procedure
- Kalbar Whistleblower Policy

Version	Doc Category	Status	Reviewer	Approver	Approval Date	Due for review
1.1	Board	Reviewed	V. Hugo	Chairman: Brad Farrell	24.2.2020	Feb-21

Table 12.6 Draft objectives and indicators

Aspect	Relevant EES Scoping requirements draft evaluation objective	EMF objectives	Indicators [unique indicator number included in brackets]
Social, health and wellbeing outcomes and community engagement	Social, land use and infrastructure – To minimise potential adverse social and land use effects, including on, agriculture (such as dairy irrigated horticulture and grazing), forestry, tourism industries and transport infrastructure. Amenity and environmental quality – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.	To protect the health and wellbeing of residents and local communities.	• Compliance with project approvals and regulatory requirements [I1], including for environmental monitoring. • Regular support for community events and initiatives [I2]. • Regular engagement with key stakeholders [I3], including East Gippsland and Wellington shires and social services providers. • Regular review of stakeholder engagement forums and approaches, with subsequent actions in response to community feedback [I4]. • Community represented on the environmental review committee [I5]. • Community reference group meets regularly [I6].
		To provide the community with access to information on the environmental performance and socioeconomic impacts of the project during all phases.	• Regular contact with adjacent residents [I7]. • Environmental monitoring results available to the public [I8].
		To effectively address community complaints in a timely manner.	• Timely response to all complaints [I9]. • All complaints responded to in accordance with the complaints handling policy and procedure [I10].
		To maximise the economic benefits from the project for the region.	• Partnerships established with training providers and industry networks prior to construction [I11]. • Locally employed workforce [I12]. • Goods and services sourced from the Gippsland region [I13].

Aspect	Relevant EES Scoping requirements draft evaluation objective	EMF objectives	Indicators [unique indicator number included in brackets]
Biodiversity values, including offsets and establishing a sustainable vegetation cover	Biodiversity – To avoid or minimise potential adverse effects on native vegetation, listed threatened and migratory species and ecological communities and habitat for these species, as well as address offset requirements for residual environmental effects consistent with state and Commonwealth policies.	To avoid and minimise, or where this is not possible, offset adverse effects on native vegetation and listed threatened flora and fauna species.	• Compliance with project approvals and regulatory requirements [I1], including Commonwealth approval conditions under the EPBC Act. • Extent of vegetation removal [I14]. • Weed and pest species density and coverage [I15]. • Fauna mortality [I16]. • Change in riparian vegetation health, water quality and groundwater level for priority groundwater dependent ecosystems [I17]. • Change in biophysical conditions of ephemeral drainage lines [I18]. • Vegetation quality at offset sites [I49].
Ecological character of the Gippsland Lakes Ramsar site	Water, catchment values and hydrology – To minimise effects on water resources and on beneficial and licensed uses of surface water, groundwater and related catchment values (including the Gippsland Lakes Ramsar site) over short and long-term.	To maintain the ecological character of the Gippsland Lakes Ramsar site.	• Alteration of hydrological regime in Mitchell River [I19]. • Change in water quality from historic baseline [I20].
Groundwater and/or surface water usage and stormwater runoff	Water, catchment values and hydrology – To minimise effects on water resources and on beneficial and licensed uses of surface water, groundwater and related catchment values (including the Gippsland Lakes Ramsar site) over short and long-term.	To minimise effects on water resources and protect beneficial uses and licenced uses of surface water and groundwater.	• Change in water quality from historic baseline [I20], including groundwater and surface water quality. • Groundwater drawdown or mounding [I23].

Aspect	Relevant EES Scoping requirements draft evaluation objective	EMF objectives	Indicators [unique indicator number included in brackets]
Geotechnical and geochemical landform stability, including potential erosion and sedimentation	Water, catchment values and hydrology – To minimise effects on water resources and on beneficial and licensed uses of surface water, groundwater and related catchment values (including the Gippsland Lakes Ramsar site) over short and long-term.	To maintain landform stability and reduce erosion during all project phases.	• Erosion extent and number of slope failures [I25]. • Change in water quality from historic baseline [I20], including groundwater and surface water quality.
Solid and liquid waste, including recycling and handling of potentially hazardous or contaminated waste, including radioactive materials	Amenity and environmental quality – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.	To minimise generation of waste, maximise reuse and recycling, and where required, responsibly dispose of wastes.	• Number and volume of spills [I26]. • Number of uncontrolled releases of soil and/or liquid wastes [I27]. • Volumes of waste (by type) produced and disposed of [I28].
Noise, vibration and emissions to air, including dust and greenhouse gases	Amenity and environmental quality – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.	To minimise effects on air quality and protect the amenity of residents and local communities.	• Actual (measured) plant and equipment noise levels [I29]. • Number of exceedances of project noise or vibration criteria at sensitive receptors [I30]. • Number of exceedances of project air quality criteria beyond the project area boundary and/or at sensitive receptors [I31]. • Number of community complaints relating to noise emissions from project traffic [I32].
		To protect the environmental public health of residents and local communities.	• Number of community complaints related to noise, vibration and air emissions [I33].
Aboriginal and cultural heritage values	Cultural heritage – To avoid or minimise adverse effects on Aboriginal and non-Aboriginal cultural heritage.	To avoid or minimise adverse effects on Aboriginal and non-Aboriginal cultural heritage values.	• Damage to known cultural heritage items, sites or places beyond that predicted in the EES [I34]. • Reports of chance finds [I35].

Aspect	Relevant EES Scoping requirements draft evaluation objective	EMF objectives	Indicators [unique indicator number included in brackets]
Traffic during construction and operations	Social, land use and infrastructure – To minimise potential adverse social and land use effects, including on, agriculture (such as dairy irrigated horticulture and grazing), forestry, tourism industries and transport infrastructure.	To maintain road safety and performance during construction and operations of the project.	• Number of incidents on roads used by project traffic [I36]. • Number of community complaints related to project traffic [I37], including traffic noise emissions. • Regular engagement with key stakeholders [I3], including East Gippsland and Wellington shires and Department of Transport.
Disruption of or hazard to existing infrastructure	Social, land use and infrastructure – To minimise potential adverse social and land use effects, including on, agriculture (such as dairy irrigated horticulture and grazing), forestry, tourism industries and transport infrastructure.	To avoid disruption or degradation to existing infrastructure due to project activities.	• Number of community complaints related to use of infrastructure [I38]. • Regular engagement with key stakeholders [I3], including East Gippsland and Wellington shires and Department of Transport. • Change in road pavement condition [I39].
Requirements for protection of the environment from radiation	Amenity and environmental quality – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.	To protect project personnel, the public and the environment from the harmful effects of radiation.	• Radiation levels in ore, overburden and dust during operations [I40]. • Radiation levels in surface water and groundwater [I41]. • Radon levels in air [I42]. • Change in radionuclide content compared to pre-mining conditions in soils and crops on land surrounding the mine. • Radiation levels on the site post rehabilitation.
Site rehabilitation, including handling of topsoil, tailings and mining by-products	Rehabilitation – To establish safe progressive rehabilitation and post-closure stable rehabilitated landforms capable of supporting native ecosystems and/or productive agriculture that will enable long-term sustainable use of the project area.	To establish rehabilitation conditions that are safe for humans, non-polluting, geotechnically stable, not prone to erosion able and to sustain post-mining land uses agreed with stakeholders.	• Number of structural failures of engineered elements of rehabilitation [I43]. • Extent of erosion in rehabilitated areas [I44]. • Change in vegetation cover and species diversity compared to pre-mining conditions [I45]. • Change in water quality from historic baseline [I20], including groundwater and surface water quality. • Levels of pollutants in soil and water [I46], including surface water and groundwater.

Aspect	Relevant EES Scoping requirements draft evaluation objective	EMF objectives	Indicators [unique indicator number included in brackets]
Fire management and emergency response	Social, land use and infrastructure – To minimise potential adverse social and land use effects, including on, agriculture (such as dairy irrigated horticulture and grazing), forestry, tourism industries and transport infrastructure. Amenity and environmental quality – To protect the health and wellbeing of residents and local communities, and minimise effects on air quality, noise and the social amenity of the area, having regard to relevant limits, targets or standards.	To prevent any unintentional fires or increase in fire risk to surrounding properties due to project activities.	• Number, cause, frequency and extent of unintentional fires [I47]. • Damage to property and infrastructure caused by fire [I48].

