# Comparison of the mitigation measures set out in the draft risk treatment plans (RTPs) and the updated Mitigation Register

## Environmental Noise Risk Treatment Plan

| Identifier | Risk controls set out in the draft RTPs (Tabled Documents 199 – 202)[1] | EES Appendix H Mitigation Register | Comment | Updated Mitigation Register (Tabled Document 505)[2] | Kalbar further response to reconcile mitigations in the draft RTPs and Tabled Document 505 |
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| **Noise and vibration** | | | | | |
| NV03 | When pumping units over 500 kVA are located within 800 m of any dwelling, temporary acoustic barriers will be used. Earth bunds, Echobarrier or FlexShield barriers would be appropriate as long as the barrier height exceeds the pump height by at least 0.5 m. The barrier system will incorporate an acoustically-absorptive finish to minimise reflected noise and will have a sound insulating rating over Rw+Ctr 22. | 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 barriers (when the barrier height exceeds the pump height by at least 0.5 m). The barrier system will incorporate an acoustically absorptive finish to minimise reflected noise. | Difference. RTP version includes Rw+Ctr rating which is inappropriate for a noise barrier (these ratings are for partitions in enclosed spaces). Minimum barrier density of 10-15kg/m2 is sufficient, as per normal acoustic requirements, but need not be specified to this level of detail in a mitigation measure. | 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 w~~W~~hen 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 exceed~~s~~ the pump height by at least 0.5 m). The barrier system will incorporate an acoustically absorptive finish to minimise reflected noise. | |

[1] The mitigation measures set out in the draft risk treatment plans are primarily contained in Table 7-1 of each plan, noting that the water risk treatment plan also contains mitigation measures in Table 7-2.

[2] Note that the mark ups shown in this column reflect the mark ups shown in Tabled Document 505. If there is nothing set out, it means that there is no change proposed to the mitigation measure set out in EES Attachment H.

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| | | | | [consistent with oral evidence of Christophe Delaire and Tabled Document 310]<br>[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.] | |
| NV06 | Contingency procedures will be implemented if noise emissions during construction are observed to exceed those modelled for this EES. Contingency measures may include short term, temporary relocation for noise-affected occupants, when | 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 | Differences: RTP version includes 'Modelled for this EES' and reference to relocation of residents. EES version refers to | | Mitigation should be updated as follows [notable changes from RTP base in red].[3]<br>*Contingency procedures will be implemented if* |

[3] Note, reference to unfavourable meteorological conditions in the EES version not included – this is simply an example of when exceedance of a noise target could occur, not a contingency measure per se. Note also that standard noise predictions are undertaken in accordance with ISO9613-2 which accounts for downwind propagation or "well developed moderate temperature inversion. Relevantly, section 1 (Scope) of ISO9613-2 explains its predictions are "for downwind propagation, as specified in 5.4.3.3 of ISO 1996-2:1987 or, equivalently, propagation under a well-developed moderate ground- based temperature inversion, such as commonly occurs at night."

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| | high noise levels from construction occur at night and there are no feasible ways of reducing noise levels or re-scheduling the activity. | enhance noise emissions from the project area. | less unfavourable conditions. | | *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.*[4] |
| NV09 | NV09a<br>A noise risk management plan will be prepared and implemented for | A noise and vibration sub-plan will be prepared and implemented. The sub-plan will be informed by best practice | RTP matters covered in the EES version which is more extensive. | A noise and vibration sub-plan will be prepared and implemented [note, there will be three relevant sub-plans | Note that Tabled Document 505 only added a note, it does not change |

[4] Note that Kalbar prefers that construction noise comply with the Noise Protocol limit of 36dB at night which equates to 21-26dB internal with partially open windows (which is below the relevant WHO target of 30dB internal for protection of sleep / health and note also the WHO guideline notes a typical 15dB reduction in sound from outside to inside a dwelling with partially open windows) (see reference below). The 36dB external under the Noise Protocol is similar to the 26dB internal recommended by EPA's EES submission, although noting that EPA has revisited this position in its Part B submissions.

