

Attachment H - Mitigation register

Kalbar update, 15 June 2021

Comments / references provided in square brackets [xxx] for context

Kalbar response – 19 July 2021

The base document is Tabled Document 505 with tracking retained.

The changes from the base document are colour coded as follows (no tracking):

- Content introduced at Kalbar's own initiative is in red.
- Content from or responding to MFG, Council and EPA's drafting comments is as follows:
 - Council – orange (Tabled Document 641)
 - MFG – green (Tabled Document 602)
 - EPA – blue (some aspects of EPA's yellow highlighting have been retained where useful) (Tabled Document 623)
- I.e., if a change to the mitigation derives from one of these submitters it is coloured accordingly. If Kalbar provides a comment responding to a particular submitter, it is coloured accordingly.
- Kalbar has also incorporated the updates proposed in the Risk Treatment Plan comparison tables (Tabled Documents 597-600).

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Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
Agriculture and horticulture				
AG01	Potential solutions to labour competition will be identified and pursued through continued communication and engagement with industry training bodies, such as TAFE Gippsland.			
AG02	Local agriculture and horticulture industry bodies, such as Food and Fibre Gippsland, will be consulted and engaged with to identify any potential issues at an early stage and enable effective solutions to be implemented.			
AG03	Representation from local horticultural and agricultural producers will be sought for the environment review committee to provide input on concerns during project construction and operations.			
AG04	The work plan will be adhered to during construction and operation of the project to achieve agreed environmental and social outcomes.			
AG08	A community engagement plan will be implemented that identifies approaches to actively manage issues with public perception, including providing objective and factual public communications.			
AG10	A joint approach will be developed with local horticultural and agricultural producers to identify measures to attract and retain a local workforce.			
AG11	A working group with growers will be established, as agreed with growers, and will			

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	meet on a periodic basis to discuss specific issues of concern and potential responses.			
AG12	Local growers will be encouraged to obtain EnviroVeg or Freshcare environmental certification as evidence of 'clean green' production under an environmental management system.	AG12 should not be included as a "mitigation measure", as horticultural growers already have certification.	Kalbar will explore ways of supporting local growers, including without limitation through grants and training, to obtain EnviroVeg, Freshcare or other equivalent environmental certification to support evidence of production under an environmental management system.	Accept this comment. However, to indicate the context, this 'mitigation' was identified by RMCG in the Horticultural Impact Assessment and was intended as more of a positive action that could be offered rather than a mitigation in the true sense (as submitters and the IAC will appreciate, Kalbar's case is that horticulture and the mine can co-exist without impacts). The idea was to identify ways Kalbar could assist growers to add to their existing environmental credentials and this arose out of consultation feedback in the HIA concerning consumer perception (e.g., 'clean green' image). Kalbar's preference is to retain this as a 'mitigation' at this time and further develop this idea as part of its community engagement actions under the Work Plan, however acknowledges that if there is no take up / interest in this going forward, it will not proceed.
AG13	An annual local community event will be supported that attracts visitors to the region, such as a Harvest Festival, and/or support the East Gippsland Veg Innovation Day.			
AG14	The amount of land clearance will be minimised wherever possible to minimise loss of agricultural land.	Not measurable/enforceable. Redraft to specify how this will be achieved.		The intent of this mitigation is clear. No change necessary. Within the mining area, land clearance will be minimised through the staged

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				<p>mining and progressive rehabilitation methods as documented in section 4 of the Draft Work Plan. The final work plan will set requirements for this, including the sizes of mining cells, cleared zones and so on. Progressive mining and rehabilitation is an essential element of this Project.</p> <p>The mitigation measures adopted in this document are performance based. Further detail and specificity (where required) will be developed through the management plans that become legal controls on the use and development of the Project (as approved under the Work Plan or Incorporated Document).</p>
AG15	Progressive rehabilitation will be conducted to ensure that, where feasible, disturbed agricultural land in the project area can be restored to productive use as soon as possible.	Delete the word where feasible	Progressive rehabilitation will be conducted to ensure that disturbed agricultural land in the project area can be restored to productive use as soon as possible.	Agree. 'As soon as possible' sufficiently accommodates practicalities of the Project overall. 'Where feasible' deleted.
Air quality				
AQ01	Areas will be cleared in a staged manner, and only as required, to reduce dust generation by minimising the area of exposed ground at any one time.			
AQ02	Water or appropriate suppressants will be applied to working surfaces, stockpiles, haul roads and other areas where rehabilitation is not yet practical, to minimise dust generation, and in particular, during drier months.	AQ02 - Amend to ensure water is treated.	Water of appropriate quality or appropriate suppressants will be applied to working surfaces, stockpiles, haul roads and other areas where rehabilitation is not yet practical, to minimise dust generation, and in particular, during drier months.	Accept that water needs to be of acceptable quality, although not necessarily 'treated'. This will be a management issue, i.e., determining appropriate quality of water to use for dust suppression. High levels of contaminants such as radionuclides or

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				heavy metals would be unacceptable in dust suppression water, however some turbidity may be acceptable, e.g., on water applied to an internal haul road.
AQ03	Drop heights for topsoil and overburden will be minimised as far as practicable to reduce dust generation.			
AQ04	Speed limits <u>of 20 km/hr in the event of dusty conditions and 50 km/hr under normal conditions</u> will be implemented and enforced on unsealed project roads to minimise dust generation. <u>[evidence statement of Simon Welchman. [67], TN13 Item 99].</u>	<p>It is unclear how the distinction between “dusty” and normal conditions would or could be established or enforced.</p> <p>AQ04 - Specify/define "dusty conditions".</p> <p>Tiered speed limits will be implemented and enforced on unsealed project roads to minimise dust generation as follows:</p> <ul style="list-style-type: none"> - under normal conditions, 20km/hr within 250 metres of sensitive areas and 50km/hr elsewhere - under dusty conditions, further reduce vehicle speed limit to the extent reasonably practicable to minimise dust emissions. 	Speed limits of 20 km/hr in the event of dusty conditions (which includes, without limitation, when dust levels exceed trigger levels specified in the air quality management plan, visual observation indicates dusty conditions, or weather forecasts or conditions indicate a risk of high levels of dust) and 50 km/hr under normal conditions will be implemented and enforced on unsealed project roads to minimise dust generation	<p>Further detail added, however ultimately will require a degree of judgement and practicality.</p> <p>As above.</p> <p>There is some merit in EPA’s drafting (and Kalbar does not oppose it per se) however the mitigation as drafted by Mr Welchman is still preferred, as it matches the proposed approach of proactive and reactive management based on real time monitoring, observation and the like.</p>
AQ05	Topsoil stripping will be planned and conducted taking into account forecast and actual weather conditions to minimise dust generation.			
AQ06	Public roads and new intersections will be constructed to standards used by the East Gippsland Shire Council to reduce generation			

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	of excess dust (Infrastructure Design Association, 2015) ¹ .			
AQ07	The mine void will be progressively backfilled and rehabilitated to reduce generation of dust by minimising the area of exposed soil, including for topsoil and overburden stockpiles.			
AQ08	Haul vehicles will travel on designated haul roads only and haul route lengths will be minimised where practicable.			
AQ10	Ore will be transferred through a pipeline across the project area as a slurry to reduce potential for dust emissions.		Haul vehicles will travel on designated haul roads only and haul routes will be minimised where possible. Haulage of product will be limited to daytime hours only (11 hours a day)	Kalbar initiated change as per Tabled Document 598 (RTP reconcile)
AQ11	Ore will be processed as a slurry to reduce potential for dust emissions.			
AQ12	No crushing or grinding of ore will occur to prevent the potential for emissions of respirable crystalline silica.			
AQ13	Certain activities, such as overburden excavation and transport of overburden and product, will be ceased, <u>slowed or relocated (as necessary)</u> when real-time air quality monitoring indicates that air quality trigger levels have been reached near key sensitive receptors.	This should be cross-referenced to indicate what those thresholds are and the real time air quality monitoring should be made publicly available. Clear indications of the "key sensitive receptors" should be included in this measure. AQ13 - Delete 'slowed'	High dust producing activities including but not limited to overburden excavation and transport of overburden and product, will be ceased, slowed or relocated (as necessary) to reduce dust to the extent reasonably practicable when real-time air quality monitoring and visual monitoring observations	Meaning of trigger levels clear. Cross referencing unnecessary. Note Kalbar initiated changes and changes accepting aspects of EPA's submission.

¹ Infrastructure Design Association. 2015. Infrastructure Design Manual, Version 4.4.2. Local Government Infrastructure Design Association. 14 October 2015. Tongala, Victoria.

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		<p>Certain activities, such as overburden excavation and transport of overburden and product, will be ceased, slowed or relocated (as necessary) when real-time air quality monitoring and visual monitoring observations indicates that air quality trigger levels have been reached near sensitive receptors.</p> <p>[EPA Comment: What are the air quality trigger levels? EPA is concerned that this mitigation measure focuses on specific trigger levels and not minimising the risk of harm to the extent reasonably practicable. As per EPA's cover letter, language should be amended.]</p>	<p>indicates that air quality trigger levels have been reached near key sensitive receptors.</p>	<p>Making data publicly available on the Project website is already committed to (see SE02).</p> <p>Re key sensitive receptors – agree. Delete 'key'. Otherwise 'sensitive receptors' meaning clear.</p> <p>Not agreed. Slowing activity is an important dust mitigation.</p> <p>Accept drafting change.</p> <p>Trigger levels will be specified in the Air Risk Treatment plan (current triggers levels are provided in the Draft Air RTP. Note, that these were updated in accordance with EPA's EES submission, i.e. to revise the PM10 dust trigger level from 150ug/m3/hr to 80ug/m3/hr.</p>
AQ14	<p>Certain activities, such as overburden excavation and transport of overburden and product, will be scheduled to avoid excessive dust emissions during forecast adverse weather conditions (principally high winds).</p>	<p>AQ14 - Specify/define "high winds"</p>	<p>High dust generating activities, will be scheduled to avoid excessive dust emissions during forecast adverse weather conditions.</p>	<p>Kalbar initiated change as per Tabled Document 598 (RTP reconcile)</p> <p>Note there is a wind speed trigger level of 25km/hr specified in the Air Risk Treatment Plan (a value adjusted down from 40 to 25 in accordance with EPA's EES submission).²</p>
AQ15	<p>Dust generation will be managed in accordance with the air quality sub-plan.</p>	<p>AQ15 - For clarity, specify how this fits with Risk Treatment Plan for Airborne and Deposited Dust.</p>	<p>The option of identifying additional mitigations will be considered when preparing a final proposed Air Risk Treatment Plan submitted for approval as part of a Work Plan. Any further mitigations arising out of this work</p>	<p>Kalbar initiated change as per Tabled Document 598 (RTP reconcile)</p> <p>The air quality sub plan is the Risk Treatment Plan for Airborne and Deposited Dust.</p>

² EPA EES submission (no. 514), p 20 (pdf p 22).

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			which minimise impacts and which are reasonably practicable will be adopted.	
AQ16	Dust generation from haul roads will be controlled by applying water or chemical suppressants, cessation of haulage during adverse weather conditions, and as required in response to real-time air quality monitoring.	Dust generation from haul roads will be controlled by applying water or chemical suppressants, cessation of haulage during adverse weather conditions, and as required in response to real-time air quality monitoring and visual monitoring observations.	Dust generation from haul roads will be controlled by applying water or chemical suppressants, if determined to be environmentally acceptable, cessation of haulage during adverse weather conditions, and as required in response to real-time air quality monitoring and visual monitoring observations.	Kalbar initiated change. Agree. EPA Change adopted.
AQ17	Construction of internal haul roads will use an optimal size grading of aggregate with road stabilisation and compaction agents.			
AQ18	Plant, machinery and vehicles will be maintained regularly in accordance with manufactures' specifications to minimise emission of particulates.			
AQ19	A principal contact person to whom community queries and complaints will be directed will be identified for the project. The complaints response procedure will be implemented to address any complaints received. Twenty-four-hour contact details for the principal contact person will be provided through letters and signage onsite.			
AQ20	Activities will be restricted, as required, on days when modelling predicts exceedances of air quality criteria at one or more sensitive receptors. Activities to be restricted will include overburden extraction and haulage, ore extraction and grading of roads. Restrictions will be applied to these activities	Activities will be restricted, to minimise the risk of harm from air emissions so far as reasonably practicable, including restricting overburden extraction and haulage, ore extraction and grading of roads. Restrictions will be applied to these activities conducted across the whole or part of the project area where required to	Activities will be restricted, to minimise the risk of harm to human health and the environment from air emissions so far as reasonably practicable, including restricting overburden extraction and haulage, ore extraction and grading of roads. Restrictions will be applied to	EPA's drafting added. Requirement becomes to meet criteria and reduce as far as reasonably practicable.

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	<p>conducted across the whole or part of the project area where required to achieve compliance with air quality criteria.</p>	<p>minimise the risk of harm from air emissions so far as reasonably practicable. [EPA Comment: As per EPA's cover letter amend to reflect the intent of the GED]</p>	<p>these activities conducted across the whole or part of the project area where required to achieve compliance with air quality criteria and to minimise the risk of harm from air emissions so far as reasonably practicable.</p>	
<p><u>AQ21</u></p>	<p><u>Apply dust reduction measures to achieve the PM₁₀ objective in the Environment Reference Standards (Part 2 – Ambient Air) of 50 µg/m³ (24 hour average), including use of truck and shovel to extract overburden instead of scrapers and limiting grading, product haul and overburden extraction hours per day, particularly limiting to daytime hours where dispersion potential is greater than at night</u></p> <p><u>[expert witness statement of Simon Welchman, sections 4.1-4.2; TN13, Item 96;</u></p> <p><u>note that PM_{2.5} was already predicted to comply with the Environment Reference Standard objective of 25µg/m³, so was not the subject of these additional mitigations in section 4.1-4.2 of Mr Welchman's evidence].</u></p>	<p>This measure is unclear. The cessation of dust producing activities during night time hours is a preferred approach.</p> <p>Apply dust reduction measures to achieve the PM₁₀ objective in the Environment Reference Standards (Part 2 – Ambient Air) of 50 µg/m³ (24 hour average), minimise the risk of harm from air emissions so far as reasonably practicable, including use of truck and shovel to extract overburden instead of scrapers and limiting grading, product haul and overburden extraction hours per day, particularly limiting to daytime hours where dispersion potential is greater than at night.</p>	<p>Apply dust reduction measures to achieve the PM₁₀ objective in the Environment Reference Standards (Part 2 – Ambient Air) of 50 µg/m³ (24 hour average), and to minimise the risk of harm from air emissions so far as reasonably practicable, including:</p> <ul style="list-style-type: none"> • use of truck and shovel to extract overburden instead of scrapers; and • limiting the duration of grading, product haul and overburden extraction hours per day (i.e. to reduce 24hr average exposure), particularly limiting to daytime hours (on the basis that dispersion potential is greater than at night). 	<p>Breaking into dots points may assist. Some drafting improvements added accordingly.</p> <p>Note that this measure directly follows Simon Welchman's three scenarios in section 4.1 of his evidence statement, needed to achieve further PM₁₀ reductions to achieve ambient standards in accordance with the EPR.</p> <p>Some dust producing activity will occur at night, however not the highest dust producing activities (because dispersion is lower at night, therefore particulate concentrations are higher).</p> <p>EPA drafting added, however quantitative requirement retained also as this is an important part of the mitigation.</p>
<p><u>AQ22</u></p>	<p><u>Corrective actions must be implemented, and authorities notified, if rainwater monitoring at surrounding properties (carried out in accordance with EMF Chapter 12, Table 12.9 – baseline and operational) exceeds Australian Drinking Water Guideline limits). [expert evidence of Simon Welchman, [71], TN13 Item 102. See also Airborne and</u></p>	<p>This measure is unclear as to what is proposed to be monitored and the corrective actions proposed. Presumably it relates to monitoring of water stored in rainwater tanks. It is unlikely that rainwater itself would exceed Australian Drinking Water Guidelines.</p>	<p>Corrective actions must be implemented, and authorities notified, if rainwater tank monitoring at surrounding properties (carried out in accordance with EMF Chapter 12, Table 12.9 – baseline and operational) exceeds Australian Drinking Water Guideline limits.</p>	<p>Drafting clarified.</p> <p><u>"AQ# - Draft new mitigation measure (similar) for corrective actions and monitoring of Woodglen Water Storage."</u> Agree. See below.</p> <p><u>"AQ# - Also include monitoring for PM_{2.5}."</u></p>

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	<p>Deposited Dust Risk Treatment Plan, Table 9-1, Item 6]</p>	<p>AQ# - Draft new mitigation measure (similar) for corrective actions and monitoring of Woodglen Water Storage. AQ# - Also include monitoring for PM2.5. [EPA Comment: recommend this be amended to reflect the Water RTP]</p>		<p>Not agreed. All air quality indicators are to be monitored. A mitigation expressly referring to PM2.5 is not necessary. Accept that this will be need to be picked up in the Water RTP. This measure derives from the air quality work by Katestone and therefore presently sits within the AQ mitigation measures and the Draft Air RTP. However, the drafting of this mitigation measures seems appropriate.</p>
AQ23	<p>[East Gippsland Shire Council's request for implementation of "best practice" across the board (as per cross examination of Mr Welchman and [237] and its Part B submission) is noted. This not opposed in principle, but need / utility queried, given 'best practice' a requirement under the PEM and SEPP AQM, but presumably to be overtaken / subsumed within general environmental duty and principles under the <i>Environment Protection Act 2017</i>]</p>	<p>All dust mitigations measures must comply with industry best practice for mining as adjusted to protect the sensitive uses in this location [including vegetable farming] as may be developed from time to time. The air quality monitoring plan the Airborne and Deposited Dust Risk Treatment Plan must be reviewed annually to ensure best practice compliance and compliance with the general environmental duty and principles under the Environment Protection Act 2017. [EPA Comment: As per our cover letter, the language in the New EP Act is preferred]</p>	<p>Apply industry best practice for mining as appropriate to the site and sensitive receptors including vegetable farming, as may be developed from time to time. This requires adoption of the best combination of eco-efficient techniques, methods, processes or technology used in an industry sector or activity that demonstrably minimizes the environmental impact of a generator of emissions in that industry sector or activity. Air quality management plans for must be reviewed annually to ensure best practice compliance and compliance with the general environmental duty and principles under the <i>Environment Protection Act 2017</i>.</p>	<p>Council drafting incorporated. Kalbar has considered its earlier comments (in TD505) further. 'Best practice' as was provided under the SEPP AQM remains a useful concept for this Project. Katestone undertook a 'best practice' analysis, involving benchmarking against relevant guidelines, its experience and other mines (including operating mineral sands mines). Drafting from SEPP AQM has been used to give definition to best practice, accepting however that the SEPP is no longer current, but nonetheless provides a useful definition. Note Council drafting picks up EPA's suggestion (in Kalbar's view).</p>
AQ24			<p>A commitment to conduct continuous visual observation monitoring (e.g.</p>	<p>Kalbar initiated change as per Tabled Document 598 (RTP reconcile)</p>