12.4.5 Management plans

A series of management plans (see Figure 12.2) would be prepared for different components and phases of the project, and to address different regulatory requirements under relevant legislation~~, as detailed in Table 12.7.~~. [Table 12.7 is unnecessary in light of the following list and Table 12.8] This will include the following:

- The work plan, which will address regulatory requirements set out in the *Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019* and will apply to the mining licence area only. Preparation of a work plan is a requirement of the MRSD Act for those intending to do work under a mining licence. The work plan will summarise key risks of implementing the project, identify potential impacts of the project and describe how these potential impacts would be avoided or managed. The work plan will include:
  - A risk management plan, which itself will include risk treatment plans for key areas of activity. The following draft risk treatment plans have been prepared for the project:
    - Environmental noise risk treatment plan.
    - Biodiversity risk treatment plan.
    - Airborne and deposited dust risk treatment plan.
    - Water quality and hydrology risk treatment plan.
  - A mine rehabilitation plan.
  - A community engagement plan.
- Management plans developed for the planning scheme amendment and the associated incorporated document, which will address requirements under the Planning and Environment Act, for the specific controls overlay area only. These include:
  - An environment management framework
  - A development plan
  - A traffic and transport management plan.
  - A construction noise management plan.
  - An operational noise management plan.
  - ~~An environmental management plan.~~
  - A construction management plan.
  - A native vegetation management plan.
  - A fire and emergency management plan
  - A decommissioning plan.
- A cultural heritage management plan, which will address requirements under the *Aboriginal Heritage Act 2006* (Vic) for both the mining licence area and the specific controls overlay area.
- A radiation management plan and radioactive waste management plan, which will address requirements under the *Radiation Act 2005* (Vic) for both the mining licence area and the specific controls overlay area.
- A radiation environment plan with assessment made in accordance with the Guide for Radiation Protection of the Environment (Australian Radiation Protection and Nuclear Safety Agency [ARPANSA], 2015) for the mining licence area and the specific controls overlay area.

Additional plans, and amendments to plans, are expected to be developed throughout the project in response to the conditions of approval, monitoring results, and review and updates to the environmental risk assessment.

Table 12.7 Scope of management plans

Project phase	Project activities	Description	Approval (referral authorities)
Work plan and risk management plan (RMP)			
Construction, operations and closure	Activities within mining licence area	• Address requirements of MRSD Act and regulations. • Summarise project including assumptions and identify sensitive receptors. • Risk assessment and register including identification of hazards requiring risk management plans. • Details of controls. • Details of monitoring and reporting. • Risk management plan includes risk treatment plans for key areas of activity. • Includes mine rehabilitation plan. • Includes community engagement plan. • Outline responsibility for, and frequency of, reviews of the work plan and RMP.	ERR (Southern Rural Water, East Gippsland Shire Council)
Construction environmental management plan (CEMP)			
Construction	Activities within areas subject to the specific controls overlay	• Prepared in accordance with Environmental Guidelines for Major Construction Sites (EPA, 1996). • Address requirements of incorporated document, including: – Staging plan. – Location of works office and machinery storage. – Hours of construction. – Access routes for construction vehicles. – Vehicle and machinery exclusion zones. – Management measures for surface water. – Measures to protect areas of conservation or heritage significance. – Measures to protect existing vegetation and human health, and manage weeds, dust and construction noise and vibration. – Location of machinery and vehicle wash down area. – Management of litter, construction waste and chemical storage. – Details of construction personnel parking. – Contact details for on-site personnel and supervisors. – Details of removal of works, building and staging areas on completion of construction. – Methods for informing and training contractors on requirements of the plan. • Outline responsibility for, and frequency of, reviews of the CEMP.	East Gippsland Shire Council (EPA, Department of Transport)

Project phase	Project activities	Description	Approval (referral authorities)
Environmental management plan (EMP)			
Operations and closure	Activities in areas subject to the specific controls overlay	• Addresses commitments in the EES and conditions of approval for the project including risks, mitigation and roles and responsibilities. Provides: – Procedures to avoid, minimise, mitigate and manage potential environmental and social impacts, including human health. – Basis for continuous improvement of environmental management during the life of the project. • Address the requirements of the incorporated document to prepare a traffic management plan, native vegetation management plan and bushfire management plan. • Outline responsibility for, and frequency of, reviews of the EMP.	East Gippsland Shire Council (EPA, Department of Transport)

A series of risk treatment plans and management sub-plans would sit under the management plansmine work plan, Incorporated Document and radiation management licence.The scope and content of these plans is driven by the key environmental risks and impacts of the project identified through this EES, regulatory requirements and applicable policies and guidelines including:

- the guidelines *Preparation of Work Plans and Work Plan Variations: Guidelines for mining projects* (December 2020, v1.3, Department of Jobs, Precincts and Regions); and
- the *Code of Practice Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing* (ARPANSA, Radiation Protection Series No. 9).

The proposed risk treatment plans and sub-plans are described in Table 12.8, together with the relevant approval and referral authorities. Where possible, one plan will be prepared to address requirements within the mining licence area and the area subject to the specific controls overlay. Approval and referral authorities may differ for different sections of the plan.

Table 12.8 Proposed risk treatment and sub-plans to be prepared for the project and relevant approval authorities

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
Noise and vibration sub-plan				
Environmental noise risk treatment plan	✓	-	• Relevant sensitive receptors. • Risk assessment. • Project objectives, compliance standards and acceptance criteria for noise and vibration emissions. • Controls and contingency measures to address the risks and achieve compliance with standards and acceptance criteria. • Residual risk assessment accounting for implementation of controls. • Complaints handling policy and procedure. • Monitoring and reporting. • Address the requirements of EPA Publication 1826.4 *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues*~~EPA Publication 1411 *Noise fromIndustry in Regional Victoria*., as relevant to the project.~~ • Responsibility for, and frequency of, reviews of the ~~sub-~~plan.	ERR, East Gippsland Shire Council (EPA)
Construction noise management plan	-	✓		
Operational noise management plan	-	✓		
Biodiversity sub-plan				
Biodiversity risk treatment plan	✓	-	• Site plan showing boundaries of the site, existing native vegetation and the native vegetation to be removed. • Description of native vegetation to be removed. • Detailed mitigation measures. • Staff and contractor inductions to address the location of sensitive ecological values and their roles and responsibilities in the protection and/or minimisation of impacts to all native biodiversity. • Pre-clearing surveys and fauna salvage/translocation where practical. • Vegetation management and clearing protocols.	ERR, East Gippsland Shire Council (DELWP, DELWP (region))
Native vegetation management plan	-	✓		

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
			• Contingency measures to manage potential unexpected discoveries of listed flora and fauna species. • Fauna management. • Wetland and aquatic habitat management. • Pest plant and animal management. • Weed control measures, pest management measures, and flora and fauna monitoring program. • Offset management (to satisfy state and Commonwealth government offset requirements). • Responsibility for, and frequency of, reviews of the ~~sub-~~plan.	
Offset Management Plan	✓	✓	• Details and maps of offset sites to demonstrate how required offsets for significant residual impacts will be achieved. • Description of how the offset will be secured, managed and monitored, including management actions, responsibility, timing, performance measures and the specific environmental outcomes to be achieved. • Commitments and management actions to deliver and implement the proposed offsets. • Monitoring of offset sites. • Responsibility for, and frequency of, reviews of the plan.	Department of Agriculture, Water and the Environment, DELWP
Air quality sub-plan				
Airborne and deposited dust risk treatment plan	✓	-	• Relevant sensitive receptors. • Risk assessment. • Project objectives, compliance standards and acceptance criteria for air quality. • Controls and contingency measures to address the risks and achieve compliance with standards and acceptance criteria.	ERR, East Gippsland Shire Council (EPA, DHHS)
Air quality risk management plan	-	✓		