As to the drafting of this mitigation, while contingency measures if noise exceeds noise limits are appropriate, it is difficult to envisage that contingency measures to the extent of relocations would be needed, given the project is capable of complying with objectively low noise levels during construction phase and there will generally be the option of scaling back activity at night if needed. Nonetheless, Kalbar is content to retain this inclusion (relocation) as a possible contingency measure, despite it being very unlikely to be needed.

Reference: WHO 'Guidelines for Community Noise' (1999), see in particular recommendations for dwellings at p xiii (pdf p 14) and Table 1, p xv (pdf p 16). Available from the WHO website at the following link: https://www.euro.who.int/en/health-topics/environment-and-health/noise/environmental-noise-guidelines-for-the-european-region

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| | the management of impacts on sensitive receptors in proximity of the project area.<br><br>NV09b<br>Kalbar will implement a complaints management procedure to address (among other matters) noise-related complaints. | guidelines. At a minimum, the sub-plan will include:<br>• Location of nearby residences and other sensitive land uses, including the sensitive receptors identified in this EES.<br>• 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.<br>• Best practice work practices to minimise noise emissions.<br>• Best practice vibration mitigation strategies to minimise vibration.<br>• Community consultation strategy required for the construction phase and associated high noise and vibration generating works.<br>• Complaints handling process, including contact details, follow-up inspection, monitoring and corrective action processes once a complaint is made.<br>• Noise monitoring procedures focused on the noise-sensitive receptors, including noise monitoring from the project area | | 1) Noise and Vibration Risk Treatment Plan under the Work Plan; 2) Construction noise 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:<br>• Location of nearby residences and other sensitive land uses, including the sensitive receptors identified in this EES.<br>• 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.<br>• Best practice work practices to minimise noise emissions.<br>• Best practice vibration mitigation strategies to minimise vibration.<br>• Community consultation strategy required for the construction phase and associated high noise and vibration generating works.<br>• Complaints handling process, including contact details, follow-up | the mitigation from the EES version. |

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| | | and along the HMC transportation route.<br>• Contingency procedures if noise emissions during operations are determined to exceed those modelled as part of the approval process, including alternatives to be considered during less favourable meteorological conditions that may enhance noise emissions from the project area.<br>• Requirements for recording actions taken in response to exceedances, and evaluation of their effectiveness.<br>• Adaptive management of noise levels for the project, where identified exceedances will inform the required control strategy. | | inspection, monitoring and corrective action processes once a complaint is made.<br>• Noise monitoring procedures focused on the noise-sensitive receptors, including noise monitoring from the project area and along the HMC transportation route.<br>• Contingency procedures if noise emissions during operations are determined to exceed those modelled as part of the approval process, including alternatives to be considered during less favourable meteorological conditions that may enhance noise emissions from the project area.<br>• Requirements for recording actions taken in response to exceedances, and evaluation of their effectiveness.<br>• Adaptive management of noise levels for the project, where identified exceedances will inform the required control strategy. | |
| NV10 | Mobile plant items will be fitted with broadband reversing signals to | Mobile plant items will be fitted with broadband reversing signals to avoid tonal characteristics associated with | Same in substance | | |

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| | avoid tonal characteristic associated with traditional reversing beepers. | traditional reversing beepers at nearby sensitive receptors. | | | |
| NV11 | Activities such as overburden movement will be restricted to day and evening periods during Year 1 to avoid noise propagation during the night. | 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. | RTP version 'hard codes' management, however the EES version which is a performance based approach based on updated modelling at the relevant time, is preferred. | | |
| NV12 | Screening measures through the construction of earth bunds at strategic locations to screen operational noise impacts upon sensitive receptors are an effective way to minimise noise impacts. | Earth bunds will be constructed to control noise such that noise levels from the target sources are controlled to achieve site compliance with EPA guidelines. 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. | RTP version is more of a comment than a mitigation. EES version is moving in the right direction, but updated (Tabled Document 505) is more fit for purpose. | Earth bunds will be constructed to control noise such that noise levels from the target sources are controlled to achieve site compliance with ~~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).<br><br>[Deletions below consistent with oral evidence of Christophe Delaire and Tabled Document 310, i.e. too specific] | |