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			video monitoring) of high dust generation activities.	
AQ25		AQ# - Draft new mitigation measure (similar) for corrective actions and monitoring of Woodglen Water Storage.	<p>Air quality monitoring must be undertaken to assess any potential impacts to the Woodglen Water Storage dams. If air quality measurements indicate emissions to the Woodglen Water Storage dams are at a level that may unacceptably impact on drinking water quality, then further analysis will be undertaken to refine the understanding of the impact. If such analysis concludes that there is a credible risk of unacceptable impact, corrective actions must be implemented to remove such impact.</p> <p>Will need to be reflected in a monitoring program, however for completeness is included below as a mitigation.</p>	Accept MFG suggestion
Bushfire				
BF01	A fire and emergency management sub-plan will be prepared and implemented that includes site-specific bushfire mitigation measures, awareness actions, preparedness levels and fire response procedures for the site. The plan will be prepared in consultation with East Gippsland and Wellington shire councils and emergency service providers.			
Cultural heritage				

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CH01	A cultural heritage management plan will be prepared and implemented in accordance with the <i>Aboriginal Heritage Act 2006</i> (Vic) and the <i>Aboriginal Heritage Regulations 2018</i> (Vic). The plan will include site-specific management and salvage procedures (e.g., collection of surface artefacts and excavation of archaeological sites of significance).	These are likely to require updating to reflect further work understood to be occurring.		Agree. However, no change needed at this stage.
CH02	Cultural heritage training will be provided for all personnel involved in vegetation clearance and ground disturbance works prior to commencement of these activities.	These are likely to require updating to reflect further work understood to be occurring.		<p>Understand that Council's comment is noting the ongoing work to prepare the CHMP and cultural values assessment for the Project.</p> <p>However, for clarity, it is noted that the actions identified here and below (e.g., cultural heritage training, storage of any collected cultural materials by a qualified person etc.) are not contingent, per se, on the approval of a CHMP.</p> <p>It is clear that the final CHMP will require these measures contained in the mitigation register (albeit these matters will be specified in greater detail in the CHMP).</p> <p>These management measures / mitigations were identified in the Cultural Heritage Impact assessment in the EES (App 017) which included a preliminary complex assessment by Andrew Long & Associates (ALA). ALA are also preparing the CHMP for the site. There is therefore a good understanding of the basic elements for the final CHMP, as documented in the CHIAR.</p>

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CH03	Collected cultural heritage materials will be stored by a qualified heritage advisor.	These are likely to require updating to reflect further work understood to be occurring.		Noted. Will need to be consistent with an approved CHMP, however this measure likely to be part of the CHMP.
CH04	Recovered Aboriginal cultural heritage materials will be repatriated to a Registered Aboriginal Party, e.g., the GLaWAC.	These are likely to require updating to reflect further work understood to be occurring.		Noted. Will need to be consistent with an approved CHMP, however this measure likely to be part of the CHMP.
CH05	<p>A cultural heritage chance finds protocol will be developed and implemented which addresses:</p> <ul style="list-style-type: none"> • Actions to be taken in the event of unexpected discovery of human remains, Aboriginal places or objects, low-density and non low-density artefact distribution. • Actions to be taken in the event of unexpected discovery of non-Indigenous cultural heritage. • Custody management of Aboriginal cultural heritage recovered. • Compliance review with the protocol. • Dispute resolution. • Authority of personnel and handling sensitive information. • Site specific management. 	These are likely to require updating to reflect further work understood to be occurring.		Noted. Will need to be consistent with an approved CHMP, however this measure likely to be part of the CHMP.
CH06	<p>If cultural heritage sites are discovered, the following steps will be taken:</p> <ul style="list-style-type: none"> • The person who found the cultural heritage site will immediately notify the operations manager. • The operations manager will suspend relevant works to a distance of 50 m from the site and isolate the find via the 	These are likely to require updating to reflect further work understood to be occurring.		Noted. Will need to be consistent with an approved CHMP, however this measure likely to be part of the CHMP.

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	<p>installation of safety webbing, or other suitable barrier; the discovery is to remain in situ.</p> <ul style="list-style-type: none"> If historical archaeological deposits, artefacts or features are discovered, all works that may cause harm will cease and Heritage Victoria will be contacted. The operations manager will notify a suitably qualified archaeologist of the find within 24 hours of the discovery. 			
CH07	For registered Aboriginal cultural heritage places VAHR 8422-0369 and VAHR 8322-0226, salvage procedures, such as surface salvage collection and controlled manual or mechanical salvage excavation, of flaked stone artefacts will be undertaken by a qualified archaeologist prior to commencing construction.	These are likely to require updating to reflect further work understood to be occurring.		Noted. Will need to be consistent with an approved CHMP, however this measure likely to be part of the CHMP.
CH08	Properties within the project area or infrastructure options area that could not be accessed during the cultural heritage study will be investigated prior to ground disturbance activities to identify non-Indigenous cultural heritage values that may be present.	<p>These are likely to require updating to reflect further work understood to be occurring.</p> <p>Update to include aboriginal cultural heritage vales.</p>		<p>Note this relates to non-indigenous heritage.</p> <p>Further physical surveys are unlikely to be needed pre-CHMP, noting that the CHIAR (and CHMP under preparation) use a site predictive model developed for the entirety of the site, incorporating a range of data layers - historical information, geomorphology, environmental patterns and so on. Accordingly, no update will be made to this mitigation at this stage.</p>
<u>CH09</u>	<u>Kalbar will consult with GLaWAC on the cultural heritage values of the waterbodies in the region and how these values could inform</u>	Consultation is not a mitigation measure.		Disagree. Cultural values workshops with the Traditional Owners are essential to understanding intangible cultural

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	<p><u>the definition of water quality objectives to protect Traditional Owner cultural and spiritual values.</u></p>			<p>values. The results of this work, which is on foot, will input into the final CHMP.</p>
Geotechnical				
GEO02	<p>Stability and displacement monitoring of mine slopes will be undertaken adjacent to roads using one or a combination of:</p> <ul style="list-style-type: none"> Survey targets (prisms) located on mine slopes, read by a robotic total station from various fixed survey pillars. Radar, for safety-critical situations where a rapid response may be required. 	<p>GEO# - Insert a new mitigation measure (similar) for stability and displacement monitoring of centrifuges (building housing centrifuges).</p>		<p>Not considered necessary. The centrifuge building will be constructed on concrete foundations in accordance with appropriate structural engineering design. This is not a similar risk to stability of a mine face.</p>
GEO03	<p>Daily visual assessments around mining areas near infrastructure will be undertaken, including checks for signs of deformation (e.g., cracks, compressional ridges), over steepening of slopes, and poor management of surface water (e.g., pooling).</p>			
GEO04	<p>All mined slopes adjacent to infrastructure will be surveyed to check they are within acceptable tolerances of specified slope designs.</p>			
GEO05	<p>Surface water run-off controls will be incorporated into mine designs, including the following, where applicable:</p> <ul style="list-style-type: none"> Preventing uncontrolled ponding of surface water from rainfall within the specified stand-off distance from slope crests. 			

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	<ul style="list-style-type: none"> Preventing any surface water run-off over mine slopes with crest windrows, including no ponding behind the windrows. For the 5 m berm in mine slopes, if necessary, collecting any rainfall run-off and seepage water in drains along the toes, and re-direct it down the slope via a lined drain to the mine void floor. Managing water storage and ponding areas on the mine void floor well away from slope toes, and away from areas that will form foundations for road pillars. 			
GEO06	Visual assessments of surface water controls will be undertaken on a regular basis, and after rainfall, to check that any ponding, seepage or run-off meets design specifications.			
GEO07	Earthquake motion (acceleration) will be accounted for in mine slope designs.			
GEO08	Visual assessments of excavations will be undertaken to check for any variability from expected geological conditions, with particular focus on weaker than expected materials or features.			
GEO09	Excavation visual assessments for evidence of slope instability or deformation, and any interactions with slopes will be routinely completed by an experienced geologist or mining engineer with geotechnical understanding.	Specify/define "routinely"		Unnecessary level of detail for a mitigation. If greater detail needed as to frequency, this will be included in the Work Plan.
GEO10	Following an earthquake event, the following checks will be completed:			

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	<ul style="list-style-type: none"> • Visually assessing mining areas and surrounds for evidence of slope instability or deformation, and any water interactions with slopes including seepage, liquefaction and infiltration into new cracks or depressions. • Visually assessing of roads adjacent to mining areas and roads on road pillars for evidence of cracking and subsidence; could include a drive-along at a safe speed to check surfaces for serviceability. • Checking the functioning of all slope stability and deformation monitoring equipment. 			
GEO11	<p>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 assessed, measured by strain gauges and tilt meters.</p>			
GEO12	<p>Deformation and settlement monitoring of road pillars around mining operations will be undertaken, including:</p> <ul style="list-style-type: none"> • Horizontal strain and tilt on completed road pillars, measured by strain and tilt gauges, initially prior to formation of the roads to confirm that residual deformations are below tolerances, and prior to, during and post filling the voids adjacent to the road pillar. • Settlement of constructed road, either by surveying and/or settlement plates. 			

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GEO13	Road pillars will be constructed from Haunted Hills Formation gravel or sand tailings.			
GEO14	Trials will be conducted during the early stages of road pillar construction to verify construction methods and achieved densities.			
GEO15	<p>Construction and monitoring of all road pillars will be documented, reviewed and quality controlled, including:</p> <ul style="list-style-type: none"> • Assessing the construction of road pillars against planned construction methods. • Trialling various compaction methods to document and assess performance outcomes. • Formally reviewing road pillar construction methods prior to constructing high road pillar, including specifications of Haunted Hills Formation gravel, coarse sand tailings dewatering and compaction, any additives (e.g., fly ash), achieved strengths, and deformation moduli and settlement times for each stage. 			
GEO16	Where practicable, exclusion zones will be put in place for the geotechnical risk zones around each mining area, and public access will be limited in affected areas.			
GEO18	Overburden and sand tailings will be placed on a stable and well drained floor after removal of weaker materials or deep ripping.			
GEO19	If excess materials are placed on natural surfaces, weak materials such as topsoil,			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	alluvium, and dune sand will be removed prior to placement.			
GEO20	Slopes of landforms will be constructed from Haunted Hills Formation gravel, particularly for slopes with a gradient of 1:3 or steeper. For slopes of 1:4 or flatter, dewatered, stacked and compacted coarse sand tailings can be placed within the outer zone of the slope, with Haunted Hills Formation gravel forming an armouring layer.			
GEO21	Haunted Hills Formation clay will be placed well within the landform away from the final landform slope profile to maintain slope stability.			
GEO22	The next lift of material on top of sand tailings will be constructed only when the deposited sand tailings have achieved a partially-dewatered state (i.e., such that rapid loading will not induce a pore pressure increase).			
GEO23	Haunted Hills Formation gravel will be nominally compacted, such as under the weight of machinery, to minimise latent settlement of the landform that may affect the final rehabilitated landform profile.			
GEO24	Surface watercourses will be directed away from the landform during construction and operations, so rainfall does not pond or cause localised infiltration.			
GEO25	Geotechnical assessments of the tailings cell structures will be conducted. Assessments may be undertaken during operations to also observe and test the tailings being produced.			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
Greenhouse gas				
GHG01	Where practical, solar photovoltaic technology will be used to supplement electricity requirements for applications such as lighting.			
GHG02	Energy efficient technology will be used where practicable, including low energy lighting (e.g., LEDs).			
GHG03	Electricity usage will be conducted in accordance with the power factor limits specified in Table 2 of the Victorian Electricity Distribution Code.		The power factor of mains electricity will be improved by reducing the phase difference between the voltage and the current. The on-site power factor correction will be optimised for grid electricity usage.	Update as per Air RTP comparison table, Tabled Document 598
GHG04	Vehicle diesel consumption will be reduced where practicable through equipment selection, load and route optimisation and production scheduling, and minimising idle time.			
GHG05	Equipment will be maintained and operated according to manufacturer/supplier guidelines and recommendations.			
GHG06	Generator diesel consumption will be reduced by selecting a flexible configuration that allows for electricity output to be adjusted in line with demand.			
GHG07	The amount of land clearance will be minimised as far as practicable to reduce greenhouse gas emissions.			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
GHG08	Kalbar will regularly consider and implement new greenhouse gas mitigation opportunities and/or technologies, where practicable.	Specify/define “regularly” and delete “where practicable”.	Kalbar will regularly consider and implement new greenhouse gas mitigation opportunities and/or technologies, where reasonably practicable.	<p><u>Agree in part re “where practicable”</u>. The word “reasonably” added to reinforce requirements of the MRSD Act and EP Act 2017 and reflect the meaning of this phrase under those Acts. (i.e., a meaning whereby greenhouse gas reductions <i>should</i> prima facie be implemented where they demonstrably reduce emissions, are reasonable in cost, are consistent with industry best practice / the state of knowledge and so on).</p> <p><u>Re “regularly”</u> - unnecessary level of detail for a mitigation (i.e. to specify frequency), however note Kalbar’s commitment to carbon reduction set out in Tabled Document 339 which sets a target of reducing net scope 1 and 2 emissions by 26-28% by 2030 against a project baseline. This provides a relevant trajectory for the Project.</p>
GHG09	Energy efficiency principles will be integrated in building and facility design.			
GHG10	Materials and equipment will be sourced locally wherever feasible to minimise fuel use for transportation.			
<u>GHG11</u>	<u>Kalbar will comply with the commitments set out in the document titled ‘Kalbar commitment to Carbon Reduction at the Fingerboards Project’.</u>	<p>EPA notes that the targets in this document are not consistent with the Victorian Government’s interim targets</p> <p>The commitments in that documents should be extracted and expressly included in the mitigation register to aid clarity.</p>	Kalbar will comply with the commitments set out in the document titled ‘Kalbar commitment to Carbon Reduction at the Fingerboards Project’. (Tabled Document 339 in the EES IAC hearing). In accordance with this document, Kalbar will reduce net scope	Kalbar’s voluntary commitment is as per Tabled Document 339 and is set by reference to Australian Government targets. It is noted that the Minister’s Assessment of the Crib Point Gas Import Project found this approach to be consistent with the <i>Climate Change Act</i>

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		<p>Kalbar's commitment to Carbon Reduction (Tabled Doc. 339) should be updated to reflect Victorian Law (targets under the Climate Change Act 2017 (Vic)) rather than the Commonwealth Govt targets.</p> <p>Victorian targets are 45-50% below 2005 by 2030, whereas Commonwealth targets are much lower (26-28% below 2005 by 2030).</p>	<p>1 and 2 greenhouse gas emissions from the Project to achieve a reduction in net greenhouse gas emissions of 26-28% below the Project baseline levels by 2030 in line with Australian government policy, with subsequent emission targets to be set in line with Australian government policy at the time.</p>	<p>2017 (Vic) notwithstanding that that project involved importation of a fossil fuel. The <i>Climate Change Act 2017</i> does not require individual projects to comply with the State targets, which is sensible given that the opportunities for reduction vary greatly across different sectors. For example, the key opportunities for meeting State targets, at this point in time, relate to decarbonising the electricity grid. That said, Kalbar is strongly committed to doing its part, as reflected through this voluntary commitment.</p> <p>Agree. The substantive commitment is included, however the full document should still be referenced as it provides important details concerning how the commitment will be delivered.</p> <p>Refer EPA response above.</p>
Groundwater				
GW01	The freshwater and contingency water storage dams will be constructed with an engineered liner to reduce infiltration to groundwater.			
GW02	Groundwater will be extracted from the Latrobe Group Aquifer in line with the conditions, timings, and limits detailed in a licence issued by Southern Rural Water.	This is not a mitigation measure but statement that the proponent will comply with the law. It would be better expressed as: "The conditions of any licence or approval issued under the Water Act 1989 will be complied with"	The conditions of any licence or approval issued under the Water Act 1989 will be complied with.	
HZ-GW04	Limited quantities of chemical will be stored onsite. Any hazardous materials, such as	Define limited quantities	Minimise quantities of chemicals to be stored onsite as far as reasonably	What is a limited quantity will depend on the chemical in question and the

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	laboratory chemicals, will be stored in designated areas in accordance with their safety data sheets.		practicable. Any hazardous materials, such as laboratory chemicals, will be sorted in designated areas in accordance with their safety data sheets.	volumes of those chemicals required by the Project. Condition amended to more clearly reflect the intent that no more than reasonably required should be kept onsite at any time. Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW05	Handling of concentrated flocculant and any hazardous materials will be done in accordance with safety data sheet recommendations.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW06	Hazardous waste will be removed from site by a licensed contractor for treatment or disposal in an approved facility in accordance with licence and regulatory requirements.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW08	Inductions and training will be provided to all relevant project personnel on the safe storage, handling and transport of dangerous goods and in emergency management.	For clarity GW04, GW05, GW06, GW08 would be better placed in a new section of this document dedicated to Hazardous materials		Agree. Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44.
HZ-GW09	Waste will be removed from site and disposed of by licensed contractors (except for septic waste).			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW10	Waste hydrocarbons will be stored in suitable containers for removal from the project area for disposal at either an EPA-approved hydrocarbon waste site or a recycling depot.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW11	Spills of fuels or chemicals will be managed in accordance with requirements set out in the Spill Response and Clean-up Procedure.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-GW12	Hazardous materials will be transported in accordance with the Australian Code for the		Hazardous materials will be transported in accordance with the Australian Code	Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44

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	Transport of Dangerous Goods by Road and Rail (National Transport Commission, 2017) ³ .		for the Transport of Dangerous Goods by Road and Rail (National Transport Commission, Edition 7.7, 2020)	Update as per Water RTP comparison table, Tabled Document 600.
GW15	Management techniques, such as underdrains, sumps and water recovery pumps will be used to recover water in from the mine void tailings containment cells.	Management techniques, such as underdrains, sumps and water recovery pumps will be used to maximise recovery of water from the mine void tailings containment cells and Perry Gully.	Management techniques, such as underdrains, sumps and water recovery pumps will be used to maximise recovery of water from the mine void and Perry Gully.	Agreed.
GW16	The open voids will be progressively backfilled with sand tailings and fines tailings and covered with overburden, subsoil and, in areas other than Grassy Woodland revegetation, topsoil. Revegetation with crop, pasture or native vegetation will be undertaken where required.			
<u>GW17</u>	<u>A Groundwater Dependent Ecosystem (GDE) management plan will be developed prior to construction. The plan will include establishment of baseline conditions and periodic monitoring (including eco system health monitoring) at high value GDEs, including the Chain of Ponds in the Perry River catchment.</u> <u>[In response to recommendations made by Joel Georgiou in TN013 No.34 and 35]</u>	Amend to include other important GDE saplings morass, "spring fed" dams and areas of river red gums.	A Groundwater Dependent Ecosystem (GDE) management plan will be developed prior to construction. The plan will include establishment of baseline conditions and periodic monitoring (including eco system health monitoring) at high value GDEs, including the Chain of Ponds in the Perry River catchment, Saplings Morass and areas of Gippsland Red Gum Grassy Woodland identified in the Groundwater Dependent Ecosystem Impact Assessment.	The extent of groundwater dependency by River Red Gums is variable (cf TR Q, NEL EES, p. 194) and it is not accepted that all River Red Gums constitute 'high value' GDEs. Appropriate to include GRGGW however due to conservation status. A spring fed dam is not a GDE. See new GW27 and GW28 for dam protection measures.