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
			• Residual risk assessment accounting for implementation of controls. • Air quality trigger levels to avoid exceedances of criteria at sensitive receptors. • Address requirements of the *Protocol for Environmental Management – Mining and Extractive Industries* (EPA publication no. 1191), *Mining and quarrying - guide to preventing harm to people and the environment* (EPA publication no. 1823), *National Environment Protection Measure for Ambient Air Quality*, ~~State Environment Protection Policy (Air Quality Management) and State Environment Protection Policy (Ambient Air Quality)~~Environment Reference Standard and general environmental duty under the *Environment Protection Act 2017*, as relevant tothe project. • Responsibility for, and frequency of, reviews of the sub-plan.	
Surface water and groundwater sub-plan				
Water quality and hydrology risk treatment plan	✓	-	For surface water and groundwater: • Relevant sensitive receptors. • Risk assessment. • Project objectives, compliance standards and acceptance criteria for surface and groundwater. • Monitoring program(s). • Controls and contingency plans to address the risks and achieve compliance with standards and acceptance criteria. • Residual risk assessment accounting for implementation of controls. • Address requirements of Environment Reference Standard and general environmental duty under the *Environment Protection Act 2017*~~State Environment Protection Policy (Waters) (EPA Victoria, 2018)~~, as relevant to the project and in consultation with EPA in the development of the plan. • Responsibility for, and frequency of, reviews of the sub-plan.	ERR, EPA, Southern Rural Water (East Gippsland Shire Council, catchment management authorities, DHHS)
Water management plan	-	✓		

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
Radiation sub-plan				
Radiation management plan	✓	✓	• Address requirements of the *Code of Practice on Radiation Protection* and *Radioactive Waste Management in Mining and Mineral Processing* (ARPANSA, 2005, Radiation Protection Series No. 9). • All significant exposure sources and pathways, including plans of the mine and primary processing plant, equipment to be used in mining and processing and estimates of radionuclide content of various process streams. • Assessment of radiation impacts to g~~C~~roups of workers, ~~ or~~ members of the public, surrounding land uses (including horticulture and agriculture) and the environment (including groundwater and surface water). ~~most at risk.~~ • Requirements for activity median aerodynamic diameter (AMAD) airborne particle sizing to be undertaken in early stages of operations to determine if default conversion coefficients (ARPANSA Radiation Protection Series No. 9.1, 2011) are appropriate for radiation dose assessment purposes, or alternative coefficients need to be applied. • Address radiological hazards associated with transportation of heavy mineral concentrate and mitigation measures to manage potential impacts on freight contractors and the public. • Responsibility for, and frequency of, reviews of the management plan.	Department of Health~~HHS~~ (EPA, ERR, DELWP)

Radioactive waste management plan	✓	✓	• Waste generated, processes generating the waste and the environment into which the waste will be discharged or disposed of. Facilities and procedures involved in the handling, treatment, storage and disposal of radioactive waste. • Prediction of environmental concentrations of radionuclides and radiation doses to people from the proposed waste management practices, including demonstration that the radiation protection requirements of the *Code of Practice on Radiation Protection* will be met.	~~DHHS~~Department of Health (EPA, ERR, DELWP)

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
			• Contingency measures in the case of failures in operational processes or equipment. • Program for monitoring the concentration of radionuclides in the environment and assessing radiation doses to members of the public arising from the waste management practices (i.e., groundwater monitoring, airborne dust levels or radon in air). • System of periodic assessment and review of the adequacy and effectiveness of procedures instituted under the approved radioactive waste management plan to ensure currency and account for potential improvements in technology. • Plan for decommissioning waste management facilities and rehabilitation of the site. • Responsibility for, and frequency of, reviews of the management plan.	
Radiation environment plan	✓	✓	• Made in accordance with the *Guide for Radiation Protection of the Environment* (ARPANSA, 2015, Radiation Protection Series G-1). • Potential impacts of the project on non-human biota, relevant screening values and if required, further assessment. • Responsibility for, and frequency of, reviews of the plan.	~~DHHS~~Department of Health (EPA, ERR, DELWP)
Rehabilitation sub-plan				
Mine rehabilitation plan	✓	-	• Post-mining land uses and landforms envisaged following project completion. • Rehabilitation outcomes ~~which Kalbar seeks to achieve~~. • Rehabilitation and restoration measures including the establishment of rehabilitation protocols. • Metrics by which attainment of rehabilitation outcomes would be assessed. • Key risks that could affect delivery of closure objective.	ERR (Mine rehabilitation plan), East Gippsland Shire Council (Decommissioning plan)~~, EPA~~ (East Gippsland Shire Council, DHHS, Southern Rural Water, catchment management authorities, DELWP, DELWP (region))
~~Rehabilitation plan~~Decommissioning plan	-	✓		

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
			• How Kalbar proposes to avoid or mitigate rehabilitation and closure risks. • Responsibility for, and frequency of, reviews of the sub-plan.	
Fire and emergency management sub-plan				
Emergency preparedness and response plan, Bushfire management plan	✓	-	• Actions required to minimise impacts on community or worker health and safety. • Actions required to minimise environmental and property damage. • Training of emergency response personnel. • Emergency organisation and responsibilities. • Internal and external communications. • Evacuation routes and assembly points. • Processes for a post-accident evaluation to establish and implement corrective and preventative actions. • Periodic testing of emergency response procedures including periodic training drills to test competencies and the effectiveness of emergency communications and response systems. • Responsibility for, and frequency of, reviews of the plan. • Fire risk management measures for landscape, siting, design, defendable space, construction, water supply and access and includes site specific bushfire mitigation measures, awareness actions, preparedness levels and fire response procedures for the site (see BF01)	ERR (CFA, East Gippsland Shire Council)
Fire and emergency management plan	-	✓	• Procedures for vegetation management, fuel control and the provision of firefighting equipment during declared fire danger periods. • Procedures for planned burns or other fuel reduction measures to reduce overall fuel hazard levels. • Protocols to address periods of high fire danger, including Total Fire Ban days and Code Red days. • Procedures for hot work permitting to reduce the potential for ignitions and suspension or shutdown of tasks which may cause	East Gippsland Shire Council (CFA, DELWP)

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
			ignition (such as site preparation works in vegetated areas) on days of elevated fire danger. • Criteria for provision of static water supply solely for firefighting purposes and procedures for maintaining suppression equipment and plant to respond to spot fires. • Minimum standard for access roads and tracks to allow access for firefighting vehicles. • Bushfire awareness and response procedures, including responses to formal emergency alerts issued by authorities. • Details of response roles at the mine site. • Details of the role of fire refuges. • Program for monitoring the implementation of bushfire mitigation measures on an ongoing basis. • Responsibility for, and frequency of, reviews of the management plan.	
Other sub-plans				
Community engagement plan	✓	✓	• List of relevant community members and stakeholders. • Potential impacts on the identified community members and stakeholders. • How Kalbar would engage with community members and stakeholders. • Complaints handling policy and procedure. • Timeline for engagement activities throughout the mine life. • Responsibility for, and frequency of, reviews of the plan.	ERR~~, East Gippsland Shire Council~~ (DELWP, EPA, East Gippsland Shire Council)

Plan	Mining licence area	Specific controls overlay area	Description of contents	Approval (referral authority)
Traffic and transport management plan	✓ -	✓	• Roads and associated infrastructure at risk from damage, deterioration or dilapidation arising from the construction and operation of the project. • Inspection program during construction to identify road safety hazards or maintenance works necessary as a result of construction traffic. • Program to rehabilitate existing road infrastructure to a safe and useable condition during construction, operations and closure of the mine. • Road widening and upgrades required to accommodate additional traffic or oversize vehicles due to the project. • Responsibility for, and frequency of, reviews of the management plan.	East Gippsland Shire Council, ~~Wellington Shire Council~~ ~~(~~Department of Transport~~)~~
Development plan	-	✓	• Location of buildings, works and proposed activities. • Elevations of buildings and above ground works.	East Gippsland Shire Council
Cultural heritage management plan	✓	✓	• Address requirements outlined in the *Aboriginal Heritage Act 2006* (Vic) and Aboriginal Heritage Regulations 2018. • Site specific management conditions to either avoid Aboriginal cultural heritage places or mitigate impacts to them during project construction, operations and closure phases. • Contingency measures (i.e., chance finds protocol) that provide clear instructions to be followed in the event that Aboriginal cultural heritages places or materials are discovered.	AV (GLaWAC)

12.4.6 Procedures

Kalbar will develop procedures setting out how activities in the management plans would be implemented. Procedures will apply across key risk mitigation activities and would likely include (but not be limited to):

- **Record control:** How records will be taken, stored and distributed.
- **Complaints:** How complaints will be recorded and responded to.
- **Monitoring:** How monitoring activities will be conducted.
- **Spill response:** Measures to be implemented to respond to spills, including need for water quality testing and reporting.