<table>
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<tr><td></td><td></td><td>
<table>
<tr><th>Location</th><th>Height</th><th>Activities screened</th></tr>
<tr><td>Within mine void adjacent to MUP1</td><td>10 m</td><td>Bund will block line-of-sight to receptors to the east screening scrapers working with the mine void near MUP1.</td></tr>
<tr><td>Overburden haul route</td><td>3 m</td><td>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.</td></tr>
</table>
</td><td></td><td>~~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.~~
<table>
<tr><th>~~Location~~</th><th>~~Height~~</th><th></th></tr>
<tr><td>~~Within mine void adjacent to MUP1~~</td><td>~~10 m~~</td><td>~~Bund will block line-of-~~ ~~with the mine void nea~~</td></tr>
<tr><td>~~Overburden haul route~~</td><td>~~3 m~~</td><td>~~The overburden haul r~~ ~~screening of the mobile~~</td></tr>
</table>
</td><td></td></tr>
<tr><td>NV13</td><td>Direct treatment through plant noise-reduction kits will be undertaken on mobile equipment over a tare weight of 35 tonnes. Suitable noise-reduction kits have been identified for specific items of plant in consultation with industry specialists (Hushpak and Minetek)</td><td>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</td><td>Similar in substance. EES version more appropriate.</td><td></td><td></td></tr>
</table>

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<tr><td></td><td>and Kalbar. They are listed in Section 10.2.1 of the Noise and Vibration report supporting the EES.</td><td>below, which also shows the level of reduction required, and examples of treatments available to achieve the required reduction.
<table>
<tr><th>Plant item</th><th>Noise reduction required</th><th>Example product</th></tr>
<tr><td>Scraper – ore 1</td><td>-6 dB</td><td rowspan="4">Replacement muffler systems, cooling fans and addition of attenuated doors on the scraper engine bay.</td></tr>
<tr><td>Scraper – ore 2</td><td>-6 dB</td></tr>
<tr><td>Scraper – overburden</td><td>-6 dB</td></tr>
<tr><td>Dozer – D9 MUP2</td><td>-5 dB</td><td rowspan="3">Air intake and exhaust silencers fitted to each unit.</td></tr>
<tr><td>Dozer – D10 MUP2</td><td>-5 dB</td></tr>
<tr><td>Dozer – D10 fines tailings screening</td><td>-5 dB</td></tr>
</table></td><td></td><td></td><td></td></tr>
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| | | Dozer – D10 MUP1 \| -5 dB \| <br>Haul truck CAT 785 x4 \| -6 dB \| Replacement muffler systems. | | | |
| NV14 | The WCP will be cladded on the sides closest to sensitive receptors. The cladding will comprise 0.6 mm thick sheet steel with a lining of 75 mm thick, 32 kg/m2 glasswool insulation, which is expected to provide a sound insulation rating of Rw 31. The cladding will be applied to manage noise from the pumps and spirals. | 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. At a distance of 20 m east and south of the plant, these levels are 50, 54 and 65 $L_{Aeq}$ dB at heights of 1.5, 10 and 20 m above ground respectively. | Similar in substance. EES version more appropriate, however too specific for a mitigation measure. A derived compliance point may be useful, however the specific design of enclosure, and any derived measurement point (if any) needs to be addressed at detailed design stage. Updated mitigation (Tabled Document 505) is preferrable. | 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 with noise criteria adopted in the Noise and Vibration Risk Treatment Plan (forming part of the Work Plan).<br><br>[Deletions below consistent with oral evidence of Christophe Delaire and Tabled Document 310, i.e. too specific]<br><br>~~. At a distance of 20 m east and south of the plant, these levels are 50, 54 and 65 $L_{Aeq}$ dB at heights of 1.5, 10 and 20 m above ground respectively.~~ | |
| NV15 | Consultation with affected residents located in the vicinity of the site will be conducted during the course of the project to investigate any need | Consultation with affected residents located in the vicinity of the site will be conducted during the course of the project to investigate the need for | Same | | |