³ National Transport Commission. 2017. Australian Code for the Transport of Dangerous Goods by Road and Rail. Edition 7.5. National Transport Commission. Melbourne, Victoria.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
GW18	<u>Groundwater monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan).</u>	Groundwater monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan) and any development and operating licence issued by EPA.	Groundwater monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan) and any development and operating licence issued by EPA.	Agreed
GW19	<u>Kalbar will work with SRW to encourage owners of unregistered bores to have their bores licensed. Once registered, those bores will be incorporated into any modelling undertaken as part of the groundwater licence application.</u> <u>[In response to recommendations made by John Sweeney in TN013 No.65]</u>	EPA recommends the modelling includes all known bores (and an assumption about unknown ones) regardless of registration status. It is not clear what this means or how it would mitigate a risk. It may something that Kalbar wishes to do but it is not clear how it mitigates risk.		It is unclear what the assumption that Kalbar is being asked to make is. Registration of unregistered bores would enable bore users to access compensation (cf. Water Act 1989, s 56(1)(x))
GW20	<u>Predicted process water quality will be reviewed as part of the updated water balance currently in preparation.</u> <u>[In response to recommendations made by John Sweeney in TN013 No.70]</u>	EPA Comment: EPA requires specific information on the re-use of process water prior to a determination on the development licence (the draft s 50(3) notice specifically refers to “considerations of the long-term average process water quality for total and dissolved metals, as well as other water quality parameters such as total dissolved solids, nutrients and other solutes that may concentrate over time and what effect will this have on management and disposal options for the centrate. Please provide Kalbar’s detailed consideration of the potential impact this may have on the quality of water entrained with, and leaching from, tailings”). Additionally, EPA may require further monitoring during	Investigate and produce information (to EPA satisfaction) on the re-use of process water and its quality, with specific consideration given to total and dissolved metals, as well as other water quality parameters such as total dissolved solids, nutrients and other solutes. Information, including monitoring through the commissioning will be included in the EP Act 2017 development licence application.	Accept that this will information will be required as part of the development licence application and its resolution will be a relevant risk reduction measure for the Project.

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		<p>commissioning of the Project. This should be reflected in the mitigation measure.</p> <p>It is unclear when this is to occur and does not appear to be a mitigation measure.</p>		
<p><u>GW21</u></p>	<p><u>Groundwater modelling will be revised annually with up-to-date monitoring data and site water balance data. Additional modelling iterations will be carried out if monitoring yields results that are materially different to those predicted. Specific triggers for remodelling will be identified in the Water Risk Treatment Plan (forming part of the Work Plan).</u></p>	<p>EPA Comment: EPA is unable to find the “specific triggers” in the Water Risk Treatment Plan. Please identify where these are, so EPA can review</p>		<p>Specific triggers for remodelling will be identified by reference to the most contemporaneous modelling at the time. Assuming a favourable recommendation, the modelling will be updated prior to submission of the Work Plan to reflect additional work done (including results from the test pit, if authorised) and triggers set at that time.</p>
<p><u>GW22</u></p>	<p><u>That filling of the Perry Gully with overburden and mine tailings be subject to appropriate protection measures reflective of the risks to surface water and groundwater.</u></p> <p><u>[In response to EPA Part B submission (Tabled Document 486, paragraph 93)]</u></p>	<p>EPA Comment: This mitigation measure should be deleted and instead all relevant “mine void” measures be amended to also refer to Perry Gully to make it clear that the exact same measures apply to both areas. An example of amended wording is show in GW15].</p> <p>The reference to “appropriate protection measure” gives no guidance as to what they are or how they will mitigate and identified risk not how that assessment will be made.</p>	<p>[Deleted]</p>	<p>Agreed.</p>
<p><u>GW23</u></p>	<p><u>The Water Risk Treatment Plan will require visual inspection of the escarpment to the north and east of the mine site on a daily basis.</u></p>	<p>EPA Comment: should include an indication of what the Proponent is inspecting the escarpment for</p>	<p>The Water Risk Treatment Plan will require visual inspection of the escarpment to the north and east of the</p>	<p>Intent of measure is to address the potential risk of daylighting at the escarpment from mounding.</p>

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			mine site on a daily basis for the emergence of water.	
<u>GW24</u>	<u>Prior to submission of any application to extract groundwater, Kalbar will undertake a further pumping test in accordance with SRW guidelines for a period of more than four days, including monitoring pH, redox, and TDS. Results of the pumping test will be taken into account in subsequent modelling.</u>	Amend GW24 to include or draft a new extra measure requiring further work to be undertaken to determine sustainable rates of pumping and to understand the effects on pumping of groundwater from the Latrobe group aquifer including for the new borefield area.		Any pumping test conducted in accordance with SRW guidelines will require the establishment of sustainable yield. The results of the pumping test are already required to be utilised in subsequent modelling of effects.
<u>GW25</u>	<u>In further modelling:</u> <ul style="list-style-type: none"> <u>Quantify and assess lag period for seepage to report to the water table;</u> <u>Quantify effect of increased baseflow discharge as a result of mounding on dissolved metals and nutrient concentrations in the Mitchell River;</u> 	Amend to include Perry River too		There is no evidence of increased baseflow at Perry River as a result of the Project.
<u>GW26</u>	<u>Update the Water Risk Treatment Management Plan to include procedures for managing potential Acid Sulfate Soils, including:</u> <ul style="list-style-type: none"> <u>Sampling procedures for PASS where perched groundwater is encountered; and</u> <u>Specifying procedures to be undertaken in the event that PASS is encountered.</u> 			
<u>GW27</u>			Identify potentially spring fed dams by identifying dams with catchments potentially affected by changes to the landform as a result of the project. Where a dam is identified as potentially	New MM introduced in response to MFG suggestions.

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			spring fed, Kalbar will consult with the landholder and undertake testing to establish whether the dam is spring fed.	
GW28			Protect confirmed spring fed dams to the extent reasonably practicable. Where spring fed dams are unable to be practicably protected, Kalbar will enter into a compensation agreement with the relevant landholder prior to carry out activities that will affect the dam.	New MM introduced in response to MFG suggestions. Practicability is an appropriate standard here as there may be spring fed dams that are unable to be protected (e.g., where the dam is located on an area to be mined).
Land use and planning				
LUP08	Landholder compensation will be in accordance with the <i>Mineral Resources (Sustainable Development) Act 1990</i> and based on a full inventory of on-farm assets.			
Noise and vibration				
NV03	<u>Unless a noise assessment based on plant noise emission data and predicted received noise levels indicates that noise reduction is unwarranted (e.g., because the noise source would not increase the received noise level at a sensitive receptor by ≥1 decibel, with the prediction rounded to the nearest whole decibel), then when pumping units over 500 kVA are located within 800 m of any dwelling, temporary acoustic barriers will be used, such as earth bunds, Echobarrier or FlexShield or other portable barriers (when with the barrier height to exceeds the pump height by at least 0.5 m). The barrier system</u>	[EPA Comment: As per EPA's cover letter, language to be updated to reflect the GED (eg replace "unwarranted")] [EPA Comment: Should include the risk of harm from intrusive character (tonality, impulsiveness, intermittent or low frequency noise)] It is unclear why this is limited to dwellings within 800m rather than being based on the extent of increase in noise. It is important to understand which properties would be affected by this measure.	When noise from pumping units may affect a noise sensitive area, then temporary acoustic barriers will be used, such as earth bunds or other portable barriers (with the barrier height to exceed the pump height by at least 0.5 m), to reduce noise so far as reasonably practicable.	Mitigation drafting simplified. Re GED / unwarranted. Agree. Drafting seeks to reflect this suggestion. Re 'character (tonality, impulsiveness, intermittent or low frequency noise)'. Kalbar maintains its position that each of these aspects of noise are intrinsic parts of a professional noise assessment. They are specifically assessed under the Noise Protocol – i.e., A weighted sound levels are based on frequency; character adjustments apply to the tonality, impulsiveness and intermittency'.

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	<p>will incorporate an acoustically absorptive finish to minimise reflected noise.</p> <p><u>[consistent with oral evidence of Christophe Delaire and Tabled Document 310]</u></p> <p><u>[note that a noise source 10dB below the loudest noise source (assessed at a receiver) does not increase the received level (because decibels are based on a Log10 scale). Accordingly, depending on distance and incidental screening, some items of plant will not contribute any appreciable noise to receivers even without the temporary barriers contemplated by this mitigation. Mitigation re-drafted accordingly.]</u></p>			<p>Accordingly, unnecessary to specify these matters.</p> <p>Agree in principle. This mitigation derives from s10.2.3 of the NVIA. There is limited explanation as to why 800m is nominated. Mitigation redrafted.</p>
NV06	<p>Contingency procedures will be developed and implemented if noise emissions during construction exceed relevant guideline values, including additional mitigation measures to be considered during less favourable meteorological conditions that may enhance noise emissions from the project area.</p>	<p>EPA Comment: As per EPA’s cover letter, the language should be amended to clearly reflect the GED (eg amend “exceed relevant guideline values”).</p>	<p>Contingency procedures will be implemented if noise emissions during construction are observed to exceed adopted noise criteria for the Project. Contingency measures may include, temporary mobile noise screens, scaling back operations, or when high noise levels from construction occur at night and there are no feasible ways of reducing noise levels or re-scheduling the activity, consideration of short term, temporary relocation for noise-affected occupants.</p>	<p>Update as per Noise RTP comparison table (Tabled Document 599).</p> <p>These are contingency not ‘business as usual’ measures, therefore appropriate that noise limits be used as the relevant benchmark (as compared with reducing to the extent reasonably practicable).</p>
NV09	<p>A noise and vibration sub-plan will be prepared and implemented <u>[note, there will be three relevant sub-plans 1) Noise and Vibration Risk Treatment Plan under the Work Plan; 2) Construction noise</u></p>	<p>EPA Comment: recommend be amended to be consistent with the Incorporated Document (which specifies the elements of the plans), including EPA’s comments.</p>	<p>Noise and vibration sub-plans will be prepared and implemented. The sub-plans will be informed by best practice and the need to reduce risk of harm to human health and the environment</p>	<p>Minor drafting improvements for clarity by Kalbar and other changes aligned with EPA recommendations.</p> <p>Re. ‘consistent with Incorporated Document’: The Incorporated document</p>

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	<p>management plan under the Incorporated Document; 3) Operational Noise Management Plan under the Incorporated Document]. The sub-plan will be informed by best practice guidelines. At a minimum, the sub-plan will include:</p> <ul style="list-style-type: none"> • Location of nearby residences and other sensitive land uses, including the sensitive receptors identified in this EES. • Approved construction working hours and/or shift rotations, and inclusion of construction activities, work areas and mobile plant and equipment locations during each working shift. • Best practice work practices to minimise noise emissions. • Best practice vibration mitigation strategies to minimise vibration. • Community consultation strategy required for the construction phase and associated high noise and vibration generating works. • Complaints handling process, including contact details, follow-up inspection, monitoring and corrective action processes once a complaint is made. • Noise monitoring procedures focused on the noise-sensitive receptors, including noise monitoring from the project area and along the HMC transportation route. • Contingency procedures if noise emissions during operations are determined to exceed those modelled as part of the approval process, including 	<p>EPA Comment: EPA recommends the NV09 is broken down to clearly refer to the three different sub-plans which will be developed so it can be understood what each sub-plan will include / will not include (eg will dot point 2 apply to the operational noise management plan etc).</p> <p>Requested change:</p> <ul style="list-style-type: none"> • Contingency procedures if noise emissions during operations are determined to give rise to a risk of harm to human health or the environment, including alternatives to be considered during less favourable meteorological conditions that may enhance noise emissions from the project area. [EPA Comment: to be amended to reflect the intent of the GED. These are one set of suggested amendments, but similar amendments to be made throughout this mitigation measure] <p>Each of the relevant subplans nominated should include a clear and consistent and updated protocol for complaints consistent TD390/TN025 and AS 10002:2014 Guidelines for complaint management in organizations.</p>	<p>from noise as far as reasonably practicable. At a minimum, the sub-plans will include:</p> <ul style="list-style-type: none"> • Location of nearby noise sensitive areas and other sensitive land uses • Approved construction working hours and/or shift rotations, and inclusion of construction activities, work areas and mobile plant and equipment locations during each working shift. • Best practice work practices to minimise noise emissions so far as is reasonably practicable • Best practice vibration mitigation strategies to minimise vibration so far as is reasonably practicable • Community consultation strategy required for the construction phase and any associated high noise and vibration generating works. • Complaints handling process, including contact details, follow-up inspection, monitoring and corrective action processes once a complaint is made. • Noise monitoring procedures focused on the noise-sensitive receptors, including noise monitoring from the project area and along the HMC transportation route. 	<p>is a legal control document, not a list of mitigations. This mitigation goes further than the elements listed in the Incorporated Document which is appropriate. Further, the majority of noise producing activity for the Project is produced on the mine site, controlled by the work plan rather than Incorporated Document.</p> <p>Re. referring to different subplans: Each of these mitigations has potential application under all subplans (save for minor exceptions, i.e., dot points 2 and 6 will only relate to the construction noise plan under the Incorporated Document, not its operational plan).</p> <p>Complaints protocols: Whilst not opposed in principle, this is overly specific for a noise mitigation measure.</p>

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	<p>alternatives to be considered during less favourable meteorological conditions that may enhance noise emissions from the project area.</p> <ul style="list-style-type: none"> Requirements for recording actions taken in response to exceedances, and evaluation of their effectiveness. Adaptive management of noise levels for the project, where identified exceedances will inform the required control strategy. 		<ul style="list-style-type: none"> Contingency procedures if noise emissions during operations adopted noise criteria in the relevant sub-plan, including alternatives to be considered during less favourable meteorological conditions that may enhance noise emissions to receivers. Requirements for recording actions taken in response to exceedances of adopted noise criteria, and evaluation of their effectiveness. Adaptive management of noise levels from the project, where identified exceedances will inform the required control strategy. 	
NV10	<p>Mobile plant items will be fitted with broadband reversing signals to avoid tonal characteristics associated with traditional reversing beepers at nearby sensitive receptors.</p>			
NV11	<p>As the year 1 mining progresses, or moves into a new situation with respect to natural or reconstructed topography, noise modelling will be used to predict compliance at nearby sensitive receptors. Where modelling indicates potential non-compliance, additional mitigation will be implemented, or night shift overburden operations will cease to achieve compliance.</p>	<p>EPA Comment: As per EPA's cover letter, should be amended to reflect the New EP Act</p>	<p>As mining progresses, or moves into a new situation with respect to natural or reconstructed topography, or proximity to noise sensitive receivers, noise modelling will be used to predict compliance at nearby sensitive receptors. Where modelling indicates potential non-compliance, additional mitigation will be implemented, or night shift overburden operations will cease to achieve compliance.</p>	<p>This should not be limited to year 1. Updated modelling should be undertaken throughout the life of the Project. Reference to proximity added also.</p> <p>This mitigation is principally focussed on updating modelling as activity shifts to new locations across the site and ensuring compliance with noise limits. Reducing noise to the extent reasonably practicably is also a requirement listed</p>

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment						
				separately. The two ideas can work together.						
NV12	<p>Earth bunds will be constructed to control noise such that noise levels from the target sources are controlled to achieve site compliance with <u>EPA guidelines noise criteria adopted in the Noise and Vibration Risk Treatment Plan (forming part of the Work Plan) and Noise Management Plans (approved under the Incorporated Document).</u></p> <p><u>[Deletions below consistent with oral evidence of Christophe Delaire and Tabled Document 310, i.e. too specific]</u></p> <p><u>The location and height of earth bunds for year 1 will be implemented as per the table below and as mining activities move around the project area, screening requirements will be reviewed.</u></p> <table border="1" data-bbox="295 948 734 1315"> <thead> <tr> <th data-bbox="295 948 450 1034">Location</th> <th data-bbox="450 948 551 1034">Height</th> <th data-bbox="551 948 734 1034">Activities screened</th> </tr> </thead> <tbody> <tr> <td data-bbox="295 1034 450 1315">Within mine void adjacent to MUP1</td> <td data-bbox="450 1034 551 1315">10 m</td> <td data-bbox="551 1034 734 1315">Bund will block line-of-sight to receptors to the east screening scrapers working with the mine void near MUP1.</td> </tr> </tbody> </table>	Location	Height	Activities screened	Within mine void adjacent to MUP1	10 m	Bund will block line-of-sight to receptors to the east screening scrapers working with the mine void near MUP1.	EPA Comment: As per EPA's cover letter, should be amended to reflect the New EP Act	Earth bunds will be constructed to reduce noise sensitive receptors to the extent reasonably practicable and, at a minimum, to the extent needed to comply with adopted noise criteria.	Agree. This is a circumstance where earth bunds should be implemented to reduce noise wherever reasonably practicable.
Location	Height	Activities screened								
Within mine void adjacent to MUP1	10 m	Bund will block line-of-sight to receptors to the east screening scrapers working with the mine void near MUP1.								