12.4.7 Environmental mitigation measures

[Note concerning consistency between the mitigation measures shown in Attachment H to the EES and the Draft Work Plan:

- Mitigations are listed in Attachment H of the EES with identifiers such as 'NV04'. These are equivalent in substance, albeit with slightly different wording, to the mitigations appearing in the Draft Work Plan (cross referenced in the same manner, e.g., 'NV04' in the Work Plan should match in substance 'NV04' in Attachment H).

- For simplicity, Kalbar will only be updating the mitigation measures at Attachment H. Any updates to Attachment H are intended to apply also to the Draft Work Plan.]

A detailed list of all mitigation measures proposed by Kalbar is provided in Attachment H. Relevant measures will be included in each of the management plans and sub-plans.

Mitigation measures will be implemented by Kalbar in accordance with the following hierarchy of control:

- Avoidance of impacts wherever possible.
- If impacts are unavoidable, minimisation of impacts as far as practicable.
- If residual impacts remain significant, examination of options to offset impacts in accordance with relevant regulatory requirements.

12.4.8 Monitoring and reporting

Monitoring would be conducted to measure project performance during construction, operations and closure (including decommissioning, rehabilitation and post-closure). Table 12.9 describes the monitoring programs proposed to be implemented for the project for each environmental aspect. Detailed monitoring requirements would be incorporated into the management plans and sub-plans for the project (see Figure 12.2). The requirements would reflect approval and regulatory requirements and the level of residual risk to the environment.

Monitoring results would be reviewed by the operations manager at least monthly to enable early detection of potential non-conformance, non-compliance and/or other issues. This regular internal review of monitoring results informs an adaptive management approach to be implemented effectively and will also help identify whether additional or modified monitoring activities are required to address project risks.

Monitoring results, including baseline data where applicable, would be reported in accordance with the conditions of approval, licences and permits and other applicable regulatory requirements. Baseline data collected for the EES will be made publicly available on the project website. Results from ongoing dust, water and noise monitoring will also be made publicly available on the project

website.

An annual monitoring report will be prepared, reviewing monitoring results against requirements and identifying the need for corrective action. The annual report would be the responsibility of the operations manager and provided to Kalbar's board. The findings of the report would be published on Kalbar's website and provided to the environmental review committee and community reference group.

Table 12.9 Proposed monitoring programs

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
Biodiversity	• General requirements: – Check 'no-go areas' are clearly marked prior to vegetation clearing activities (I1, I14)*. – Check compliance with the ground disturbance permit system, through number of ground disturbance permits issued and system audits (I1, I14). – Record fauna observations including occurrence through incident reports, fauna injury or mortality reports (including roadkill); use of nest boxes; and feral animal sightings (I15, I16). – Inspect open sections of trench daily prior to clearing activities for trapped animals, such as reptiles and small-ground dwelling mammals. In particular, in areas where sensitive habitat has been identified (I15, I16). – Assess groundwater mounding at potentially impacted sites in areas identified as 'groundwater dependent ecosystems' (I17). – Assess rehabilitation success in accordance with the mine rehabilitation plan (I20, I43, I44, I45, I46). – Monitor in accordance with the offset management plan, including for vegetation condition, species diversity, similarity to target analogue system(s), effectiveness of access controls and weed occurrence in offset areas targeted for ecosystem enhancement (I1). The frequency and duration of monitoring in offset areas will be in accordance with an offset management plan approved by the Commonwealth Department of Agriculture, Water and the Environment. • Specific requirements and timing: – Ground disturbance system audits, monthly audits during construction and six-monthly audits thereafter (I1, I14). – Weed and pathogen hygiene procedure audits monthly during construction and six-monthly thereafter (I15). – Annual weed surveys (I15). – Annual analysis of vegetation loss from satellite imagery covering the project area and infrastructure options areas (I1, I14). – Twice yearly assessments of vegetation health in areas identified as 'groundwater dependent ecosystems' (I17). – Two-yearly AUSRIVAS (or equivalent) assessments of biophysical conditions of ephemeral drainage lines, including Perry Gully, Simpson Gully, Lucas Creek, Long Marsh Gully, Moilun Creek and an unnamed tributary of Honeysuckle Creek (I18). – Annual reviews of offset land for at least the first five years of the project and reassess required frequency of reviews at year five (I1, I15, I49).
Groundwater	• General requirements: – Record groundwater levels at designated monitoring bores and locations as agreed with regulators (I17, I23). – Analyse groundwater (including for pH, salinity, dissolved metals, radionuclides, major cations and anions, and nutrients) from designated monitoring bores and locations as agreed with regulators (I1, I20, I23). – Analyse process water and effluent (including for biological oxygen demand, suspended solids, *E. coli* and other parameters) in accordance with the EPA works approvals or licence (I1).

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
	– Record quantity of treated sewage effluent discharged in accordance with the EPA works approvals or licence (I1, I27, I28). – Record groundwater extraction volumes and rate (I1). • Specific requirements and timing: – Monthly recording of groundwater levels prior to construction at designated monitoring bores installed in the Coongulmerang Formation aquifer (seven bores), Balook Formation aquifer (two bores), Seaspray Group aquifer (one bore) and Latrobe Group aquifer (two bores) (I17, I23). – Monthly recording of groundwater levels in the Coongulmerang Formation aquifer and Balook Formation aquifer at 12 locations to be agreed with regulators (I17, I23). – Continuous (via data loggers) recording of groundwater levels in water supply bores drawing on the Latrobe Group aquifer in a minimum of five monitoring bores; ~~and in three shallow groundwater monitoring bores surrounding the temporary tailing storage facility~~ (I17, I23). – Quarterly sampling (for water quality) prior to construction at designated monitoring bores installed in the Coongulmerang Formation aquifer (seven bores), Balook Formation aquifer (two bores), Seaspray Group aquifer (one bore) and Latrobe Group aquifer (two bores) (I20). – Quarterly sampling (for water quality) in the Coongulmerang Formation aquifer and Balook Formation aquifer at designated monitoring bores installed in the Coongulmerang Formation aquifer (seven bores) and the Balook Formation aquifer (five bores) (I20). – Quarterly sampling (for water quality) in six designated shallow groundwater monitoring bores, including bores at the contractor's work area and processing plant ~~and three bores at the temporary tailings storage facility~~; and analysis for pH, salinity, dissolved metals, radionuclides, major cations and anions, nutrients, and hydrocarbons (I20). – Monthly monitoring of water discharge from the borefield (bores drawing on the Latrobe Group aquifer) into the contingency water dam. Monitoring to include pH, salinity, dissolved metals, radionuclides, and major cations and anions (I1, I20). – Analysis of water quality in the process water dam monthly in first year of the project; quarterly thereafter if consistency in water quality is demonstrated (I1). – Daily records of water extraction from production bores accessing water from the Latrobe Group aquifer (I1). – Ongoing recording of results from DELWP's State Observation Bore Network for three bores in the Latrobe Valley Group to the north and east of the project (I17, I23). – Undertake several groundwater and GDE monitoring events before mining commences to inform baseline conditions and setting of water quality objectives and trigger levels. [as per expert witness recommendation of Joel Georgiou; see TN13 Item 35] – The quantity and quality of tailings seepage intercepted in the pit void drainage system will be monitored and reported on regularly basis, as part of monitoring activities under the water risk treatment plan. [as per expert witness John Sweeny; see also TN13 Items 69, 71]

Surface water	• General requirements: – Record flow rates in surface watercourses preconstruction and in all project stages (I18, I19). – Analyse water quality in surface watercourses preconstruction and in all project stages (I20). – Analyse water quality in discharges from water storages, in mine contact water, and sediment detention ponds (I1, I20). – Record water level in mine contact water dams (I1). – Record water extraction (winterfill) rates at the water extraction point during construction, operations and active rehabilitation (I1). – Observe quantity of sediment in sediment detention ponds (I25, I44). – Observe visual evidence of gullying or other instability initially at Honeysuckle Creek eastern tributary, Moilun Creek tributary and Perry Gully, and thereafter at three points in gullies affected by, or to be affected, by mining (I25, I43, I44). – The quality of water released from mine water storages will be monitored at the point of discharge, at the nearest accessible point to receiving water and (if applicable), upstream of the water storage. Water quality monitoring would be done at least daily during discharge and for a minimum of 5 days at upstream and downstream sampling locations following cessation of [TN13, Item 4].