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| | for alternative or additional noise control measures depending on each individual situation (e.g., acoustic treatment for dwellings, temporary relocation). | alternative or additional noise control measures depending on each individual situation (e.g., acoustic treatment for dwellings). | | | |
| NV16 | The quietest available plant and equipment will be selected for the project, where feasible. | 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. | Different. NV16 (RTP) was missing from the EES version. A variation of NV16 (RTP) was added as a new mitigation (NV37) in Tabled Document 505 as follows:<br>*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.* | 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. | |

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| | | | *[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].* | | |
| NV17 | Noisier activities will be scheduled for less sensitive times where feasible and works will be limited as | Noisier activities will be scheduled for less sensitive times of day where practicable and works will be limited | Same | Noisier activities will be scheduled for less sensitive times of day where practicable and works will be limited | Note that this updated mitigation (per Tabled Document 505) expands |

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| | much as practicable during the night and weekends. | as much as practicable during the night and at weekends. | | as much as practicable during the night and at weekends.<br><br>[Note: EPA drafting as per its EES submission (no. 514) inserted below, with Kalbar's tracking added to EPA's base]<br><br>*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* ~~*1254*~~*1834. Works will be considered "low-noise impact works" or "managed-impact works" in EPA Publication* ~~*1254*~~ *1834 if the predicted noise levels are below 26dB indoors* | the existing content significantly to discuss construction noise. This content was included as part of NV17 as this was the context of EPA's EES submission that was being responded to, i.e., EPA recommended NV17 be updated as per the inserted content. However, on reflection, this content is probably better placed in the Acceptance Criteria section of the RTP (although Kalbar has no strong objection to it also being included in this mitigation).<br>It is also important to consider this issue in relation to WHO guidelines[5] [see comments |

[5] WHO 'Guidelines for Community Noise' (1999), see in particular recommendations for dwellings at p xiii (pdf p 14) and Table 1, p xv (pdf p 16). Available from the WHO website at the following link: https://www.euro.who.int/en/health-topics/environment-and-health/noise/environmental-noise-guidelines-for-the-european-region

Note that Kalbar prefers that construction noise comply with the Noise Protocol limit of 36dB at night which equates to 21-26dB internal with partially open windows (which is below the relevant WHO target of 30dB internal for protection of sleep / health and note also the WHO guideline notes a typical 15dB reduction in sound from outside to inside a dwelling with partially open windows) (see reference below). The 36dB external under the Noise Protocol is similar to the 26dB internal recommended by EPA's EES submission, although noting that EPA has revisited this position in its Part B submissions.

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| | | | | at 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*.~~, 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'.]<br><br>[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 *Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues* (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 | added to NV06 and Footnote 4 above) said to be protective of health in relation to night time noise (i.e. 30dB internal at night is the WHO recommendation). Construction noise guidance (such as previously provided in publication 1254 and now in 1834) is generally targeted at a 'trade off' for noise levels that are higher than operational noise limits. The construction guidelines provide no noise limit during the day, but generally prohibit activities at night to protect sleep. This approach is ill fitting in the case of the Fingerboard's project which can commit to achieving operational noise targets for all phases of the Project. Mr Delaire gave evidence that the types of noise from construction and operation are very similar. Therefore, there |

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| | | | | 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, 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).<br>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).<br>Specific variations to the application of the Noise Protocol to mines is | would seem to be no sound basis for applying the construction 'guideline' in a legalistic way, when the Proponent is willing to accept compliance with operational noise limits for all activities. A difference in noise character between construction and operation also does not provide a basis for difference. This is because character penalties would apply to construction noise if it were assessed under the Noise Protocol (i.e., penalties for impulsiveness, tonality, intermittency and so on). |