Identifier	Mitigation measure			Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment									
	Overburden haul route	3 m	The overburden haul route will be dug 3 m into existing terrain to provide screening of the mobile plant and truck movements along the route.												
NV13	Direct treatment through plant noise-reduction kits and cladding or screening of the MUP will be undertaken. Suitable noise-reduction kits have been identified for specific items of plant in consultation with industry specialists (Hushpak and Minetek), as identified in the table below, which also shows the level of reduction required, and examples of treatments available to achieve the required reduction.			EPA Comment: As per EPA's cover letter, to be updated to reflect the New EP Act (not about just achieving a specific reduction but all reasonably practicable measures)	All reasonably practicable noise controls which demonstrably reduce noise levels at sensitive receptors will be implemented for plant and equipment including noise reduction kits (for example, muffler treatments, engine bay attenuation, air intake and exhaust silencers) and screening and cladding of fixed plant and equipment, including but not limited to mining unit plant, centrifuges and the wet concentrator plant.	Agree.									
<table border="1"> <thead> <tr> <th data-bbox="297 971 450 1085">Plant item</th> <th data-bbox="450 971 584 1085">Noise reduction required</th> <th data-bbox="584 971 748 1085">Example product</th> </tr> </thead> <tbody> <tr> <td data-bbox="297 1085 450 1173">Scraper – ore 1</td> <td data-bbox="450 1085 584 1173">-6 dB</td> <td data-bbox="584 1085 748 1173" rowspan="3">Replacement muffler systems, cooling fans and addition of attenuated doors on the scraper engine bay.</td> </tr> <tr> <td data-bbox="297 1173 450 1260">Scraper – ore 2</td> <td data-bbox="450 1173 584 1260">-6 dB</td> </tr> <tr> <td data-bbox="297 1260 450 1361">Scraper – overburden</td> <td data-bbox="450 1260 584 1361">-6 dB</td> </tr> </tbody> </table>			Plant item				Noise reduction required	Example product	Scraper – ore 1	-6 dB	Replacement muffler systems, cooling fans and addition of attenuated doors on the scraper engine bay.	Scraper – ore 2	-6 dB	Scraper – overburden	-6 dB
Plant item	Noise reduction required	Example product													
Scraper – ore 1	-6 dB	Replacement muffler systems, cooling fans and addition of attenuated doors on the scraper engine bay.													
Scraper – ore 2	-6 dB														
Scraper – overburden	-6 dB														

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	Dozer – D9 MUP2	-5 dB	Air intake and exhaust silencers fitted to each unit.			
Dozer – D10 MUP2	-5 dB					
Dozer – D10 fines tailings screening	-5 dB					
Dozer – D10 MUP1	-5 dB					
Haul truck CAT 785 x4	-6 dB	Replacement muffler systems.				
NV14	<p>Noise mitigation measures such as bunding, walls or cladding will be installed at the wet concentrator plant to control noise emissions from the plant to achieve compliance <u>with noise criteria adopted in the Noise and Vibration Risk Treatment Plan (forming part of the Work Plan).</u></p> <p><u>[Deletions below consistent with oral evidence of Christophe Delaire and Tabled Document 310, i.e. too specific]</u></p> <p>At a distance of 20 m east and south of the plant, these levels are 50, 54 and 65 LAeq dB at heights of 1.5, 10 and 20 m above ground respectively.</p>			<p>EPA Comment: As per EPA's cover letter, needs to be amended to reflect the New EP Act</p>	<p>Noise mitigation measures such as bunding, walls or cladding will be installed at the wet concentrator plant to <u>minimise</u> noise emissions from the plant <u>to the extent reasonably practicable and, at a minimum, to achieve compliance with adopted noise criteria.</u></p>	<p>Agree</p>
NV15	<p>Consultation with affected residents located in the vicinity of the site will be conducted during</p>			<p>Define "vicinity of the site"</p>		<p>In the context, 'in the vicinity of the site' means residents affected by noise. This</p>

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	the course of the project to investigate the need for alternative or additional noise control measures depending on each individual situation (e.g., acoustic treatment for dwellings).			is common language used in noise assessments. Not necessary to define further in a mitigation measure. Intent is clear.
NV16	Commissioning noise tests will be undertaken at regular intervals and prior to work starting, including checking that bunds have been constructed to specifications required for site compliance with EPA guidelines adopted noise criteria .	EPA Comment: As per EPA's cover letter, needs to be amended to reflect the New EP Act. Define "regular intervals"		This is a measure that appropriately relates to an objective noise target, rather than reduction to the extent practicable – i.e., checking compliance. Frequency of testing will be in accordance with the relevant management plan.
NV17	<p>Noisier activities will be scheduled for less sensitive times of day where practicable and works will be limited as much as practicable during the night and at weekends.</p> <p>[Note: EPA drafting as per its EES submission (no. 514) inserted below, with Kalbar's tracking added to EPA's base]</p> <p><i>In relation to construction noise, if works are scheduled during night time hours they will be inaudible or approved by a person independent from the Project, prior to commencement, as meeting the definitions of "Unavoidable works" or "low-noise impact works" or "managed-impact works" in EPA Publication 4254 1834. Works will be considered "low-noise impact works" or "managed-impact works" in EPA Publication 4254 1834 if the predicted noise levels are below 26dB indoors at a residential receiver,</i></p>	EPA Comment: EPA continues to recommend its revised recommendation at paragraph 66 of its submission dated 7 June 2021. EPA does not support the suggested wording below. Additionally, EPA does not support the approach that "all phases of the Project should comply with the noise limits set by the" Noise Protocol. Extending the application of the noise limits to construction activities other than those clearly set out in the Noise Protocol (clauses 52 to 55) is inconsistent with the New EP Act, EP Regulations and the Noise Protocol (in particular, the application of the operational noise limits to all construction activities would mean that some of the impacts will not be addressed due to inadequate assessment, because general construction noise includes specific features that are not well represented by the Effective Noise Levels used in the	<p>Construction noise</p> <p>Option 1 – apply Noise Protocol All noise from the Project must not exceed the noise limits specified in EPA Publication 1826.4 (Noise Protocol) applicable to earth resources for both operation and construction (irrespective of the exemption for construction noise provided at rule 117 of the Environment Protection Regulations 2021).</p> <p>Option 2 – Apply Chapter 4 of EPA Publication 1834 in full Construction noise from the Project must be in accordance with guidance provided at chapter 4 of EPA Publication 1834 (Civil construction, building and demolition guide).</p> <p>Option 3 – apply Chapter 4 of EPA Publication 1834, but define 'low noise impact works' by reference to a decibel standard</p>	<p>Firstly, this mitigation should be split into two – the first dealing with scheduling of noisier activities, the second dealing with construction noise criteria. The first part has been placed in a new mitigation below (NV17A).</p> <p>Secondly, Kalbar sees three options for the construction noise mitigation, as provided.</p> <p>Kalbar will address the merits of this mitigation further in its Part C submission.</p>

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	<p><i>the noise does not present a tonal, impulsive or intermittent character and, does not include low frequency content that presents a risk of intrusiveness. the Proponent can justify why there is a need to conduct the works outside the recommended standard hours and this justification is approved by a person independent from the Project, and the hours for works considered to be low-noise or managed-impact works and it is supported by the Community Reference Group. [noise already required to achieve low levels to fall within this definition of 'low-noise impact works']</i></p> <p><u>[Whilst Kalbar would accept the drafting above, it notes also the suggestion by EGSC that all phases of the Project should comply with noise limits set by the <i>Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues</i> (EPA Publication 1826.4) (Noise Protocol) (formerly NIRV, although they are identical) (understood to be the submission based on [269] of EGC's Part B submission). This would simply require all activities to comply with the noise limits in the Noise Protocol, meaning that day time activity which has no noise limit under Publication 1834 (construction guidelines) would be subject to 46dBA limit, evening would shift from a background + 10dB criterion to 41dB and night would shift from an internal level of 26dB (as above) to an external level of 36dB.</u></p>	<p>assessment procedures of the Noise Protocol).</p> <p>Delete or define "practicable"</p> <p>Both the EPA's suggested drafting and the approach articulated by the Council should be adopted as they are not inconsistent; the EPA drafting is more targeted to night time activities. Alternatively night time activities could be prohibited except specific permission of the EPA and a minimum of 48 hours written notice is provided to potentially affected properties.</p>	<p>Construction noise from the Project must be in accordance with guidance provided at chapter 4 of EPA Publication 1834 (Civil construction, building and demolition guide). For the purpose of applying this Guide, works will be considered "low-noise impact works" if the predicted noise levels from construction activity are equal to or less than 26dB inside a residential receiver, the noise does not present a tonal, impulsive or intermittent character and, does not include low frequency content that presents a risk of intrusiveness.</p>	

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	<p><u>which are broadly equivalent (i.e., based on the usual assumption that a partially open window in a dwelling provides a 10-15dB reduction from outside to inside).</u></p> <p><u>In this regard it is relevant to note that most pre-commencement mining activities are subject to the specific noise limits for earth resources under the Noise Protocol. As a starting position, the Noise Protocol relevantly applies to all noise sources except for “construction or demolition activities on building sites” (rule 117 of the Environment Protection Regulations 2017).</u></p> <p><u>Specific variations to the application of the Noise Protocol to mines is provided at Table 4 (p 17) which relevantly includes:</u></p> <p><u>“Site clearing and preparation works</u></p> <p><u>The variation applies to vegetation removal, topsoil removal, subsoil removal, road construction and civil works such as site drainage where the activity will happen before acoustic mounds can feasibly be constructed.”</u></p> <p><u>The fact that variations can be approved to the application of noise limits for these aspects of mining clearly demonstrates these activities are caught by the Noise Protocol noise limits in the first instance. Accordingly, it can be seen that the majority of site preparation activities, including road construction, are already covered by the noise limits set by the Noise Protocol.</u></p>			

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	<p><u>Irrespective, the <i>Civil construction, building and demolition guide</i> (Publication 1834) is a guide, not mandatory. Section 4.4 titled 'Managing noise and vibration outside normal working hours' relevantly states: "Where relevant, works outside normal working hours (Sunday, public holidays, evening and night-time) should be done in accordance with local laws or with an approval."</u></p> <p><u>In sum, Kalbar supports the approach of applying the Noise Protocol limits to all activities for certainty and simplicity. However, in the alternative, the EPA's drafting subject to the above changes is also acceptable, albeit more complicated.</u></p>			
NV17A			Noisier activities will be scheduled for less sensitive times of day where practicable and works will be limited as much as practicable during the night and at weekends.	Split from NV17 above. Original wording retained.
NV18	Residents at noise-sensitive receptors will be informed of the timing and location of each construction stage and associated noise reduction measures and given advance notice and details of periods of noisy activities (such as excavation).			
NV19	Managerial processes will be implemented (such as 'push-back' mining operations) to optimise the direction of mine void excavation			

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	so the terrain provides maximum natural attenuation noise from plant and equipment.			
NV20	All personnel will be informed about the measures required to minimise noise including through regular toolbox talks. <u>Adherence to the relevant practices and requirements will be verified by an inspection and audit program.</u> <u>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar]</u>			
NV22	All pneumatic tools used near residential areas will be fitted with an effective silencer on the air exhaust port.			
NV23	Plant will be turned off when not in use.			
NV24	Plant, machinery and vehicles will be maintained <u>and operated</u> in accordance with manufacturers' specifications <u>and industry best practice</u> to minimise emission of noise. <u>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar]</u>			
NV25	All trucks left standing on site will, as far as practicable, have their engines switched off after no more than five minutes.			
NV27	All project vehicles will be maintained in accordance with manufacturers' specifications.			
NV28	Trucks will be equipped with adequate and functioning mufflers.			

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NV29	Project vehicles will be driven to the speed limit and in a careful manner, avoiding strong acceleration/deceleration, and restricting the use of compression brakes to situations where justified on safety grounds, such as along long downhill slopes.			
NV31	A permanent power supply will be secured as early as possible to minimise the time diesel generators are used.			
NV32	<p>Equipment and processes that do not exhibit characteristics of intermittency or impulsiveness will be selected, where feasible.</p> <p><u>[As stated by Mr Delaire in Tabled Document 310 (Mitigation Register commentary):</u> <u>“This requirement is too restrictive as noise emission from a large number of items may not contribute significantly to noise levels are [sic] receivers. Providing that the equipment with low sound power levels are used, as far as practicable, and detail design modelling demonstrates compliance with the relevant criteria, noise emissions of equipment may reasonably exceed that detailed in the MDA Report.”]</u></p>	<p>Equipment and processes that do not exhibit characteristics of tonality, intermittency or impulsiveness will be selected, where reasonably practicable. The risk of intrusive low frequency noise within noise sensitive areas is to be minimised as far as reasonably practicable.</p> <p>This measure should be changed is as follows: NV32 Equipment and processes that do not exhibit characteristics of intermittency or impulsiveness will be selected, where reasonably practicable and in accordance with industry best practice.</p>	<p>Equipment and processes that do not exhibit characteristics of tonality, intermittency or impulsiveness will be selected, where reasonably practicable. The risk of intrusive low frequency noise within noise sensitive areas is to be minimised as far as reasonably practicable.</p>	Agree.
NV33	Equipment will be selected with noise emissions that do not exceed the sound values used in the project noise modelling.	The quietest available plant and equipment will be selected for the project, so far as reasonably practicable.	The quietest available plant and equipment will be selected for the project, so far as reasonably practicable.	Agree.
NV34	Construction of the proposed Fernbank East rail siding will be restricted to daytime hours			

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	(Monday to Friday (7:00 a.m. to 6:00 p.m.) and Saturday (7:00 a.m. to 1:00 p.m.)).			
NV35	<p>Project inductions will include briefings for all employees and contractors on the key principles and requirements of the noise and vibration sub-plan as relevant to their work.</p> <p><u>Adherence to the relevant practices and requirements will be verified by an inspection and audit program.</u></p> <p><u>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar]</u></p>			
NV36	<p>B-double movements on the private haulage road and rail loading activities at the Fernbank East rail siding will be restricted to the day and evening periods <u>as defined under the Noise Protocol.</u></p> <p><u>Specific measures will be included in the Operational Noise Management Plan to address the risk of impacts due to short term high noise levels and low frequency noise from truck by-passes to properties near the proposed haulage road. Specific measures will be included in the Operational Noise Management Plan to address the risk of noise from train horns at the siding impacting on nearby properties. Specific measures will be included in the Operational Noise Management Plan to address the risk of impacts from vehicles travelling on the rumble and shaker strips to properties near the proposed roundabout and rail siding.</u></p> <p><u>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar]</u></p>			

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<p>NV37 (added from Risk Treatment Plan)</p>	<p><u>Where a meaningful reduction in noise levels at a sensitive receiver will result, then quieter plant and equipment will be selected where options exist, unless the cost or other relevant disadvantage of selecting the quieter plant (e.g., reliability, quality, warranty provision and so on) is disproportionate to the noise reduction achieved.</u></p> <p><u>[Kalbar notes EGSC's suggestion in its Part B submission [Tabled Document 407 at 267] that 'where feasible' should be deleted. However, plant and equipment (e.g., as between two brands) cannot be selected solely based on which item has the lower stated sound power level. A balanced approach to equipment selection is required, with a strong preference for selecting lower noise plant where options exist, however not at all costs. Accordingly, this mitigation measure has been reworded to clarify its intent].</u></p>	<p>EPA Comment: In light of amendments made to NV33 above, recommend this mitigation measure is deleted</p> <p>This drafting is improved but remains imprecise and unlikely to be capable of enforcement. The following change would assist: NV37 (added from Risk Treatment Plan) Where a meaningful perceptible reduction in noise levels at a sensitive receiver will result, then quieter plant and equipment will be selected where options exist, unless the cost or other relevant disadvantage of selecting the quieter plant (e.g., reliability, quality, warranty provision and so on) is demonstrated to be an unreasonable response to the noise reduction achieved. Records relating to all decision making consistent with this mitigation measure must be made available to any person on request.</p>	<p>[deleted]</p>	<p>Agree. Overtaken by NV33.</p>
<p>NV38</p>	<p><u>Acoustic treatments will be applied to the centrifuge plant building (and associated ancillary equipment) such as cladding and screens to reduce noise emissions to sensitive receivers.</u></p> <p><u>[see amended supplementary evidence statement of Christophe Delaire, Tabled Document 284, p 3, dot point 1, which explains that the centrifuge plant was modelled without any such treatments, but noted the potential for a lightweight enclosure</u></p>			

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	<u>with acoustic penetrations to reduce noise levels by at least 5dB]</u>			
<u>NV39</u>	<u>Earth mounds will be constructed to shield centrifuge cake haul noise emissions to sensitive receivers.</u>			
NV40			Activities which generate the highest potential noise and vibration will not be scheduled at night, where feasible	Kalbar initiated change as per Tabled Document 598 (RTP comparison table)
Radiation				
RD01	Radiation exposure to workers will be minimised by implementing standard operating procedures for handling and transport of radioactive materials, use of safety apparatus and industrial gauges.	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p> <p>Clarify how mitigation measures interact with Radiation Waste Management Plan.</p> <p>Insert new mitigation measures</p> <p>1/ To require that all exposure pathways (for workers, community members (including workers in downwind horticultural industry) and people living along transport route) be mapped.</p> <p>1A/ To require that exposure pathways through ingestion of local meat, dairy and vegetables be mapped.</p>		<p>Kalbar understands that Dr Joyner was satisfied with the mitigation measures.⁴ If the Council has a specific suggestion, that will be considered, however it is difficult to identify what Council suggests should be altered.</p> <p>Mitigations will be adopted through Radiation Management Plan and Radioactive Waste Management Plan, as appropriate. These are management plans which cover the content prescribed under the ARPANSA Mining Code (RPS-9).</p> <p>A mitigation requiring mapping not supported. Not a mitigation per se. Also, Kalbar understands that radiation assessments assess a critical group (as seen in the EES Radiation Impact</p>

⁴ See e.g., Dr Joyner's second expert report, Tabled Document 541, [22i], p 14.