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
	– Assess stability of waterways within or immediately adjacent to operational areas (I25, I44). – Audit the structural integrity of the freshwater storage dams, ~~temporary TSF~~ and other water management dams annually (I43). – Observe visual evidence of poor structural integrity in the freshwater storage dams, ~~temporary TSF~~ and other water management dams (I43). • Specific requirements and timing: – Continuous monitoring (via data loggers) of preconstruction flow rates at DELWP gauging stations on Mitchell River and initially at Honeysuckle Creek eastern tributary, Moilun Creek tributary and Perry Gully; and daily monitoring at DELWP gauging station on Mitchell River during construction, operations and active rehabilitation (I18, I19). – Analysis of pre-construction water quality quarterly at five established monitoring sites on Mitchell River; quarterly at two locations on Perry River (to be agreed with regulators) and twice per year (if water is present) initially at Honeysuckle Creek eastern tributary, Moilun Creek tributary and Perry Gully (I20). – Analysis of water quality during construction, operations and active rehabilitation: ○ Every two months initially, then quarterly thereafter with agreement from the regulator at five established monitoring sites on Mitchell River (I20). ○ Every two months initially, then quarterly thereafter with agreement from the regulator at two locations on Perry River to be agreed with regulators (one location upstream and one downstream of the confluence of Honeysuckle Creek and Perry River) (I20). ○ Every two months (if water is present) at two locations within each impacted drainage line inside the project area (locations to be agreed with regulators) (I20). ○ Following significant rainfall events (when rainfall received at the mine site exceeds 60 mm within a 24 hour period, which corresponds approximately to a 100% AEP) and when water is available to sample at six established monitoring locations within the project area in undisturbed catchments (I20). – Analysis of water quality (including hydrocarbon content) discharged from water storages at least daily during discharge and for a minimum of five days at upstream and downstream sampling locations following cessation of discharge. Monitoring at the point of discharge, the nearest accessible point to receiving waters and (if applicable), upstream of the water storage (I1, I20). – Analysis of water quality (including hydrocarbon content) in mine contact water dams twice yearly and no less than 72 hrs before each discharge event (I1). – Daily records of water level in mine contact water dams daily (I1). – Daily monitoring (when the pump is operating) of water extraction (winterfill) at the water extraction point during construction, operations and active rehabilitation (I1). – Twice yearly observations of quantity of sediment, and field and laboratory testing of water quality, in sediment detention ponds, including once in October each year (I1). – Visual evidence of gullying or other instability annually and prior to finalising design of infrastructure within 100 m of an existing drainage line. Monitoring to be conducted initially at Honeysuckle Creek eastern tributary, Moilun Creek tributary and Perry Gully, and thereafter at three points in gullies affected by or going to be affected by mining (I25, I43, I44).

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
	– Visual observations to assess stability of waterways within or immediately adjacent to operational areas, taken at the furthest accessible downstream point within the mining licence area two-yearly and following major rainfall events (when 72-hour rainfall exceeds 136 mm, which corresponds approximately to a one in five year 72-hour event). Observations at Perry Gully, Simpson Gully, Lucas Creek, Long Marsh Gully, Moilun Creek and an unnamed tributary of Honeysuckle Creek (I25, I43, I44).
Air quality	[Further details of monitoring is contained in the Draft Air Quality Management Plan at Appendix C of the expert evidence statement of Simon Welchman, see sections 7 (Air Quality and Meteorological Monitoring Program) and section 8 (Trigger Action Response Plan)] • General requirements: – Record particulate matter (PM_{10} and $PM_{2.5}$ and respirable crystalline silica, gross alpha and beta radiation and heavy metals) (I1, I31, I33). – Record meteorological conditions in project area (with alarms sent automatically to the shift supervisor if average wind speeds exceed 40 km/hour, to trigger management responses, including restricting operations where necessary) (I1, I31, I33). – Record dust deposition rates (at least three downwind and two upwind locations) (I1, I31, I33). – Sample and analysis of rainwater tanks for total and dissolved metals and suspended solids, and comparison against pre-mining concentrations (I1, I31, I33). – Record complaints and responses in accordance with the complaints handling policy and procedure (I33). • Specific requirements and timing: – One-hour average concentration of PM_{10}: Real-time monitoring (1-hour average) of PM_{10} concentrations at key sensitive receptor locations (positions will vary throughout the project) to allow for changes in operational activities and locations that may impact the achievability of the 24-hour average health-based criteria. A minimum of three real-time PM_{10} monitors is likely to be required. The management action trigger level for hourly PM_{10} readings will be set at ~~150~~ 80 µg/m^3 (1 hour average reading) (I1, I31, I33). [evidence statement of Simon Welchman, [65, TN13 Item 97] – Twenty-four-hour average concentrations of PM10 and PM2.5, and weekly analysis of PM10 and PM2.5 filters for respirable crystalline sIlica, gross alpha and beta radiation and heavy metals: Continuous monitoring will be conducted during construction and operations at locations representative of sensitive receptors likely to experience the highest particulate concentrations (monitoring locations will change, depending upon the locations of mining activities). A network of no fewer than five particulate monitoring stations is likely to be required (I1, I31, I33). – At least hourly monitoring and recording of temperature, humidity, wind speed and direction (I1, I31, I33). – Continuous dust deposition monitoring upwind and downwind of active mining areas to determine monthly average dust deposition rates (I1, I31, I33). – ~~Quarterly sampling of water inrainwater tanks at a minimum of 13 locations (assuming landholders grant access) priorto construction anddduring operations (I1, I31, I33).~~Rainwater tanks to be monitored for a minimum of twelve months prior to commencement of site works to establish baseline data. Monitoring to continue during construction and operation of the mine. Corrective actions should be implemented if monitoring results exceed recommended health-based Australian Drinking Water Guideline limits. Analysis should include metals, suspended solids concentrations, Ra-226 and Ra-228 relative to pre-mining concentrations. [expert evidence of Simon Welchman, [71], TN13 Item 102; re radium, see expert evidence of Darren Billingsley, [8.4] and TN13, Item 102] – Prior to construction, ongoing monitoring of respirable crystalline silica to fill in data gaps in the 12-month ambient monitoring program conducted to date. – During construction and operation - at least hourly monitoring and recording of temperature, humidity, wind speed and direction. Average wind speeds exceeding 25 km/hr, to trigger management responses, including restricting operations if necessary. [evidence statement of Simon

	Welchman, [66], TN13 Item 98] – Visual observation monitoring (e.g. video monitoring) of high dust generation activities [response to EPA submission, accepting that this will be economically viable, and otherwise in accordance with expert evidence of Simon Welchman, [68], TN13 100] – Periodic monitoring during construction and operations of deposited dust on crops and soils in the neighbouring Lindenow Valley horticulture area [see TN13 Item 103]
Greenhouse gases	• General requirements: – Record fuel and energy consumption and estimate greenhouse gas emissions throughout the project phases (and identify opportunities to reduce energy consumption and greenhouse gas emissions) (I1).

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
Noise and vibration	• General requirements: – Noise emission testing of selected fixed and mobile equipment at commissioning or commencement of construction and targeted checks in construction and operations to confirm whether plant noise levels conform to design specifications and are in line with noise data used in the noise model, and to check whether operations can be implemented to achieve ~~NIRV-recommended noise levels~~the Noise Protocol noise limits (I29). – Undertake attended (where personnel attend the monitoring event) and unattended (where personnel do not attend the monitoring event) monitoring of ambient noise levels taken during day, evening and night periods to determine the noise levels due to site activity at the worst-affected noise-sensitive receptors (I30, I32, I33). – Record meteorological conditions in project area (I1). – Record complaints and responses in accordance with the complaints handling policy and procedure; determine if further noise monitoring needed outside the scheduled noise monitoring periods (I32, I33). • Specific requirements and timing: – Prior to commencement, ambient (Leq, L_{10} (including $L_{101,8hr}$ for traffic purposes) and L_{max}) and background (L_{90}) noise surveys to characterise baseline conditions to enable comparison during construction and operations and fix relevant criteria for compliance purposes. – Annual noise testing of selected fixed and mobile equipment to confirm whether actual noise emission levels conform to design specifications and are in line with noise used in the noise model (I29). – Attended monitoring of ambient noise ~~on at least three occasions during the first 14 days of~~at appropriate phases of construction in order to capture 'worst case' activities and monitor performance against project noise targets; at least two-monthly during construction (at a minimum with additional targeted measurements as required);and at least annually during active mining (at a minimum with additional targeted measurements as required) (I30, I32, I33). [note: existing time frames / measurement durations suggested may be insufficient and not fit for purpose. Surveys need to be targeted. Ambient noise surveys usually include combined use of remote noise logging and attended measurements and need to correspond with worst case activities. Drafting amended accordingly.] – At a minimum, u~~U~~nattended monitoring including seven-day surveys conducted ~~at six locations~~ during the first three months following commencement of ~~construction~~ operation~~(one survey per month during each of the first three months)~~; and seven-day unattended surveys conducted quarterly ~~at six locations~~ followingcommencement of mining (one survey per quarter at a minimum) (I30, I32, I33). [similar comments to above] – Continuous monitoring of temperature, humidity, wind speed and direction, barometric pressure, and precipitation (I1).

Radiation	• General requirements: – Prior to construction, undertake a finer grid external gamma dose rate survey in the project area to verify the baseline characterisation, in accordance with regulatory requirements (I1). – Measure radiation levels onsite and in storage and handling areas of the port facilities to demonstrate compliance with regulatory standards, dose estimation and effectiveness of engineering controls (I1, I40, I41, I42). – Investigate the variability of radionuclides present in soils in an area of high-value irrigated vegetables in the Lindenow Valley for baseline purposes. Consider locations in relation to the project area, crop type, cultivation methods, fertiliser use and gamma survey field measurements (I1). – Analyse gamma radiation levels and conduct radionuclide analysis within vegetables from the Lindenow area using appropriate methods approved to the satisfaction of Department of Health as part of baseline surveys (I1). – Prior to construction, undertake additional dust analysis of baseline high-volume filter samples to quantify the existing alpha and beta activity concentrations in air (I1). [see additional information below] – Undertaking AMAD airborne particle sizing in the early stages of operations to determine if default conversion coefficients (ARPANSA Radiation Protection Series No. 9.1, 2011) are appropriate for radiation dose assessment purposes, or alternative coefficients need to be applied (I1).

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
	~~• Specific requirements and timing:~~ ~~– Quarterly monitoring of passive radon and thoron gas onsite during the initial stages of operations to confirm the ambient airborne radioactive gas concentrations used as part of the EES assessment. Continue for 12-months at both outdoor and indoor locations within the project area (I42).~~ ~~– Quarterly radionuclide analysis of groundwater bores and surface water monitoring for 12-months prior to operations (I41).~~ ~~Long-term measurement of Ra-222 and Ra-220 (I42).~~ • Specific requirements and timing: – 12 month pre-commencement baseline monitoring: • Groundwater and surface water: Ra-222 and Ra-220 which is of particular interest [evidence statement of Darren Billingsley, [8.3]-[8.4; see also Rehabilitation Conclave, Part 1, Tabled Document 236, Item 2.1]]. Whilst Ra-222 and Ra-220 are of primary interest due to greater mobility in water [see evidence statement of Darren Billingsley, [8.3] and Australian Drinking Water Guidelines, version 3.6, Table 10.7, p 190)] a subset of samples should also be analysed for the full suite of naturally occurring long-lived radionuclides, including U-238 and U-235. • Air sampling: Particulate monitoring for gross alpha/beta analysis using a HiVol sampler with a TSP head sampling a minimum 5000 m3 air volume. HiVol sampler positions should reflect where monitoring will occur during operations, to enable 'like for like' comparison. [evidence statement of Darren Billingsley, [8.6]; TN13 Item 16]. – Radon monitoring: During test pit operations and ongoing throughout operations (relevant to worker exposure) utilising passive and real-time detectors. [evidence statement of Darren Billingsley, [8.7]; TN13 Item 17] [see also Section 13 – Future Work of EES Appendix A011 (Radiation Assessment) which lists a program of future works consistent with the above]

Traffic and transport	• General requirements: – A survey of the existing conditions for the final product transport route should be undertaken prior to construction commencing so that deterioration resulting from the project can be monitored. This includes a structural integrity assessment to understand the pavement comparison. During operation and closure monitoring should continue. [as per evidence statement of Paul Carter, p 28. This point replaces the following two which are too limited in the sense that asset monitoring / protection will be required for roads other than those listed. Note also that these asset protection requirements are captured in DoT's suggested drafting of the Incorporated Document which is accepted in substance (subject to minor drafting matters) by Kalbar] ~~– Prior to construction, survey of pavement condition along Lindenow-Glenaladale Road and Bairnsdale-Dargo Road west of Lindenow-Glenaladale Road to provide a baseline to assess any deterioration resulting from the project (I1).~~ ~~– Regular (e.g., annual, subject to existing pavement condition and agreement with the responsible authority) monitoring of pavement condition along Lindenow-Glenaladale Road, Bairnsdale-Dargo Road west of Lindenow-Glenaladale Road and other roads as required and agreed in accordance with the relevant authority (I1, I3, I36, I37).~~ – Undertake stakeholder consultation and driver surveys (I3). • Specific requirements and timing: – Quarterly meetings with key stakeholder during construction to obtain feedback on the efficiency of the road network, transport safety, the asset performance condition and identifying the need for further monitoring tasks (I3, I37). – Annual driver surveys throughout the project area; to inform any necessary updates to the traffic management plan as required (I3, I36, I37). – Prior to the movement of oversize and overmass vehicles an audit will be completed to assess route options, safety, and clearance between the vehicle and potential obstructions such as wires, trees, structures and rail crossing infrastructure, and then plan the route accordingly. [evidence statement of Paul Carter, p 21; TN13 Item 82] – Pedestrian surveys at Lindenow South conducted with the results utilised in the Traffic and Transport Management Plan approved under the Incorporated Document, – The following surveys and analysis must be undertaken with the results utilised in the Traffic and Transport Management Plan approved under the Incorporated Document: • 7 day classified tube counts on all road links used by the Project, relevantly: • Bairnsdale Dargo Road (west of Lindenow Glenaladale Road) • Lindenow-Glenaladale Road • Fernbank-Glenaladale Road, south of Bairnsdale Dargo Road • Racecourse Road east of Princes Highway • Forge Creek Road, north of Racecourse Road • Collins Street, south of Main Street • Bosworth Road at entry to rail siding • Two-hour turning movement counts and SIDRA analysis during AM and PM weekday for the following intersections: • Princes Highway / Bairnsdale-Dargo Road • Main Street / Collins Street • Princes Highway / Racecourse Road • Bairnsdale Dargo Road / Lindenow-Glenaladale Road • Fernbank Glenaladale Road / Bairnsdale-Dargo Road • Princes Highway / Lindenow-Glenaladale Road. [Kalbar accepts Mr Hunt's evidence that this data should be collected to inform detailed design and preparation of the Traffic and Transport Plan approved under the Incorporated Document]