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		2/ To use best practice dose calculations when determining acceptable levels of exposure.		Assessment) rather than a mapper distribution of exposure. Dost calculations will need to apply those adopted by the relevant regulator from time to time.
RD02	Workers will be provided with training specific to their role on potential radiation risks and measures to be implemented to reduce or minimise radiation exposures. All training will be documented and will include: <ul style="list-style-type: none"> • Job-specific training and additional training for supervisors. • Induction programs relating to the dangers of working near radioactive material and procedures to prevent radiation exposure. • Specific ongoing training and professional development of radiation safety personnel. 	These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.		As per RD01
RD03	Exposure to gamma radiation will be minimised through: <ul style="list-style-type: none"> • Providing site security and signage to restrict unauthorised access. • Locating product stockpiles at sufficient distances from other operations. • Only loading trucks immediately prior to departure from the site. • Transporting HMC in accordance with <i>the Code of Practice for Safe Transport of Radioactive Material</i>. 	These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.		As per RD01
RD04	Generation and inhalation of radioactive dust will be minimised through:	These measures do not appear to have been reviewed taking into account the	Generation and inhalation of radioactive dust will be minimised through:	As per RD01 Agree

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	<ul style="list-style-type: none"> Ensuring HMC stockpile material is damp. Progressively backfilling and revegetating the worked-out mine void to minimise the area of mine materials exposed to the environment. Pumping ore as a slurry to the WCP and returning tailings as a slurry. Retaining sufficient moisture content in concentrates during processing. Transporting concentrate in fully sealed containers or covered for bulk shipments. 	<p>revised comments by Dr Joyner particularly in relation to transport off-site.</p> <p>Amend to require storage in silos.</p>	<ul style="list-style-type: none"> Ensuring HMC stockpile material is damp. Progressively backfilling and revegetating the worked-out mine void to minimise the area of mine materials exposed to the environment. Pumping ore as a slurry to the WCP and returning tailings as a slurry. Retaining sufficient moisture content in concentrates during processing. Transporting concentrate in fully sealed containers or covered for bulk shipments Storage of HMC at the wet concentrator plan within silo(s) 	
RD05	<p>The project will be operated in accordance with a management licence addressing radiation safety in accordance with the provisions of the Radiation Regulations, including likely conditions such as compliance with the Radiation Protection Series No. 9 and preparation of a radiation sub-plan for all operations. The plan would account for any special conditions or exemptions from specific provisions of the Radiation Regulations that might apply to the project.</p>	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p>		As per RD01
RD06	<p>Ingestion of radioactive material will be minimised through:</p>	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p>		As per RD01

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	<ul style="list-style-type: none"> Providing hand washing facilities and encouraging good hygiene practices. Restricting smoking and eating onsite to designated areas only. Providing sufficient hose-down points and sumps to allow clean-up of product. 			
RD07	<p>Runoff and erosion of soil (which could contain ore) will be minimised through:</p> <ul style="list-style-type: none"> Adequate bunding of operations and storage areas to avoid the transport of spilled or stored material into the surrounding terrestrial, freshwater or marine environment. Constructing stockpile slope angles as low as practicable and mulch materials and contour ripping will be strategically used. Locating stockpiles to avoid overland flow pathways. Diverting runoff from stockpiles to the process water dams for reuse. Vegetating overburden stockpiles where appropriate to minimise erosion. 	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p>		As per RD01
RD08	<p>Radiation exposure at the port through handling of HMC will be minimised through:</p> <ul style="list-style-type: none"> Adequately segregating stored concentrate from other cargo, including providing adequate signposting. Adopting remote handling of concentrate and minimising exposure times wherever possible. Using rotator boxes to load bulk shipments of concentrate into vessels. 	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p> <p>Specify Port of Geelong and/or specify who has responsibility for these mitigation measures.</p> <p>Radiation exposure at the Port of Geelong through handling of HMC will be minimised through:</p>		<p>As per RD01</p> <p>Identification of a specific Port not necessary to mitigate effects at that Port.</p>

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RD09	<p>Radiation exposure to personnel will be minimised through:</p> <ul style="list-style-type: none"> • Engineering controls, such as ventilation, dust control, and appropriate machinery shielding. • Limiting occupancy in identified higher risk areas and/or restricting time spent on identified higher risk activities. • Providing warning signs and labels in higher risk areas. • Providing adequate facilities for personal hygiene. • Providing personal protective equipment for certain procedures where higher potential radiation doses might necessitate its use. 	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p>		
RD10	<p>Generation of dust and inhalation of dust by project personnel and members of the public will be minimised through:</p> <ul style="list-style-type: none"> • Limiting vehicle speed on unsealed roads. • Suppressing dust by applying water to unsealed roads in the project area as required. • Passing trucks through a wheel wash prior to leaving the site. • Minimising the drop height of truck dumping as far as practicable. 	<p>These measures do not appear to have been reviewed taking into account the revised comments by Dr Joyner particularly in relation to transport off-site.</p>		
RD11	<p>Loading of concentrate onto ships will not occur under very wet or windy conditions to limit the potential for concentrate to be</p>	<p>These measures do not appear to have been reviewed taking into account the</p>		<p>As per RD01 Responses in order:</p>

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	washed or blown from the wharf into the ocean. Any spillage of concentrate would be immediately cleaned up	<p>revised comments by Dr Joyner particularly in relation to transport off-site.</p> <p>Define "very wet or windy conditions".</p> <p>Require concentrate to be transferred in containers (rather than in bulk).</p> <p>Specify who will be responsible.</p> <p>Specify how concentrate will be "cleaned up".</p>		<p>This is a performance based measure. The intent is sufficiently clear.</p> <p>Bulk handling is proposed.</p> <p>The port handling facility operator will be subject to a management licence and have responsibility for management practices within its facility.</p> <p>This is a performance based measure. The intent is sufficiently clear.</p>
Rehabilitation				
RH01	Stripped topsoil will be transferred directly to nearby rehabilitation areas, or stockpiled separately to overburden adjacent to the active mining area within the disturbed area. Actions to reduce weed seed burden in stripped topsoil will be applied. [expert evidence statement of Dr Rob Loch, p 21, response to EGSC / SLR submission; TN13 Item 27]			
RH02	Site inductions for mining and rehabilitation personnel will include information on the different soil types present across the project area and their corresponding management, including for stockpiling.			
RH03	Fines tailings will be placed at depth in the backfilled mine void so that any restrictions to drainage are far enough below the soil to avoid impacts on vegetation growth and grazing animals.	Remove or amend. This measure is redundant as currently drafted. Caked tailings will be used in the manufactured soils.	Fines tailings will be placed at depth in the backfilled mine void so that any restrictions to drainage are far enough below the soil to avoid impacts on vegetation growth and grazing animals. This applies to the direct placement of	This mitigation is clearly referring to the direct placement of fine tailings in the mine void. If fine tailings are used in the manufactured subsoil, this is a different situation to that contemplated by the mitigation measure.

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			find tailings in the mine void. It does not apply to any fine tailings material used in a manufactured sub-soil.	However, clarification added.
RH04	Construction of stockpiles will be designed to avoid flow pathways to minimise erosion.			
RH06	Rocks will be included in rehabilitated channel beds, <u>where appropriate</u> , to increase critical shear of the bed, resist initiation of scour and increase channel stability to storm flows and minimise erosion. <u>[rock armouring will not be appropriate in all instances]</u>			
RH07	Rehabilitation will be designed to ensure plateau tops are consistent in form <u>to generally reflect</u> pre-mining landforms. Swales will be designed to be broad, U-shaped, no steeper than current stable drainage paths, and consistent in shape with the most stable drainage paths currently present. <u>[rehabilitated landform is not a replica, but generally consistent]</u>	Specify/define scope of "generally". Currently too vague.		Land contours are specified in the Rehabilitation Plan forming part of the Work Plan. The intent of this mitigation is clear. The word 'generally' reflects the fact that the proposed final landform is not identical to the existing.
RH08	Riparian vegetation will be established in rehabilitated flow channels to increase effective hydraulic roughness of the channels, reduce flow velocities, increase channel stability to storm flows and minimise erosion. <u>A revegetation programme for revegetation of all gullies downstream of mining activities will be commenced at the first autumn or winter after environmental approval (i.e., as early as</u>	It is not clear what "environmental approval means" ie whether it is final approval of a work plan or any approval of an EES. Given the importance of this process it should be any approval of an EES. This addresses rehabilitated flow channels but not other channels not yet rehabilitated or eg Perry Gully. This should be extended to all flow paths or at a minimum those affected by the relevant	A revegetation programme for revegetation of all gullies downstream of mining activities will be commenced at the first autumn <u>after commencement of the Project</u> (i.e., as early as possible and prior to mining commencement to minimise risks of erosion).	<u>After commencement is an appropriate trigger. Amended accordingly.</u>

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	<p><u>possible and prior to mining commencement to minimise risks of erosion).</u> <u>[evidence statement of Dr Michael Cheetham, p 4]</u></p>	<p>stage of mining operation whether or not rehabilitated.</p>		
RH09	<p>High rates of vegetation establishment will be prioritised in rehabilitated flow channels (especially in the first three years of rehabilitation) to maximise surface cover and minimise erosion.</p>			
RH10	<p>Rehabilitation activities will be timed in consultation with landholders and based on analysis of long-term rainfall patterns to maximise the rate of successful vegetation establishment and rehabilitation performance.</p>			
RH11	<p>Hydromulches or tackifiers will be used where appropriate to prevent erosion and the more effective use of incident rainfall by germinating seeds.</p>			
RH12	<p>Hydroseeding will be used in rehabilitation areas, where appropriate, to stabilise the soil surface and minimise erosion.</p>			
RH13	<p>Site/local experience will be considered when determining seed timings and rates to achieve maximum reliability of vegetation establishment. Seed will be re-applied at a later date in areas where rehabilitation performance does not meet established targets when suitable conditions, such as rainfall, are likely to occur.</p>			
RH14	<p>Rehabilitated areas will be irrigated where required to promote satisfactory performance and vegetation establishment.</p>	<p>Delete "where required"</p>		<p>These words are sensible. Irrigation will not always be required.</p>

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RH15	Larger plants that are less susceptible to grazing damage will be used in rehabilitation areas where practicable.			
RH16	Guards will be placed on tubestock where required to prevent damage by rabbits, cockatoos and other pest animals.	Delete "where required".		Again, these words are sensible. Not all tubestock will be planted with guards.
HZ-RH18	Hazardous materials will be managed (including storage, handling, transport and disposal) in accordance with relevant safety data sheets.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-RH19	Mobile plant and vehicles will be maintained regularly and in accordance with manufacturers' specifications. Maintenance will include inspections for leaks and spills.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
HZ-RH20	Personnel will be trained in management of hazardous materials and spill response procedures prior to commencement of work.			Hazard 'HZ' identifier added – see MFG comment and Kalbar response at TE44
RH21	Where practicable, ameliorants such as organic mulches and fertilisers will be spread on in-situ topsoils prior to stripping to increase soil fertility.	Delete "where practicable"		These words are sensible.
RH22	Stockpiles will be vegetated where appropriate to minimise erosion.			
RH23	Stockpile slope angles will be constructed as low as practicable and mulch materials and contour ripping will be used strategically to stabilise stockpiles, prevent runoff and minimise erosion.			
RH24	The density of deep-rooted trees and shrubs will be increased in areas at risk from tunnel			

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	erosion by minimising the volume of seepage flows reaching valley slopes and channels.			
RH25	Grazing will be excluded in rehabilitated native grass woodland areas (Zone E) channels and riparian areas (Zone D) and on steeper valley slopes (Zone C) to maintain sufficient levels of vegetation cover and prevent disturbance of soils by trampling by livestock, thereby increasing stability and minimising erosion.			
RH26	Topsoil stockpiles scheduled to be in place for four months or longer (or for an unknown duration) will be restricted to a height of 2 m and treated with a soil stabiliser or revegetated immediately following their construction.			
RH27	Tree densities in areas planned for grazing land use, particularly in swale areas, will be increased to reduce deep drainage and seepage flows, and to maximise erosion stability.			
RH28	Gypsum will be applied in sufficient quantity to a depth of at least 500 mm as part of a constructed subsoil where material likely to disperse is placed (such as Haunted Hills Formation overburden or fines tailings); to reduce exchangeable sodium and magnesium to acceptable levels (ESP <4 and Ca/Mg ratio >0.5).	Update and provide specifics (i.e. what is a "sufficient quantity" of gypsum).		Scope of mitigation is clear. Details will be specified in a management plan.
RH29	Revegetated areas will be fenced (electric fencing with multiple closely spaced tapes) to			

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	prevent damage by stock or kangaroos; where cost-effective to do so.			
RH30	Revegetation will be conducted over as large an area as practicable at one time to spread potential impacts of animal grazing over larger areas.			
HZ-RH31	Triple interceptor traps will be used to prevent release of hazardous materials from banded areas into rehabilitated areas.			
RH33	Planting of tubestock will be scheduled to maximise initial growth, including in spring to take advantage of warmer growing conditions, or in autumn to take advantage of the wet winter.			
RH34	Seeds will be spread to achieve a stem density significantly higher than the target to allow for losses due to animal damage and other causes; thinning will occur at a later date to achieve the target number of stems per hectare, particularly in areas where a higher (moderate) density of trees is proposed and where there is inclusion of understorey species.			
RH35	<u>In relation to the intersected portion of the unnamed tributary of Honeysuckle Creek and the mine site, mitigate impacts of upstream headwaters entering the rehabilitated mine area, by providing an appropriate slope planform of the waterway channel. If additional measures are needed to achieve stability, augment with other engineered</u>			

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	<p><u>features, such as grade control structures and / or a permanent dam / water feature.</u> <u>[evidence statement of Dr Michael Cheetham, p 5; TN13 Item 24].</u></p>			
<p><u>RH36</u></p>	<p><u>If fine tailings from the centrifuges are used in preparing manufactured subsoil, then a procedure to break up dried lumps of fine tailings into aggregates having a nominal particle size of less than 5 mm would be implemented to ensure thorough and even mixing.</u> <u>[supplementary evidence statement of Dr Rob Loch, [12]]</u></p>	<p>Delete "If fine tailings from the centrifuges are used in preparing manufactured subsoil, then..."</p>		<p>Suggestion unclear (sentence would be incomplete if these words are removed). In any event, this mitigation is in accordance with Dr Loch's evidence.</p>
<p><u>RH37</u></p>	<p><u>Internal compliance / performance reviews will be conducted annually by Kalbar to check whether rehabilitation and closure actions proposed in this plan are being carried out as required providing reliable evidence of progress towards agreed closure outcomes. An independent audit of rehabilitation and closure activities will be conducted every 3 years to measure performance against the monitoring schedule and standards shown in the rehabilitation plan.</u></p>			
		<p><u>Other:</u> Insert new mitigation measures for rehabilitation:</p> <ol style="list-style-type: none"> 1) Requiring specific consideration be given to the safe rehabilitation of Perry Gully. 2) To inform rehabilitation trials, determine exactly what physical 		<p>The intent of these recommendations is supported, however each of these matters form an intrinsic part of the rehabilitation plan rather than mitigations per se. Accordingly Kalbar do not propose any further drafting here, however if the IAC were minded to include these matters as mitigations, that is not opposed.</p>

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		<p>and chemical properties will be for overburden and topsoil.</p> <p>3) Develop detailed plan for the management of the 200ha Woodland in perpetuity.</p>		
Socioeconomic				
SE01	Community access will be provided to information on potential project impacts, and the process for the EES, land access and acquisition in a range of ways, such as through community meetings, personal meetings, newspaper advertisements and website information.			
SE02	Dust, noise and water monitoring results will be made available at regular intervals on the project website along with information on how any peaks or exceedances have been responded to.			
SE03	Regular meetings will be held with adjacent residents to discuss any issues or concerns.	Clarify whether "adjacent residents" are immediately adjacent, or something else.	Regular meetings will be held with nearby residents to discuss any issues or concerns.	Agree 'adjacent' too limited. Some degree of flexibility is needed here and setting a hard and fast boundary would be arbitrary (e.g. '2km'). The intent is clear.
SE04	A community fund will be established to support community events and initiatives that encourage social interaction such as sporting teams and community festivals.		A community fund will be established to support community events and initiatives that encourage social interaction such as sporting teams and community festivals. Resolve detailed arrangements for the community fund to the value of	Kalbar notes the submissions made in Council's Part B at [287] and has responded by specifying the fund amount and provide further detail as to its operation. This drafting is substantially the same as provided for the in Crib Point Gas Import Project ERS

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			<p>\$250,000 per annum in partnership with East Gippsland Shire Council and relevant community stakeholders.</p> <p>In particular, there must be community led involvement in:</p> <ul style="list-style-type: none"> • identifying a Committee of Management drawn from the local area. • selecting which communities will benefit from the programs and projects to be funded. • selecting appropriate projects and activities. • identifying how the fund will be established, managed and governed. • devising and implementing processes to monitor and evaluate the fund's effectiveness in addressing socio-economic disadvantage and offsetting adverse social impacts. <p>Appoint an independent facilitator to assist the establishment of the community fund and its governance.</p> <p>The operation of the fund should commence as soon as all relevant permissions are finalised to commence construction of the Project and should conclude within ten years from commencement.</p> <p>The costs of administering the community fund, including the funding</p>	<p>(as attached the IAC's report in that matter, Report 2, Appendix G – Recommended EPRs, SO04, p 212, pdf p 215)</p>

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			of the independent facilitator must be borne by the Project proponent, separate to the \$250,000 per annum fund amount.	
SE05	The community engagement plan and associated activities will be regularly reviewed and adapted based on community feedback so that the community has different ways to receive information on the performance of the project.			
SE06	A range of avenues will be provided for those with concerns to contact Kalbar to express their concerns or ask questions.	For clarity, specify what the "range of avenues" will be.	A range of avenues will be provided for those with concerns to contact Kalbar to express their concerns or ask questions, including phone, email, social media, website and in person attendance at a Kalbar office.	Agree.
SE08	Regular updates will be provided to local communities on the progress of the EES.			
SE09	Regular community updates will be provided on how bushfire mitigation measures are being adopted on site.			
SE11	Incentives will be provided to encourage employees to become emergency services volunteers. For example, Kalbar will pay its employees for their time to attend training and respond to incidents on behalf of these organisations.			
SE12	Prior to construction and operations, all residents adjacent to affected roads will be engaged with to discuss any concerns they have and how road safety can be maintained.			