Closure	• General requirements: – Implement rehabilitation monitoring program to demonstrate compliance with rehabilitation commitments and provide information for future planning (I1, I20, I25, I43, I44, I45, I46). – Establish reference sites prior to commencing rehabilitation works to form a baseline, used to assess the success of rehabilitation works (I20, I44, I45, I46). • Specific requirements and timing: – Annual: Ongoing monitoring and review of closure activities. Continue until closure criteria have been met and land is ready for relinquishment, unless otherwise agreed with Earth Resources Regulation; discontinue once site has been relinquished (I20, I25, I43, I44, I45, I46). – Three-yearly: Independent audit of closure activities. Continue until closure criteria have been met and land is ready for relinquishment, unless otherwise agreed with Earth Resources Regulation; discontinue once site has been relinquished (I20, I25, I43, I44, I45, I46). – Rehabilitated waterways must be monitoring for 20 years from establishment of vegetation. [evidence statement of Dr Michael Cheatham, section 3.1, p 3; TN13 Item 22 • Deformation and settlement monitoring of mine slopes around mining operations will be undertaken and horizontal strain and tilt at margins of existing roads will be measured by strain gauges and tilt meters (I43, I44). • Carry out rehabilitation trials to investigate optimal manufactured sub-soil, including material ratios and chemical amendments. [see Rehabilitation Conclave, Part 2, Tabled Document 237, Item 4; evidence statement of Dr Rob Loch, [26] and p 16]. • Carry out CAESAR land form evolution modelling to inform final rehabilitation plan. • Carry out electromagnetic induction (EMI) survey to confirm topsoil depth across the site results utilized in the rehabilitation plan. [see Rehabilitation Conclave statement, Part 2, Tabled Document 237, p 2; evidence statement of Dr Rob Loch, [11], p 2].

Environmental aspect	Monitoring program (related key indicators in parentheses; refer to Table 12.6)
	• Deformation and settlement monitoring of road pillars around mining operations will be undertaken for the following aspects: – Horizontal strain and tilt on completed road pillars, measured by strain and tilt gauges; prior to formation of the roads to confirm that strain and tilt are within tolerances; and prior to filling the voids adjacent to the road pillar (I43, I44). – Settlement of constructed road, either by surveying and/or settlement plates (I43, I44).

* Note: Unique indicator numbers in parentheses, such as I1, I2, I3, etc., are the numbers included in brackets in Table 12.6.

12.4.9 Competence, training and awareness

All personnel, including Kalbar employees and contractors, would be required to complete induction training prior to commencing work on the site, including detailed training on the EMF. Specific management sub-plans may include requirements for further induction/training. The site-specific induction would include information on potential environmental impacts and hazards, and the monitoring activities employees may be required to undertake. Proof of induction completion would be recorded, and such records maintained throughout the project life.

12.4.10 Community and stakeholder engagement

Kalbar aims to engage openly and honestly with the community and all stakeholders, provide timely and informative responses, and actively encourage feedback.

Community engagement during the construction, operations and closure (including decommissioning, rehabilitation and post-closure) phases of the project will be conducted in accordance with the Fingerboards Community Engagement Plan. A copy of the plan is provided as Appendix D to the draft Work Plan (Attachment B to the EES). The plan would be updated at the completion of the EES process, before construction commences.

The Community Engagement Plan has been prepared in accordance with Kalbar's Stakeholder Relations Policy (Figure 12.4), public participation concepts developed by the International Association for Public Participation (IAP2), Regulation 46 of the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019 and Earth Resources Regulation's Community Engagement Guidelines for Mining and Mineral Exploration. Regulation 46 of the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019 sets out the following requirements for the plan:

> *(a) identify the community likely to be affected by the work under the licence; and*
>
> *(b) set out how the licensee will share information with the community; and*
>
> *(c) set out how the licensee will receive feedback from the community; and*
>
> *(d) set out how the licensee will manage complaints and other communications from members of the community; and*
>
> *(e) in the case of a work plan for a mining licence that covers an area of more than 5 hectares, set out how the licensee will—*
>
> > *(i) identify community attitudes and expectations; and*
> >
> > *(ii) analyse community feedback, taking into account community concerns or expectations; and*
> >
> > *(iii) register, document and respond to complaints and other communications from members of the community in relation to the mine operations.*

KALBAR
OPERATIONS PTY LTD

Kalbar Operations
Stakeholder Relations Policy

1. Introduction

Building relationships and working collaboratively and transparently with our local community, government, employees and investors is critical to our long-term success. We do this by engaging regularly, openly and honestly with people affected by our operations and by taking their views and concerns into account in our decision-making.

2. Policy objectives

This policy outlines Kalbar's intent to engage purposefully, honestly and effectively with all stakeholders and indicates the way in which we intend to achieve this.

3. Scope

This policy applies to all employees, directors, officers, contractors, agents, consultants and any other party representing Kalbar wherever it operates across the world.

4. Policy statements

- We engage with our community and seek to understand the social, cultural, environmental and economic implications of our activities so that we can respond to concerns, reduce negative impacts and optimise benefits for the local community and the overall economy.
- We seek a social licence to operate through respect for stakeholder views and by building trust in Kalbar through its actions.
- We will engage with stakeholders in an open, honest and timely manner.
- We will be transparent in the provision of factual and consistent information.
- We incorporate the community's rights, values and cultural heritage in our decision making process.
- At all times we reflect Kalbar's values when engaging with our local community.
- We proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner.
- We effectively report and independently verify progress and performance.
- We will maintain adequate documentation of engagement and regulatory compliance
- We will work to enhance social and economic development by seeking opportunities to address local community needs.

5. To achieve these objective we will:

- Consult with the community and proactively engage with our neighbours in an open and meaningful manner;
- Ensure all stakeholders have access to information and opportunities to participate in the stakeholder engagement process;
- Ensure communications materials for the community consultation process are concise and factual;
- Utilise appropriate data validation and verification processes to provide public confidence in the information being reported;
- Ensure all Kalbar representatives engage with our stakeholders in a manner that reflects this policy by treating all people with fairness and dignity;
- Act as ambassadors for Kalbar ensuring that our behaviour always reflects positively on our own reputations and that of the company;
- Seek to understand community values and respect them;
- Actively seek stakeholder views and listen respectfully to their concerns;
- Seek to work with relevant stakeholders to identify and address concerns and expectations and to maximise potential opportunities from our Company;
- Commit to recruiting locally where possible and to working in partnership with our community to foster local economic development;
- Source goods and services locally where possible;
- Maintain a stakeholder database and record all interactions with stakeholders, including follow-up action to respond to stakeholder communications; and
- Operate a community complaints and grievance process to acknowledge, investigate and document community concerns and complaints.

6. Policy Review

This policy will periodically be reviewed by the Board to ensure it continues to meet both regulatory and contemporary industry standards and practices.

Related documents:

- Kalbar Code of Conduct
- Kalbar Whistleblower Policy
- Kalbar Community Engagement Plan
- Misconduct Reporting Procedure

Version	Doc Category	Status	Reviewer	Approver	Approval Date	Due for review
1.1	Board	Reviewed	V. Hugo	Chairman: Brad Farrell	24.2.2020	Feb-21

12.4.10.1 Community engagement principles

The Community Engagement Plan includes principles for community engagement to which Kalbar will adhere during construction, operations and closure, as follows:

- Demonstrate a commitment to engaging with all community and stakeholder interests.
- Promote inclusiveness by encouraging and supporting a diverse representation of community participation in consultation.
- Clearly communicate the purpose of consultation activities.
- Foster mutual respect by recognising and responding to the rights, values and interests of all stakeholders.
- Show transparency by documenting community issues and input in a timely, open and effective manner.
- Clearly document and share information on how stakeholder feedback contributes to the assessment process.

12.4.10.2 The engagement process

The Community Engagement Plan includes detailed information on the engagement process, including methods of consultation and records of consultation undertaken. The plan describes:

- The community members and stakeholders that have been engaged with to date and how this engagement has taken place (and at what level), including information channels/types used for communication with the community.
- How community attitudes and expectations have been identified and documented.
- Likely community and stakeholder attitudes and expectations related to the mining operations.
- Potential impacts of project implementation on each of the identified community members and stakeholders.
- How Kalbar receives and collects community feedback about the project.

Timeframes for future consultation and engagement are also provided in the Community Engagement Plan. An updated schedule for ongoing community engagement would be prepared at the completion of the EES process.

12.4.10.3 Complaints management

The complaints management process will be available on the project website and would be included in the updated Community Engagement Plan prior to construction commencing. Kalbar would aim to respond to all comments and complaints in a timely and effective manner to ensure that the values, priorities and issues of affected stakeholders are acknowledged and addressed. A register would be developed to log and track the progress of all complaints and responses made.