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SE13	The need for a cycleway/foot path on Lindenow-Glenaladale Road to provide greater protection for cyclists and pedestrians on this road within the township will be investigated as a part of the traffic management plan.			
SE14	If Bairnsdale Siding is utilised, Bairnsdale Racing Club and East Gippsland Shire will be engaged regarding when public events are held at Bairnsdale Racecourse and the measures that can be adopted to improve pedestrian safety.			
SE15	All adjacent landholders will be engaged prior to construction and operations to discuss any concerns that these residents have and dust emissions will be minimised.			
SE16	The use of low beam lights on vehicles will be promoted except in emergencies or for safety reasons.			
SE17	Site-specific visual impact management will be discussed with affected residents located close to the project area.			
SE18	Current levels of access to national parks and other natural assets will be maintained.			
SE19	An environmental review committee will be established to involve the community in reviewing the environmental performance of the project throughout its life.			
SE20	A community reference group will be established to provide a point of liaison and			

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	communication with the local community during project construction and operations.			
SE21	Close dialogue with East Gippsland and Wellington Shire councils will be maintained to identify opportunities to encourage social interaction.			
SE22	Timely responses will be provided to any community complaints raised.	Define/specify "timely"	<p>Timely responses will be provided to any community complaints raised.</p> <p>A community complaints procedure will be developed and implemented.</p> <p>The complaints management system will be consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaint Management in Organisations and document:</p> <ul style="list-style-type: none"> • name of persons receiving complaint • name of person or stakeholder making the complaint • location, date and time of complaint. • nature of the complaint • actions taken to rectify • actions to avoid and minimise risk of reoccurrence • name of person(s) responsible for undertaking the required actions • communication of response to the complaint. 	<p>If necessary, this could be specified in the community engagement plan under the Work Plan, however the intent is clear.</p> <p>MFG suggestion adopted from SE26 below.</p> <p>This drafting is substantially the same as provided for the in Crib Point Gas Import Project ERS (as attached the IAC's report in that matter, Report 2, Appendix G – Recommended EPRs, SO04, p 215, pdf p 218)</p>

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SE23	The review and update the Lindenow and District Community Plan will be discussed with the East Gippsland Shire Council.			
SE24	Incentives will be provided for personnel to participate in local community activities and organisations.			
SE25	An employment code of conduct, pre-employment screening and fit for work procedures will be developed and implemented.		An employment code of conduct, pre-employment screening and fit for work procedures will be developed and implemented. Police checks will be conducted on potential project personnel.	MFG suggestion adopted from SE28 below.
SE26	A community complaints procedure will be developed and implemented.	Consolidate with SE22.	[deleted]	Agree. Delete this mitigation
SE28	Police checks will be conducted on potential project personnel.	Consolidate with SE25.	[deleted]	Agree. Delete this mitigation
SE29	A local employment and procurement guideline will be developed and implemented that gives preference to local residents and businesses.			
SE30	Incentives for new residents to buy locally will be established, working work with the Chamber of Commerce and local industry representative groups.			
SE31	Capacity and capability of the local community will be built through implementing training courses.			
SE32	Local landholders will be engaged on how land is rehabilitated to ensure compatibility with future stocking requirements.			

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SE33	Access will be maintained to the Fingerboards information board and a similar meeting point re-established.			
SE35	Tourism authorities, such as Business & Tourism East Gippsland and East Gippsland Marketing Inc., will be engaged regularly to identify economic and business opportunities for the region.			
SE36	Local businesses providing short-term accommodation will be engaged to discuss the timing of project works and potential peak periods.			
SE37	All agricultural landholders within 2 km of the project area will be consulted to understand where, when and how the local road network is used for the transport of machinery and stock so that strategies can be introduced to reduce potential impacts.	Change "2km" to "a minimum of 5km". A 2km limit is inappropriate for a rural area.	All agricultural landholders within 5 km of the project area will be consulted to understand where, when and how the local road network is used for the transport of machinery and stock so that strategies can be introduced to reduce potential impacts.	Agree.
SE38	Education and training providers will be consulted to identify suitable work placement applicants and provide opportunities to work on the project.			
SE39	Local applicants will be targeted for employment opportunities on the project, working with GROW Gippsland and other organisations, including to encourage applicants from disadvantaged or vulnerable groups.			
SE40	Opportunities will be provided for apprentices to work on the project and work with support networks such as the Australian	For clarity, consolidate with SE31, SE38 and SE39.		These are related albeit separate actions.

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	Apprenticeship Support Network to increase the likelihood that these apprentices will complete their program.			
SE41	Information sessions will be provided for potential employees, presentations given at career events and local schools, and careers counsellors will be engaged on job opportunities available on the project.			
SE42	Partnerships will be formed with local labour hire providers to fill short-term and contract jobs.			
SE43	A database of businesses based in Gippsland with services and supplies that could support construction, operations and closure of the project, such as Industry Capability Network (ICN) and Gippsland Business Connect, will be established and maintained.			
SE44	A range of people working on the mine (including construction, operations and closure) and/or featured roles on the mine will be profiled to give people information on the types of roles available and general competencies and skills that are required. This information will be distributed to education and training providers and advertised in local newspapers to assist people in getting job ready.			
SE45	Industry Capability Network (ICN) and GROW industry briefings and tender writing workshops will be provided.	Specify for what purpose.	Industry Capability Network (ICN) and GROW industry briefings and tender writing workshops will be provided to assist local suppliers navigate the	Agree unclear. Additional words added.

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			tender process for work associated with the mine.	
SE46	Skill shortages and training requirements will be identified to allow local people to gain qualifications within these areas. Ongoing training will be encouraged and supported through local partnerships with a view to keep abreast of the changing landscape of the mining industry.			
SE47	A labour force strategy will be prepared in consultation with local employment networks prior to construction commencing; including targeted strategies to manage potential impacts of project employment on other sectors.			
SE49	Pre-employment medicals and drug testing will be conducted through contracts with local hospitals or medical practices.			
SE50	Local health service providers, education providers and relevant support networks will be engaged with prior to construction, and on a six-monthly basis during construction and operations, to monitor and identify strategies to manage any potential peaks in demand.			
SE52	Targeted strategies will be implemented to reduce potential impacts on housing availability and affordability during construction; including for example working with East Gippsland and Wellington shires to source holiday homes that could be rented to workers during the construction period, and/or assisting community housing agencies in			

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	securing short-term accommodation for use as crisis accommodation during construction.			
SE53	A housing strategy will be developed in consultation with local housing support agencies prior to construction commencing to identify targeted strategies associated with accommodating the non-local workforce.			
SE54	Workers living in long-term accommodation will be encouraged to share with other project workers.			
SE55	Regular consultation will be conducted with local housing support agencies and house prices will be monitored.			
SE56	Transport contractors will be engaged about opportunities to adopt vehicle management systems which enable drivers to detect school buses.			
SE57	One-on-one meetings will be held with adjacent landholders on a regular basis to provide project updates and discuss any issues of concern.	Consolidate with SE03. Same comment as above applies. Clarify whether "adjacent residents" are immediately adjacent, or something else.	One-on-one meetings will be held with nearby landholders on a regular basis to provide project updates and discuss any issues of concern.	Agree with comment re. 'adjacent'. 'Nearby' not precise per se, however sufficiently captures the intent. Not consolidated.
SE58	Road works will be avoided on roads used to access areas such as Den of Nargun including Wy Yung Calulu Road and Friday Creek Road.			
SE59	Kalbar will work with GROW Gippsland to support local economic development, including: <ul style="list-style-type: none"> Developing an individualised GROW Gippsland Action Plan with an annual 			

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	<p>statement of outcomes for publication on the GROW Gippsland website.</p> <ul style="list-style-type: none"> • Sharing appropriate data to communicate regional procurement opportunities and track GROW Gippsland progress via a shared measurement framework. • Providing opportunities to grow local small to medium sized businesses – either as suppliers to our business, as partners, or as sub-contractors – to improve social outcomes. • Seeking opportunities to work with social enterprises and Aboriginal businesses in the region that deliver social outcomes as part of doing business, either directly or as part of our supply chain. • Collaborating with other GROW members to identify opportunities to work together to increase opportunities for people with barriers to work and support economic participation in our region. 			
SE60	Organisations such as the GLaWAC and GEGAC will be engaged on opportunities to encourage local Indigenous youth to conduct training and/or apprenticeships; employment and commercial opportunities on the project will also be discussed.			
SE61	A database will be maintained of people interested in working on the project through which upcoming opportunities can be proactively promoted to subscribers.			
SE62	A review of the existing capability of emergency services and potential future			

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	requirements for these services will be completed in consultation with East Gippsland and Wellington shires and emergency service providers.			
SE63	All tenders will be advertised in local newspapers and relevant procurement portals.			
SE64	Best practice, evidence-based health and wellbeing programs will be investigated in collaboration with East Gippsland and Wellington shires councils.			
Surface water				
		EPA Comment (from cover letter): It remains confusing which dams and what water many of these mitigation measures are referring to (ie mine contact water or clean stormwater). This has been a constant issue of confusion in the hearing. Recommend language in all mitigation measures is amended to be clear and consistent with the Work Plan		Agree. References are intended as follows “water storage dam” = freshwater storage dam “sediment ponds” = water management dams
SW01	Surface water will be extracted from the Mitchell River in line with the conditions, timings, and limits detailed in any licence issued by Southern Rural Water.			
SW02	The design and placement of infrastructure in the project area will consider potential for flow accumulation and increased flood risk, and associated prevention measures.			
SW03	Mine contact water from outside of the mine void, temporary TSF or process water dams that is retained in water management dams	Include detail on how this measure will be independently monitored and enforced	Mine contact water from outside of the mine void, or process water dams that is retained in water management dams	An independent technical review committee is proposed to provide independent oversight of water issues

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	<p>will be offset by releasing the same volume of water from the freshwater storage dam. Water will be released downstream of the project area (to the Perry River catchment) or directly to the Mitchell River via the pipeline from the freshwater storage dam.</p>	<p>Remove reference to TSF</p> <p>Add "in accordance with any development or operating licence issued by EPA.</p> <p>These releases should also be subject to the sub-plan referred to in SW-04 and cross referenced to the requirements of SE-44 and SW-45.</p>	<p>will be offset by releasing the same volume of water from the freshwater storage dam in accordance with any development or operating licence issued by EPA. Records must be kept of the quantity of mine contact water retained on site and the timing and quantity of freshwater releases.</p>	<p>on site. Reporting on compliance will also be required to the ERC.</p>
SW04A	<p>A surface water and groundwater sub-plan will be developed and implemented to minimise discharge of stormwater from construction areas. The sub-plan will include measures such as:</p> <ul style="list-style-type: none"> Directing surface runoff around or away from areas of land disturbance, stockpiles, embankments or nearby sensitive areas, where practicable. Capturing runoff (via surface water infrastructure) that comes into contact with construction areas and directing it to sedimentation dams. If required, flocculant treatment (i.e., alum, gypsum or hydrated lime) will be used to reduce suspended sediment levels in the stormwater. <u>[a PAM flocculant will be used]</u> Controlling erosion within gullies using primary and secondary sediment traps constructed at appropriate sites. Retaining water on site from the contributing catchment <u>via water management dams to approximately the 10% annual exceedance probability. [spill frequencies addressed more specifically in SW11 below]</u> 	<p>[EPA Comment: to be made clear if this only applies to the ancillary infrastructure area outside of the mine licence area? Or is this referring to the Water RTP? Additionally it seems to only apply to stormwater but then refers to the addition of flocculant which EPA was not aware of. It is confusing whether this is applying to mine contact water or clean stormwater]</p>	<p>A surface water and groundwater sub-plan Risk Treatment Plan will be developed and implemented to minimise impacts from mine contact water (including runoff from construction activities). The sub-plan will include measures such as:</p> <ul style="list-style-type: none"> Directing surface runoff around or away from areas of land disturbance, stockpiles, embankments or nearby sensitive areas, where practicable. Capturing runoff (via <u>water management dams</u>) that comes into contact with <u>disturbed</u> areas and directing it to <u>water management dams</u>. If required, flocculant treatment will be used to reduce suspended sediment levels. [a PAM flocculant will be used] Controlling erosion within gullies <u>prior to completion of water management dams</u> using primary and secondary sediment traps constructed at appropriate sites. 	<p>Yes this is referring to the Water RTP. Drafting changes added for clarity.</p>

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	<ul style="list-style-type: none"> Designing and profiling all site drains to reduce water flow velocity and erosion. 		<ul style="list-style-type: none"> Retaining water on site from disturbed catchments via water management dams [spill frequencies addressed more specifically in SW11 below] Designing and flow lines to reduce water flow velocity and erosion. 	
SW04B			The Construction Management Plan approved under the Incorporated Document will include best practice measures to minimise impacts associated with discharge of stormwater from construction areas.	Picks up stormwater management requirements for construction activities outside the mining licence area (i.e. within the Specific Controls Overlay area) as these are not captured by SW04A above.
SW05	Freeboards on the water storage dam, process water dam and sediment ponds will be maintained to allow for storm events and high rainfall periods, in accordance with relevant licence, permit and approval requirements.	EPA Comment: Unclear what is meant by “water storage dam” and “sediment ponds” are these the Freshwater Dam and Water Management Dams?]	Freeboards on the freshwater storage dam, process water dam and water management dams will be maintained to allow for storm events and high rainfall periods, in accordance with relevant licence, permit and approval requirements.	Agree. Drafting changes made accordingly.
SW06	Areas will be inspected for nearby stream bed instability prior to construction where infrastructure such as water storages and haul roads are to be installed on or close to a watercourse.			
SW07	If required, bed instability will be addressed through appropriately designed grade controls, such as the use of rock chutes.			
SW08	All stream bed instability areas within and immediately downstream of the project area will be inspected prior to, and annually, during construction to determine movement rates of			

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	unstable areas and potential risks posed to mine infrastructure.			
SW09	Surface water management infrastructure designed to capture runoff (and eroded soils) will be maintained until vegetation is fully established and stabilising the landscape.	Amend “stabilising the landscape” to “has stabilised the landscape”	Surface water management infrastructure designed to capture runoff (and eroded soils) will be maintained until vegetation is fully established and is stabilising the landscape.	Consider proposed amendment adequately addresses.
SW10	Stockpile slope angles will be constructed as low as practicable; and seeding or mulch materials and contour ripping will be used to stabilise stockpiles, prevent runoff and minimise erosion of soils.			
SW11	A daily water balance approach will be applied to dam design to achieve a probability of spillway activation of once per 100 years on average (1% average-exceedance probability) for Perry River catchments, and three times per 100 years on average (3.3% average-exceedance probability) for Mitchell River catchments.	<p>MFG has requested we change these figures but this cannot be read in their comments in tabled doc 602</p> <p>EPA Comment: Recommend clarifying what is the “daily water balance approach”. Is this a reference to SW32 and SW33?</p> <p>EPA have requested that once in 100 years on average 1% average-exceedance probability) for Mitchell River catchments.</p>		No evidence or material has been provided that the adoption of a 1% AEP of activation would result in materially improved outcomes / avoidance of harm relative to a 3% AEP of activation.
SW12	The design, construction and operation of the freshwater storage dam <u>and water management dams</u> will follow the Australian National Committee on Large Dams (ANCOLD) Guidelines on the Consequence Categories for Dams.			

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SW21	Rainfall runoff water from vehicle workshop floors, vehicle service areas and fuelling areas will be captured and directed to an interceptor trap to extract hydrocarbons, prior to treated water being discharged to the drain and sump network. The trap will be emptied of hydrocarbons routinely by a licensed contractor for disposal offsite at a licensed facility.			
SW22	The temporary TSF will be constructed using engineered cells with lined walls. Water will be managed using a decant system, sumps and drains to capture and reuse seepage.[TSF not pursued]			
SW23	Water will be recovered and reused where practicable (such as runoff from ore stockpiles and supernatant water from the temporary TSF and tailings areas within the mine voids).	Water will be recovered and reused where practicable (such as runoff from ore stockpiles and within the mine voids and Perry Gully).	Water will be recovered and reused where practicable (such as runoff from ore stockpiles and within the mine voids and Perry Gully).	Agreed.
SW24	Water running off undisturbed ground will be diverted around disturbance areas where practicable.	Remove "where practicable"		Not agreed. Experts at flooding and hydraulic conclave accepted practicability as a reasonable constraint, provided it was defined. The EP Act 2017 defines practicability.
SW28	Surface water will be managed through an adaptive management strategy that includes trigger levels for surface water quantity and quality that determine when remedial action is required (in consultation with affected stakeholders).	Redraft to comply with the new EP Act. This measure currently adopts a reactive, rather than a preventative approach to impact on surface water quality and quantity. Where does this management strategy fit? Who will approve / be consulted		Firstly, trigger levels do not imply an opportunity to 'pollute up to the limit' rather they provide a warning for action and are usually set at lower levels than a 'limit'. Secondly, characterisation of this provision as inconsistent with the EP Act 2017 is not accepted. Other measures seek to protect water quality. Adaptive