The proposed procedure for addressing complaints, along with key roles and responsibilities for implementation are outlined in Table 12.10.

Table 12.10 Procedure to address community and stakeholder complaints

Role	Responsibilities	Relevant forms
Complaints Receiver	• Collect all details from complainant, including specific time, location and concerns. • Repeat and confirm all details with complainant. • Confirm details for follow-up meeting (if required) with complainant, including time and location. • Advise relevant supervisor immediately of complainant concern. • Ensure all relevant forms are completed and sent to relevant Supervisor.	Community comment and complaint form Site conditions log (if applicable)
Supervisor	• Advise relevant manager/supervisor of complaint within 24 hours of receiving. In the event of a serious incident, immediate notification should be completed. • From the information available, check whether complaint is related to Kalbar activities. • If related to Kalbar activities, implement appropriate actions to modify the situation. • Complete and distribute relevant forms to appropriate supervisors/managers. • Ensure contact is made with complainant, within 24 hours, by appropriate personnel to advise them of actions being taken. • Advise Community Relations Officer and Environment, Health and Safety Officer (if applicable) within 24 hours.	Community comment and complaint form Site conditions log (if applicable)
Co-ordinator Superintendent and Site Manager	• Plan and implement required actions to address complaint. • If required, request involvement of HSE Specialist for technical interpretation. • Respond to and/or visit complainant (as required) with assistance from Community Relations Officer. • Inform General Manager, if required. • Ensure relevant forms are completed. • File summary of incident and close out with Community Relations Officer.	Community comment and complaint form
Community Relations Officer	• Provide guidance and assistance to Site Manager regarding communications with the complainant. • Liaise with the relevant manager and HSE Specialist to determine whether response (verbal/written) and/or visit to the complainant is required. Where applicable, provide written response to complainant within three working days. • If necessary, respond to other public interest regarding the matter (e.g., local/regional media, local government). • Advise External Affairs (if applicable). • Report incident to Community Relations Manager Australia. • Provide details to Site Manager. • Where required, continue liaison with Site Manager and complainant.	

Role	Responsibilities	Relevant forms
HSE Specialist	• Provide technical interpretation to Site Manager where required. • Inform manager. • Investigate HSE aspects of incident (if applicable). • Following approval from the Site Manager, report to relevant regulatory agencies (if applicable). • Document all actions and advice given to complainant and provide to Site Manager. • In liaison with the Site Manager and Community Relations Officer, respond to and/or visit complainant, as required.	

12.4.11 Evaluation of compliance

A series of procedures would be in place to continually monitor and evaluate project compliance and manage records as described below.

12.4.11.1 Inspections

Site inspections would be conducted as one of the many tools used to verify that management commitments and mitigation actions are being implemented, and to evaluate environmental performance of the project. Site inspections would include:

- Regular inspections and annual monitoring to review the actual area of vegetation cleared against the area approved to be cleared.
- Visual inspections around stockpiles and areas of ground disturbance and vegetation clearing to detect erosion.
- Visual inspections within and adjacent to areas of ground disturbance and vegetation clearing to identify and record any new weed infestations.
- Routine inspections of on-site water management infrastructure systems to determine maintenance requirements, so they remain effective.
- Inspection of open trenches for trapped fauna at least once per shift.
- Inspection of water controls on a regular basis and after rainfall, to check that ponding, seepage or runoff meets design specifications.
- Inspection of excavations for variability of geological conditions, with particular focus on weaker than expected materials or features.
- Inspection of mining areas and surrounds for evidence of slope instability, ground subsidence or deformation following an earthquake event.
- Inspection for leaks and spills as part of regular maintenance of mobile plant and vehicles in accordance with manufacturers specifications.
- Inspection of interceptor traps to determine when they need to be emptied of hydrocarbons by a licensed contractor for disposal offsite at a licensed facility.

12.4.11.2 Non-conformance, incidents, and corrective and preventative actions

All environmental incidents and 'near misses' would be recorded in an incident database. The database would be maintained and reviewed regularly by the operations manager to identify any trends and assess the effectiveness of preventative measures.

Incidents would be recorded by the person who causes, or identifies, the incident as soon as practicable. Incidents and 'near misses' would be investigated and appropriate measures implemented to prevent reoccurrence. Where applicable, environmental incidents reoccurrence be reported to the relevant government agency. The operations manager would be responsible for determining the cause of the incident and implementation of appropriate remedial and/or preventative actions.

In the event of an incident, or if inspections or monitoring results indicate that performance requirements are not being achieved, corrective actions would be enacted and may include any or all of the following:

- Immediately stop work where required.
- Complete incident report and investigations.
- Report to regulatory authorities as required (with notice of proposed corrective actions where relevant).
- Investigate cause of exceedance or issue, including review of relevant monitoring data and effectiveness of implemented corrective actions (if any).
- Implement corrective actions as appropriate to prevent recurrence.
- Undertake maintenance as required.
- Notify regulatory authorities of corrective actions implemented and outcome as applicable.

The operations manager would be responsible for investigating non-conformances with environmental procedures. The actions required for initiating and completing corrective and preventative actions will be established in the relevant management plans and sub-plans. Corrective actions to prevent reoccurrence of an incident, reduce risk and improve the effectiveness of environmental procedure would be recorded in a register.

The Kalbar management team would be responsible for coordinating these actions and responsible persons would be nominated for completing the actions. Corrective actions may result from:

- Continuous improvement initiatives.
- Management compliance audits.
- Environmental audit non-conformances and observations.
- Incident investigations.
- Near-miss incidents.
- Breaches of the compliance schedule.
- Information distributed at meetings.
- Results of regulatory audits.
- Hazard identification.

12.4.11.3 Environmental reviews, audits and reporting

Review and auditing of the implementation and effectiveness of the EMF and subsequent reporting to management is an integral component of the framework. Environmental auditing and reporting allows for:

- Early detection of potential issues with the system.
- Implementation of corrective actions before the issue becomes significant and/or irreversible.
- Continual environmental performance improvement.
- Measurement of progress towards objectives and targets.
- Reassessment of objectives and targets.
- Timely review of EMF relevance with business objectives.
- Assessment of compliance status with legal and other requirements and organisational commitments.
- Verification of the effectiveness of corrective actions.

An EMF audit schedule would be developed for each calendar year. Audits would target elements of the EMF over the course of a defined period (e.g., 12 months or 24 months). The audit schedule would prioritise areas of highest environmental risk and these areas may also be audited more regularly.

Internal audits of the implementation and effectiveness of the EMF would be conducted at least every six months during construction and at least yearly during operations. The HSE Specialist would report the results of the audits to the operations manager every six to 12 months as part of a formal management review process (as a minimum), or sooner if deemed necessary.

12.4.11.4 Review and update of environmental management documentation

The environmental management documents listed in Table 12.7 and Table 12.8 are intended to be dynamic and will be revised and updated as required in response to audits, technology improvements, incidents, changed legal requirements or company policies, and in response to new data and information obtained through monitoring activities. Documentation will be reviewed on an annual basis, or more frequently if required, based on changes to operations, results of audits or monitoring, and incident reports.

Relevant government agencies will be consulted and amendment approvals will be sought where applicable when changes to environmental management documentation are proposed. For example, changes to mining activities or new work not covered in the current Risk Management Plan (included as part of the draft Work Plan) would require a work plan variation (if there are new or increased associated risks) or notification to ERR (if there are no new associated risks and existing risks are rated low or medium).

12.4.11.5 Record control

The management of environmental baseline and monitoring data would be in accordance with Kalbar's record control procedure. Hardcopy records would be kept in designated locations. Electronic copies would also be saved.

Records to be maintained would include, but are not limited to:

- Specialist reports.
- Training records.
- Calibration certificates.
- Operational checklists.
- Service records.
- Observational inspections and checks.
- Non-conformance reports.
- Performance indicator measurements.
- Legal compliance checks.
- Relevant permits, licences and approvals.
- Community complaints.
- Records of correspondence relating to environmental performance of the project.

Records no longer needed would be archived in a secure location for future access if required. An archive register would be maintained.