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				<p>management remains necessary to detect and respond to unanticipated changes.</p> <p>Trigger levels will be adopted in the Water Risk Treatment Plan and are also likely to be part of the approach to meeting requirements under a development licence issued by EPA under the EP Act 2017</p> <p>The RTP will be approved by ERR, in consultation with EPA. The groundwater licence will be approved by SRW, who will monitor compliance with its conditions.</p>
SW30	Appropriate outlet scour protection will be placed on all stormwater outlets, chutes, spillways and slope drains to dissipate flow energy and minimise risk of soil erosion.			
SW32	Mine contact water management dams within the Perry River catchment will be emptied as a priority over those located in the Mitchell River catchment to reduce potential water quality impacts from a spillway discharge to the Perry River catchment.	Recommend adding what will trigger emptying the Perry River catchment mine contact water management dams (eg during successive storm events and/or when freeboard within dams is less than 30mm and/or high rainfall events are forecast which may lead to water management dams capacities being exceeded	Pumping from mine contact water management dams will commence when any dams reach a trigger 10% of the dam's capacity. Pumping operations would occur at a discrete number of dams at any one time (ie 1 or 2 dams, not all dams simultaneously), with the dams selected for dewatering assessed daily on the basis of location and stored volume. From the dams triggered, those in the Perry River catchment will be emptied as a priority over those located in the Mitchell River catchment. Amongst dams within the same catchment, dams	Kalbar has consulted with EMM and provided more detail in updated mitigation, as requested.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
			filled to a higher percentage of total volume would be dewatered with higher priority.	
SW33	<p>If during successive storm events, water management dams are required to be drawn down at a rate greater than can be achieved by the process water demand, mine contact water will be treated at a rate of 24 ML/day prior to discharge to the freshwater storage dam. Mine contact water will be treated to meet licence requirements prior to discharge offsite.</p>	<p>Add contingency for circumstances where a rate exceeding 24ML/day required</p> <p>If during successive storm events water management dams are required to be drawn down at a rate greater than can be achieved by the process water demand, mine contact water will be treated at a rate of up to 24 ML/day in the Dissolved Air Flotation plant (DAF) prior to discharge to the freshwater storage dam. Mine contact water will be treated to meet development or operating licence requirements prior to discharge offsite.</p>	<p>If water management dams are required to be drawn down at a rate greater than can be achieved by the process water demand, mine contact water will be treated at a rate of up to 24 ML/day in the Dissolved Air Flotation plant (DAF) prior to discharge to the freshwater storage dam. Mine contact water will be treated to meet development or operating licence requirements prior to discharge offsite.</p>	<p>EPA change agreed.</p> <p>24ML/day is the maximum capacity of the DAF. In the event this is exceeded, spills would be expected. Dams would be designed to reduced probability of spills as above.</p>
SW34	<p>Ephemeral drainage gullies will be revegetated in areas downstream of future mining activities prior to operations commencing to increase landscape stability and specifically mitigate:</p> <ul style="list-style-type: none"> • Effects of a moderate increased flow velocity downstream of the mine operations and the final landform. • Potential effects of tunnel erosion downstream of the mine void boundary where soil treatment is not planned. • Effects of sediment starvation by reducing sediment transport and encouraging deposition. 			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
SW35	An adaptive management strategy will be implemented, based on water quality and quantity monitoring results, to determine whether offset water that would typically be returned to the Mitchell River may be directed to ephemeral drainage gullies in a controlled manner.			
SW36	Aquatic and riparian vegetation will be established in minor waterways between the water management dams and major receiving waterways to reduce potential water quality impacts from release of mine contact water.			
SW37	Natural surface water drainage courses will be re-routed to avoid post-mining landforms, where practicable.	Delete where practicable		Not agreed. Experts at flooding and hydraulic conclave accepted practicability as a reasonable constraint, provided it was defined. The EP Act 2017 defines practicability.
SW38	Surface water ponding on post-mining landforms will be avoided, where practicable, through appropriate slope profile design and topsoil treatments.			
SW39	The downhill side of containment structures, such as surface water drains and road batters, will undergo soil conditioning and be spread with topsoil and revegetated as soon as practicable to minimise erosion and sediment laden runoff.			
SW40	Sediment traps and dams will be cleaned at regular intervals, and following storm events and high rainfall events, to maintain the efficiency of the infrastructure.			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
SW41	Riparian vegetation will be retained where possible to maintain aquatic ecosystem habitat and prevent sedimentation of watercourses.			
SW42	Access tracks and roads will be regularly maintained and clearly marked to prevent establishment of secondary tracks and reduce soil erosion; existing roads will be used where practicable.			
<u>SW43</u>	<u>Surface water monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan).</u>	Surface water monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan) and any development and operating licence issued by EPA.	Surface water monitoring and management will be carried out in accordance with an approved Water Risk Treatment Plan (forming part of the Work Plan) and any development and operating licence issued by EPA.	Agreed.
<u>SW44</u>	<u>Water discharges will be undertaken in accordance with conditions imposed in a development licence issued by EPA.</u>	Water discharges will be undertaken in accordance with conditions imposed in a development and operating licence issued by EPA.	Water discharges will be undertaken in accordance with conditions imposed in a development and operating licence issued by EPA.	Agreed.
<u>SW45</u>	<u>In order to limit the risk of impacts arising due to nitrogen or phosphorus in discharged water, treated water from the Dissolved Air Flotation (DAF) circuit will not be released to the Mitchell River when daily Mitchell River water flows are less than 50 ML/day. [In response to recommendations made by Jarrah Muller in TN013 No.53]</u>	In order to limit the risk of impacts arising due to nitrogen or phosphorus in discharged water, treated water from the Dissolved Air Flotation (DAF) circuit will not be released to the Mitchell River when daily Mitchell River water flows are less than 50 ML/day or as specified in the development and operating licence issued by EPA. [In response to recommendations made by Jarrah Muller in TN013 No.53] It is unclear how this fits with SW33. If the water is required to be discharged in	In order to limit the risk of impacts arising due to nitrogen or phosphorus in discharged water, treated water from the Dissolved Air Flotation (DAF) circuit will not be released to the Mitchell River when daily Mitchell River water flows are less than 50 ML/day or as specified in the development and operating licence issued by EPA.	Agreed. SW33 operates in circumstances of 'successive storm events'. Given the catchment of the Mitchell River, it is not anticipated that low flows would be occurring at the same time as successive storm events.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
		anticipation of a flood event, while flows are low this would inhibit the indicated benefits of removal of water from the site anticipation of flood events.		
SW46	<u>The DAF plant will be tested at least to annually confirm operability during low rainfall periods when it is not in active use.</u> <u>[In response to recommendations made by Jarrah Muller in TN013 No.58]</u>	The DAF plant will be tested at least to annually confirm operability during low rainfall periods when it is not in active use or as specified in the development and operating licence issued by EPA. [In response to recommendations made by Jarrah Muller in TN013 No.58]	The DAF plant will be tested at least to annually confirm operability during low rainfall periods when it is not in active use or as specified in the development and operating licence issued by EPA.	Agreed
SW47	<u>In preparation for the licence application to SRW and the Development Licence Application, Kalbar in consultation with key stakeholders will assess potential impacts on farm dams and where a potential impact is identified, identify options for delivery mechanisms of offset water.</u>	In preparation for the licence application to SRW and the development licence application , Kalbar in consultation with key stakeholders will assess potential impacts on farm dams and where a potential impact is identified, identify options for delivery mechanisms of offset water.	In preparation for the licence application to SRW Kalbar in consultation with key stakeholders will assess potential impacts on farm dams and where a potential impact is identified, identify options for delivery mechanisms of offset water.	Agreed
SW48	<u>A site water balance will be maintained. It will incorporate weather data, monitoring and all material sources of loss and input including seepage and evaporation from tailings.</u>	A site water balance will be maintained. It will incorporate weather data, monitoring and all material sources of loss and input including seepage and evaporation from tailings.		Not agreed
SW49 SW 50		Add new mitigation measures SW # - Undertake dam failure impact assessment SW # -Model flooding of Perry Gully at various stages Add new mitigation measure SW# - Revised flood modelling will be prepared to inform detailed design and	SW49: Undertake dam failure impact assessment in accordance with ANCOLD guidelines. SW50: Revised flood modelling, including modelling of Perry Gully, will be prepared to inform detailed design	There is no evidence of any material risk of 'catastrophic' failure of the centrifuges and it is not clear that the EPA has the power to regulate a piece of plant that has no direct environmental impacts. To the extent the centrifuges poses a risk to the health of workers, this must be addressed under OHS legislation.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
		<p>will be revised annually to inform future mine works and operations.</p> <p>SW# - A plan to reduce the risk of catastrophic failure from the centrifuges will be implemented and must include measures to avoid adverse impacts to the environment and human health in the event of catastrophic failure.</p>	<p>and will be revised as needed to inform future mine works and operations.</p>	
<p>SW51 (former TE26)</p>			<p>Bunding for the fuel storage area (fuel farm) will be in accordance with Australian Standard 1940:2017 (Standards Australia, 2017)⁵. The capacity (i.e., bund height), storage, stormwater control and maintenance, and operation of banded areas will comply with EPA bunding guidelines (Environment Protection Authority Victoria, 2015)⁶.</p> <p>If a leak or spill occurs, contaminated soil will be excavated and disposed of by a qualified specialist at a licenced facility.</p>	<p>Moved from TE26. (original comment by MFG in TE26 <i>This measure should be move to somewhere more appropriate (ie not biodiversity)</i> Update as per Water RTP comparison table, Tabled Document 600</p>
<p>SW52 (former TE25)</p>			<p>Strategies will be implemented during construction and operations to control sediment runoff (and reduce the potential for increased turbidity in</p>	<p>Moved from TE25 as more appropriate to be grouped with SW measures.</p>

⁵ Standards Australia. 2004. AS 1940:2004. The Storage and Handling of Flammable and Combustible Liquids. Standards Australia. Sydney, New South Wales.

⁶ Environment Protection Authority Victoria. 2015. [Bunding Guidelines: Liquid Storage and Handling Guidelines](#) Publication 347.4-1698 Environment Protection Authority Victoria, Southbank, Victoria.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
			downstream aquatic habitats) and reduce the potential for spills.	
SW53			Wastewater from ablutions and the office will be treated with a wastewater treatment system. There will be sufficient capacity to cater for the operations workforce and visitors.	Update as per Water RTP comparison table, Tabled Document 600
SW53			All waste excluding septic waste will be removed from site and disposed of by licensed contractors.	Update as per Water RTP comparison table, Tabled Document 600
SW53			Waste hydrocarbons will be stored in suitable containers for removal from the mine site for disposal at either an EPA-approved hydrocarbon waste site or a recycling depot.	Update as per Water RTP comparison table, Tabled Document 600
			Permanent and long-term drains and bund walls will be topsoiled and vegetated with suitable vegetation as soon as possible	Update as per Water RTP comparison table, Tabled Document 600
Terrestrial and aquatic biodiversity				
TE01	Appropriate approvals and permits will be obtained prior to any vegetation removal.	For transparency, specify exactly what the appropriate approvals and permits are	Prior to any vegetation removal, a native vegetation management plan and offset management plan must be prepared and approved by DELWP.	Agreed.
TE02	Prior to clearing, <u>artificial hollows and nest boxes</u> will be <u>created</u> / installed in areas of potential habitat adjacent to the project footprint to compensate for the removal of hollow-bearing trees and impacts on hollow-dependant fauna known or potentially present	Delete reference to powerful owls which are known to require very large hollows. That is this measure does not mitigate the impact on Powerful Owls	Prior to clearing, artificial hollows and nest boxes will be created / installed in areas of potential habitat adjacent to the project footprint to compensate for the removal of hollow-bearing trees and impacts on hollow-dependant fauna known or potentially present (yellow-bellied sheathtail bat, powerful owl,	There is no evidence that salvaged or artificial hollows cannot provide habitat for Powerful Owls, if present. See MFG comment below to consolidate from TE21 – this change made

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	(yellow-bellied sheathtail bat, powerful owl, masked owl and eastern pygmy possum).		masked owl and eastern pygmy possum). Salvaged or artificial hollows will be installed (under the supervision of an ecologist) in retained vegetation adjacent to the project footprint where hollow-bearing trees are lost.	
TE03	Appropriate offsets will be secured in accordance with state and Commonwealth legislation and policy.			
TE04	The extent of clearance and buffers around no-go areas will be clearly defined to avoid disturbance within areas to be retained.	No-go zones should be identified where possible in these measures to include Saplings Morass, the areas surrounding the Ferndale Road sidings and sensitive gullies not included in the mining area.	The biodiversity RTP and Construction Management Plan (under the Incorporated Document) must identify no go zones. These zones must include, where practicable: <ul style="list-style-type: none"> • Saplings morass; • Areas surrounding the Fernbank Rail siding; • Gullies containing native vegetation with a strategic biodiversity score of 0.6 or more not included in the mining area. The extent of clearance and buffers around no-go areas will be clearly defined to avoid disturbance within areas to be retained.	Agree. Changes proposed.
TE05	Access tracks and roads will be clearly marked to prevent establishment of secondary tracks and disturbance to adjacent vegetation; existing roads will be used where practicable.			

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TE06	Access tracks expected to experience heavy traffic will not be located adjacent to areas of high ecological sensitivity (comprising areas of the Gippsland Red Gum Grassy Woodland and Associated Native Grassland ecological community and 11 EVCs (refer to Table 9.3); hollow-bearing trees; known occurrences and identified potential habitat for swamp everlasting, dwarf kerrawang, gaping leek-orchid, slender wire-lily, blue mat-rush, slender tick-trefoil and sandfly zieria; identified habitat for the giant burrowing frog and Australian grayling; and downstream waterways and wetlands).			
TE07	Parking areas, stockpiles, machinery depots and site buildings will be located in areas of low ecological value (such as blue gum plantations).			
TE08	Large trees will be retained adjacent to the project footprint and clearly marked; Tree Retention Zones will be identified and marked.			
TE09	Areas will be revegetated and managed in accordance with the rehabilitation sub-plan to increase overall native vegetation cover in the project area, native vegetation patch size and habitat connectivity, and to exclude stock from such areas.			
TE10	Disturbed areas will be revegetated to recreate pre-existing vegetation communities, where agreed and practicable, to increase habitat value and visual amenity while			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	reducing the likelihood for weeds to establish and proliferate, and for soil erosion to occur.			
TE11	Revegetation of mined areas will include: <ul style="list-style-type: none"> • Planting locally occurring native shrubs, trees and groundcover plants, selected in consultation with DELWP, to recreate the target vegetation community. • Including rocks, logs, dead trees, and stumps in the restoration and rehabilitation works to provide fauna habitat. • Maintaining plantings in accordance with the rehabilitation sub-plan. • Managing weeds and pest animals. 			
TE12	Staff/contractor inductions will incorporate an environmental component signed off by a suitably qualified representative (e.g., site environmental advisor/specialist).			
TE13	Sensitive areas, such as those with fauna habitat, will be cleared of fauna (as far as practicable) by a suitably trained ecologist or other qualified environmental specialist prior to construction and operations activities commencing.			
TE14	Pre-clearing activities will remove the understorey and smaller non-hollow-bearing trees to disturb fauna and encourage them away from the clearing area.			
TE15	Animals disturbed during clearing works will be relocated, with appropriate authorisation under the <i>Wildlife Act 1975</i> .			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
TE16	All trenches will have escape ramps to avoid fauna entrapment and allow animals to escape.			
TE17	Appropriate speed-limits will be applied in areas containing remnant native vegetation to reduce the risk of fauna mortality from vehicle strike.	Specify appropriate speed limits		Speed limits will be specified in FIMLP.
TE18	Traffic movements will be minimised during the night, dusk and dawn periods in remnant native vegetation areas.			
TE19	Hollow-bearing trees will be retained around project infrastructure, where construction permits.			
TE20	Pre-clearance surveys will be carried out by a competent environmental professional in all areas of vegetation to be cleared that have large trees (as defined in the Guidelines for the removal, destruction or lopping of native vegetation, 2017) or that are likely to support flora or fauna species listed under the EPBC Act and/or FFG Act.			
TE21	Salvaged or artificial hollows will be installed (under the supervision of an ecologist) in retained vegetation adjacent to the project footprint where hollow-bearing trees are lost.	Consolidate with TE02	[Delete]	Agreed. Consolidated in TE02 above.
TE22	Isolation and fragmentation of habitat will be minimised when planning activities with potential to remove vegetation.			
TE23	Appropriate erosion and sediment control strategies will be implemented to prevent			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	gully erosion in areas adjoining the project footprint.			
TE24	No-go zones with buffers will be established around waterbodies adjoining the project footprint to prevent any disturbance to the biodiversity values present within these areas. The width of buffer areas will be determined on a case-by-case basis.			
TE25	Strategies will be implemented during construction and operations to control sediment runoff (and reduce the potential for increased turbidity in downstream aquatic habitats) and reduce the potential for spills.		[deleted – moved to SW52]	See comment immediately below.
TE26	Bunding for the fuel storage area (fuel farm) will be in accordance with Australian Standard 1940:2004 (Standards Australia, 2004) ⁷ . The capacity (i.e., bund height), storage, stormwater control and maintenance, and operation of banded areas will comply with EPA bunding guidelines liquid storage and handling guidelines (Environment Protection Authority Victoria, 20152018) ⁸ .	This measure should be move to somewhere more appropriate (ie not biodiversity)	[deleted – moved to SW51]	Agreed. New SW51 created. (whilst this measure could sit with a range of areas – e.g., groundwater, surface water etc., grouping with surface water appears satisfactory)
TE27	The design, construction, monitoring and rehabilitation of the temporary TSF will comply with the Department of Economic Development, Jobs, Transport and Resources: Technical Guideline Design and Management of Tailings Storage Facilities			

⁷ Standards Australia. 2004. AS 1940:2004. The Storage and Handling of Flammable and Combustible Liquids. Standards Australia. Sydney, New South Wales.

⁸ Environment Protection Authority Victoria. ~~20152018. Bunding Guidelines. Liquid Storage and Handling Guidelines~~ Publication ~~347.1.1698~~ Environment Protection Authority Victoria, Southbank, Victoria.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	(Department of Economic Development, Jobs, Transport and Resources, 2017)⁹.			
TE27	<p><u>Additional targeted surveys for specified species, including the Giant Burrowing Frog (active searching, installation of song meters over multiple days after significant rainfall) as part of approval conditions recommended through the EES assessment process.</u></p> <p><u>[Partially in response to recommendations made by Aaron Organ in TN013 No.6 and partially in response to the evidence of Brett Lane regarding changes to the advisory list]</u></p>	<p>No time is nominated for this activity. It should occur as soon as possible if an EES were approved and before the approval of the relevant sub-plan.</p>	<p>Additional targeted surveys for specified species, including the Giant Burrowing Frog (active searching, installation of song meters over multiple days after significant rainfall) as part of approval conditions recommended through the EES assessment process.</p> <p>Surveys should be undertaken as soon as practicable following the Minister's Assessment, having regard to any available information on appropriate timing of surveys for relevant species (e.g., flowering periods, breeding periods, etc.) and in any event prior to the submission of the Native Vegetation Management Plan, Biodiversity RTP or CEMP, as relevant.</p>	<p>The EES is not a document to be approved, but the intent is agreed.</p>
TE28	<p>The biodiversity sub-plan will incorporate fauna salvage and relocation/translocation procedures.</p>	<p>Specify whether the biodiversity sub-plan is the same as the risk treatment plan for biodiversity</p>	<p>Plans for activities which have the potential to adversely affect fauna will incorporate (either expressly or by reference) salvage and relocation/translocation procedures.</p>	<p>Agreed in part.</p> <p>The biodiversity RTP is only applicable to land in the Project Area. Activities outside the Project area have the potential to impact on fauna and should incorporate appropriate protective measures (the CMP required under the</p>

⁹Department of Economic Development, Jobs, Transport and Resources. 2017. Technical Guideline, Design and Management of Tailings Storage Facilities. Department of Economic Development, Jobs, Transport and Resources. Earth Resources Regulation. April 2017.

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
				ID is expressly required to include measure to minimise impacts on fauna).
TE29	Use of underpasses/culverts and overpasses will be investigated to allow ground dwelling species and arboreal marsupials to move between areas of native vegetation that are bisected or crossed by access roads and linear infrastructure.			
TE30	All remaining areas of ecological value near the project area and infrastructure options area will be managed under the supervision of a suitably qualified ecologist to enhance habitat features and compensate for those lost; including installing nesting boxes and logs, and other large woody debris relocated from cleared areas.			
TE31	Fauna escape features and refuges (including ramps and damp sandbags) will be provided where remnant patches of vegetation are adjacent to construction and operational areas.	Consolidate with TE29		Not agreed. Although similar, TE29 and TE31 address different risks (TE29 is directed to maintaining connectivity across landscapes; TE31 is directed to ensure that construction features allow escape).
TE32	Any water and other suppressants (applied to reduce dust) will not directly enter nearby waterbodies or remnant native vegetation.			
TE34	Construction machinery, vehicles and pedestrians will be confined to formed tracks and designated areas, where practicable.			
TE35			Excessive noise or vibration emitting equipment or machinery will be located away from sensitive ecological values. Where relocation is not feasible, control	Updated as per Biodiversity Comparison Table Tabled Document 597

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
			measures such as mufflers or baffles will be employed.	
TE36	Lighting systems will be designed and used in a way that minimises potential impacts on fauna species, particularly nocturnal species (mammals such as possums, gliders and bats, and birds); including, where applicable, use of light shields and directional lighting to avoid interference with foraging or roosting activities.			
TE37	Project infrastructure and activities will be micro-sited to avoid threatened flora species and native vegetation; including for example, if vegetation of high quality is identified during pre-clearance searches, where practicable, the location will be adjusted to avoid it.			
TE38			Limits of clearing sensitive areas (e.g., listed species habitat) will be marked to avoid unnecessary vegetation and habitat removal.	Updated as per Biodiversity Comparison Table Tabled Document 597
TE39	All trenches and other excavations will be checked daily and any trapped animals removed by a competent environmental professional before works commence.			
HZ-TE41	Areas used for handling and/or storage of concentrated flocculent and hazardous materials will be bunded appropriately to avoid spilled or stored material reaching the surrounding environment and will contain spill response equipment.			Hazard 'HZ' identifier added
HZ-TE42	Mobile plant and vehicles will be maintained regularly and in accordance with			Hazard 'HZ' identifier added

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	manufacturers' specifications; including inspections for leaks and spills.			
HZ-TE44	If a leak or spill occurs, contaminated soil will be excavated and disposed of by a qualified specialist at a licenced facility.	TE42 and TE44 should be moved to a more appropriate section of the document (ie in a section dedicated to hazards and spills rather than biodiversity)		Agree in principle. To avoid significant structural changes to this version of the document, an identifier has been added 'HZ'. This also retains ability to see what area the hazard measure was originally linked – e.g., terrestrial ecology, rehabilitation, surface water etc.
TE45	Biosecurity procedures will be implemented to avoid introducing and spreading weeds, pests and diseases into the project area and surrounds.			
TE46	Disturbed areas will be revegetated to increase habitat value and visual amenity while reducing the likelihood of weeds to establish and proliferate.			
TE47	Revegetation of mined areas will include management of weeds and pest animals.			
TE48	Currently known extant populations of gaping-leek orchid will be avoided, and project activities will be designed to minimise potential for indirect impacts to these populations.			
TE49	Construction machinery will not be permitted to access Cowells Lane to avoid potential indirect impacts to swamp everlasting, native vegetation and low-lying areas within the infrastructure options area.			
TE50	Progressive rehabilitation will aim to increase the extent of native vegetation cover and habitat connectivity within and adjoining the			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	project area prior to clearing and fragmenting habitat in other areas.			
TE51	Faunal habitat features, such as logs and hollows, will be included as part of habitat restoration works. <u>Features will be implemented in accordance with the Fauna Impact Mitigation and Landscape Plan.</u>			
TE52	Populations of listed or rare native plant species from EVCs within the project area will be increased through targeted recovery programs.			
TE53	A detailed flora and fauna survey will be undertaken in accordance with relevant state and Commonwealth legislative requirements in the unsurveyed portion of the project area, located in the northwestern corner, prior to commencement of ground disturbance.			
TE54	Pre-clearance searches for fauna will be conducted by a competent environmental professional prior to vegetation removal.			
TE55	Construction activities will be delayed if significant weather events are forecast.			
TE56	Felling of large hollow-bearing trees will be supervised by a competent environmental professional.			
Traffic and transport <u>[Note: The EES assessed three product (HMC) transport options.</u> <u>Option 1 – haul via private road to a new siding at Fernbank East;</u>				

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	<p><u>Option 2 – truck transport to the Bairnsdale (Fenning) siding (either via Racecourse Road or via Main Street / Collins Street / Bosworth Road):</u></p> <p><u>Pre-Avon River bridge - Truck transport to a Port via Princess Highway.</u></p> <p><u>Kalbar no longer pursues the Pre-Avon River Bridge option. Option 1 and 2 continue to form options to be assessed. Some mitigations are specific to either Option 1 or 2 and are differentiated accordingly.]</u></p>			
TT01	<p><u>Option 2:</u> The intersection of Princes Highway and Lindenow-Glenaladale Road will be upgraded to roundabout control to increase road safety and avoid excessive slowing of traffic due to B-doubles turning right from Lindenow-Glenaladale Road onto Princes Highway (if required under the Bairnsdale rail and road and rail scenarios).</p>	<p>B-doubles would be required to turn left onto M1, not right.</p>	<p><u>Option 2:</u> The intersection of Princes Highway and Lindenow-Glenaladale Road will be upgraded to roundabout control to increase road safety and avoid excessive slowing of traffic due to B-doubles turning left from Lindenow-Glenaladale Road onto Princes Highway (if required under the Bairnsdale rail and road and rail scenarios).</p>	<p>Correct. Change made.</p> <p>Note “and road and rail scenarios” deleted.</p>
TT02	<p>A traffic management plan will be prepared in accordance with industry standards to address general driver awareness and safety for the project workforce and the inherent risks associated with driving; the plan will be updated as required based on annual driver surveys of the project workforce and in response to recommendations from relevant incident investigations.</p>			
TT03	<p>Standard road lighting will be provided at the following intersections to increase the visibility on approach to the intersection and improve safety:</p>	<p>It is noted that if an underpass is provided in accordance with Mr Hunt’s evidence it is likely that the lighting requirements would be reduced – amendments would depend upon the IAC’s recommendations.</p>		<p>Noted and agree.</p> <p>Correct, only a part of Racecourse-Rd is not B-double approved.</p>

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	<ul style="list-style-type: none"> Fernbank-Glenaladale Road and Bairnsdale-Dargo Road (if required under the road and rail scenario). <u>(Both Options, noting that this lighting also required for construction phase)</u> Lindenow-Glenaladale Road and Princes Highway. <u>(Option 2)</u> Fernbank-Glenaladale Road and the private haulage road <u>(Option 1)</u>. Racecourse Road and Princes Highway (if required under the Bairnsdale rail scenario) <u>(Option 2)</u>- <p><u>[see evidence statement of Paul Carter, pp 28-29 which explains these changes]</u></p>	<p>Note Racecourse-Rd is not B-double rated. Suggest amendment.</p>		
TT04	<p>Flag lighting (a small number of lights to indicate the presence and location of an intersection without providing lighting to any particular level) will be provided at the following intersections to increase visibility on approach and improve safety:</p> <ul style="list-style-type: none"> Fernbank-Glenaladale Road and <u>Bairnsdale-Dargo Road, Princes Highway.</u> <u>[evidence statement of Paul Carter, p 42]</u> Fernbank-Glenaladale Road and private haulage road. <u>(Option 1 only) [evidence statement of Paul Carter, p 29]</u> 			
TT05	<p>Prior to the movement of oversize and overmass vehicles:</p> <ul style="list-style-type: none"> 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 			

Identifier	Mitigation measure	Submitter comments / drafting	Kalbar proposed mitigation drafting	Kalbar comment
	<p>crossing infrastructure, and then plan the route accordingly.</p> <ul style="list-style-type: none"> A permit will be obtained from the relevant road authority to gain access to any roads not approved for oversize and overmass vehicles. [this will be required, as noted in Mr Carter's evidence at p 21 and will likely involve requirements for escort / pilot vehicles however this is a legal requirement not a mitigation] 			
TT06	Oversize and overmass vehicle movements will avoid peak hours and school bus operation hours.			
TT07	A channelised right-turn treatment will be provided at the new intersection of Bairnsdale-Dargo Road and the diverted section of Fernbank-Glenaladale Road north of Bairnsdale-Dargo Road.			
TT10	Diverted and realigned roads will be constructed to the same or better standard as existing roads.	Add: All roads and or surrounding or road related infrastructure altered, diverted or realigned will be constructed to a standard approved by the relevant road authority at no cost to the relevant Council or Secretary to DoT.	Diverted and realigned roads will be constructed to the same or better standard as existing roads. All roads and or surrounding or road related infrastructure altered, diverted or realigned will be constructed to a standard approved by the relevant road authority at the Proponent's costs..	Agree. Slight drafting change.
TT11	New intersections, including new intersections that have been created by diverted roads, will be constructed to Austroads standards.			
TT12	The no overtaking line marking west of the intersection of Lindenow-Glenaladale Road			

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	and Bairnsdale-Dargo Road will be extended to just west of Lindenow-Glenaladale Road to reduce the risk of vehicles trying to overtake B-doubles on the approach to the crest of the hill near the intersection.			
TT13	Boom gates will be installed at the level crossing on Lindenow-Glenaladale Road in accordance with AS 1742.7 Manual of uniform traffic control standards, Part 7 Railway crossings.			
TT14	Rumble or shaker strips will be provided on approach to the new Fingerboards roundabout and on the Fernbank East rail siding access road to prevent mud tracking onto the public road network.			
TT15	The proposed new Fingerboards roundabout will be designed so that the angle between each leg is approximately equal, such that the legs are distributed generally evenly around the roundabout.			
TT17	Where roadworks require closure of roads, alternative routes will be identified in consultation with East Gippsland Shire Council and Department of Transport to provide the public with adequate access at all times.			
TT18	New intersections will be constructed such that through-traffic movements are maintained to the satisfaction of the responsible road authority. Temporary traffic signals will be used as required to safely control traffic flow through the work site.			

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TT19	Roadworks and temporary traffic management on the public road network will be implemented in accordance with a traffic management plan submitted to and approved by the responsible road authority prior to commencement of works.			
TT20	Emergency services will be advised where significant delays are expected and contact details for the operations manager will be provided to allow emergency services to arrange access across an area of delay.			
TT21	<u>Option 2</u> : Roadworks affecting the Princes Highway, if required under the Bairnsdale rail scenario or road and rail scenario, will be avoided during peak periods, including peak hours and peak times such as school and public holidays, wherever practicable.	Delete "wherever practicable"	Option 2: Roadworks affecting the Princes Highway, if required under the Bairnsdale rail scenario will be avoided during peak periods, including peak hours and peak times such as school and public holidays, wherever practicable.	Note deletion of "or road and rail scenario" The intent of the mitigation including the words "wherever practicable" is clear. This places a very strong preference for any roadworks to be outside the relevant times, however it would be incorrect to state this as an absolute rule.
TT22	A dedicated travel plan will be prepared that The construction environmental management plan and environmental management plan will include measures to encourage personnel to travel to and from the mine site by bus, or to carpool. <u>[evidence statement of Paul Carter, p 29]</u>			
TT23	<u>Option 2</u> : Based on the outcomes of pedestrian surveys at Lindenow South, <u>which must be conducted prior to commencement with results utilised in the Traffic and Transport Management Plan approved under the Incorporated Document</u> , B-double operating times will be limited (i.e., avoiding			

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	peak times), speed limits will be revised and driver training and familiarisation will be undertaken as required to minimise risks to pedestrian safety within the town.			
TT24	<p>Measures developed in consultation with the Department of Transport will be implemented to minimise the risk of B-doubles queuing onto the level crossing at Maryvale rail siding, such as shorter cycle times, leading and lagging right turn phasing and coordinating signals with a detector on the rail line upstream of the crossing (if required under the road and rail scenario).</p> <p>[Pre-Avon River Bridge option no longer pursued]</p>			
TT25	<p><u>Option 2:</u> Heavy mineral concentrate haulage via Lindenow South will be scheduled to avoid school bus routes during times of school bus movements and school pick-up and drop-off times (i.e., 7:30:00 a.m. to 9:00-9:30 a.m. and 3:20:30 p.m. to 5:00:00 p.m. on school days) [evidence statement of Paul Carter, p 29]</p>			
TT26	Where any pavement damage occurs and requires immediate treatment, remedial pavement works will be undertaken as agreed with the responsible road authority.			
TT28	<u>Option 1:</u> For B-double movements to Fernbank East rail siding, an operational overlay to the traffic management plan will be introduced that requires B-doubles to stop			

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	before crossing Chettles Road and Cowells Lane.			
TT29	<u>Option 2:</u> For B-double movements to Bairnsdale rail siding, shoulders will be widened, and line marking will be reinstated on the Racecourse Road bend to reduce the potential for rear end collisions (if required under the Bairnsdale rail scenario).			
TT30	<u>Option 2:</u> For B-double movements to Bairnsdale rail siding, shoulders will be widened, and line marking will be reinstated on the Forge Creek Road bend to reduce the potential for crashes (if required under the Bairnsdale rail scenario).			
TT31	<u>Option 2:</u> For B-double movements to Bairnsdale rail siding, the intersection of Princes Highway and Racecourse Road will be upgraded to roundabout control to increase road safety and avoid excessive slowing of traffic due to B-doubles turning right from Princes Highway onto Racecourse Road (if required under the Bairnsdale rail scenario).			
<u>TT32</u>	<u>Option 1: Upgrade of the Fernbank-Glenaladale Road / Private Haulage Road intersection to a signalised control with advanced warning signs upstream of the intersection location and consideration of appropriate spacing between intersections to reduce the risk of high-speed vehicle collisions and providing awareness of the hazard. [evidence statement of Paul Carter, p 28.]</u>	As acknowledged by Kalbar this drafting would require amendment if the underpass option were preferred.		Agree.

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	<p><u>[Note that the ultimate treatment will need to be determined by the responsible road authority, and as per Mr Hunt's evidence, could extend to use of an underpass rather than signalised crossing. Both Mr Hunt and Mr Carter gave evidence that the final intersection treatment would need to be determined by the road authority. However, at this stage, Kalbar accepts Mr Carter's evidence that a signalised intersection is required.]</u></p>			
<p><u>TT33</u></p>	<p><u>Option 1: Road sealing of ~20-30m either side of the Private Haulage Road crossing of Chettles Road and Cowells Lane. [evidence statement of Paul Carter, p 28]</u></p>			
<p><u>TT34</u></p>	<p><u>Option 2: Seal the Bairnsdale (Fenning) Rail Siding access road. [evidence statement of Paul Carter, p 28]</u></p>			
<p><u>TT41</u></p>	<p><u>The project emergency preparedness and response plan will include provisions for managing transport accidents and related emergency events.</u></p>			
<p>Visual and landscape</p>				
<p>VL01</p>	<p>Visual bunds and screen plantings will be established at locations around the perimeter of the project area to visually screen project activities from sensitive viewpoints.</p>			
<p>VL02</p>	<p>Fixed lighting on plant and buildings will be designed to reduce the potential for light spill through measures such as focussed/targeted lighting and installation of shields or baffles</p>			

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	<p><u>and will be designed so as not to exceed 0.1 lux at any surrounding dwelling (assessed in accordance with AS24282:2019), including under cloudy conditions.</u></p> <p><u>[see Kalbar response to IAC RFI questions 90-91 in TN010 (pp6-7)]</u></p>			
VL03	Buildings and roofs will be clad with non-reflective materials of a colour that mimics those found in the landscape to reduce visual contrast with the landscape setting.			
VL04	Works will be scheduled wherever practicable during daylight hours to avoid night-time activities in areas directly visible from nearby residences.			
VL05	The mine void will be progressively backfilled, and rehabilitation will be progressive to re-instate pre-mining landforms and re-establish vegetation.			
VL06	Fixed buildings will be located to take advantage of existing vegetation screening. Additional vegetation screening will be planned to minimise future visual impacts.			
VL07	The landscape will be restored to reduce visual impacts from elevated viewpoints.			
VL08	Regular slopes and/or sharp transition angles will be rounded to provide a natural appearance to the final landform.			
VL09	Disturbed areas (e.g., road reserves) will be revegetated with local indigenous vegetation.			

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VL10	Displaced plantation timber and vegetation will be replaced around properties in consultation with relevant landholders.			
VL11	Topsoil will be managed and maintained throughout rehabilitation activities to promote successful re-grassing and tree planting.			
VL12	Containers will be stacked at the rail siding to the maximum height of adjacent screening vegetation and/or topography.			
VL13	Temporary visual bunds will be placed to screen operations within the mine void.			
<u>VL14</u>	<u>A program of voluntary landscape mitigation works must be offered, and if accepted, made available, to the owners of dwellings within 1km of the mine. The offered mitigation works must include planting and/or other works on the owner's land to reduce direct views of mining activity from dwellings.</u> <u>[as provided in TN010, Landscape and Visual, IAC RFI response, p 7, response to questions 95-96]</u>	This is supported but it is not clear whether "direct views of mining activities from dwellings' means only direct views of equipment from inside a dwelling or has more expansive definitions inclusive of views of infrastructure from other areas of adjoining properties. Clarification of which dwellings would be the beneficiaries of this measure would assist.		The intent is that this mitigation only applies to views to active mining and within 1km. This corresponds with a 'local' setting under the Landscape and Visual Impact Assessment (EES App 014).
		Insert new measure to screen centrifuge buildings, as appropriate.		Agree with the intent of this comment, however screening of plant and buildings is already picked up in VL01 and VL06.