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| | | | | provided at Table 4 (p 17) which relevantly includes:<br>"**Site clearing and preparation works**<br>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."<br>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.<br>Irrespective, the *Civil construction, building and demolition guide* (Publication 1834) is a guide, not mandatory. Section 4.4 titled 'Managing noise and vibration outside normal working hours' relevantly | |

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| | | | | 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***."<br><br>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. | |
| 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 notice and details of periods of noisy activities (such as excavation). | 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). | Same | | |
| NV19 | Operational practices will be implemented (such as 'push-back' mining operations) to optimise the direction of pit excavation so the terrain provides maximum natural attenuation of plant and equipment. | Managerial processes will be implemented (such as 'push-back' mining operations) to optimise the direction of mine void excavation so the terrain provides maximum natural | Same | | |

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| | | attenuation noise from plant and equipment. | | | |
| NV20 | All personnel will be informed about the measures required to minimise noise including through regular toolbox talks. | All personnel will be informed about the measures required to minimise noise including through regular toolbox talks. | Same | All personnel will be informed about the measures required to minimise noise including through regular toolbox talks. Adherence to the relevant practices and requirements will be verified by an inspection and audit program.<br>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar] | |
| NV22 | All pneumatic tools used near residential areas will be fitted with an effective silencer on the air exhaust port. | All pneumatic tools used near residential areas will be fitted with an effective silencer on the air exhaust port. | Same | | |
| NV23 | Plant will be turned off when not in use. | Plant will be turned off when not in use. | Same | | |
| NV24 | All plant and equipment will be maintained in accordance with manufacturers' specifications. | Plant, machinery and vehicles will be maintained in accordance with manufacturers' specifications to minimise emission of noise. | Same in substance | Plant, machinery and vehicles will be maintained and operated in accordance with manufacturers' specifications and industry best practice to minimise emission of noise.<br>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar] | |

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| NV25 | No truck associated with the work will be left standing with its engine operating for more than five minutes, where possible. | All trucks left standing on site will, as far as practicable, have their engines switched off after no more than five minutes. | Same in substance | | |
| NV27 | All project vehicles will be maintained in accordance with manufacturers' specifications. | All project vehicles will be maintained in accordance with manufacturers' specifications. | Same | | |
| NV28 | Trucks will be equipped with adequate and functioning mufflers. | Trucks will be equipped with adequate and functioning mufflers. | Same | | |
| NV29 | Project vehicles will be driven to the speed limit and in a careful manner, avoiding strong acceleration/deceleration | 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. | EES version more comprehensive and preferred. | | |
| NV30 | Activities which generate the highest potential noise and vibration will not be scheduled at night, where feasible | - | Missing in EES version | - | Include NV30(RTP) to the mitigation register, i.e., *"Activities which generate the highest potential noise and vibration will not be scheduled at night, where feasible"* |
| NV31 | A permanent power supply will be secured as early as possible to minimise the time diesel generators are used. | A permanent power supply will be secured as early as possible to minimise the time diesel generators are used. | Same | | |

| Identifier | Risk controls set out in the draft RTPs (Tabled Documents 199 – 202)[1] | EES Appendix H Mitigation Register | Comment | Updated Mitigation Register (Tabled Document 505)[2] | Kalbar further response to reconcile mitigations in the draft RTPs and Tabled Document 505 |
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| NV32 | Equipment and processes that do no exhibit characteristics of intermittency or impulsiveness will be selected, where feasible. | Equipment and processes that do not exhibit characteristics of intermittency or impulsiveness will be selected, where feasible. | Same in substance | ~~Equipment and processes that do not exhibit characteristics of intermittency or impulsiveness will be selected, where feasible.~~<br><br>[As stated by Mr Delaire in Tabled Document 310 (Mitigation Register commentary):<br>"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 relavant criteria, noise emissions of equipment may reasonably exceed that detailed in the MDA Report."] | Note the comment included in Tabled Document 505 should have been applied to NV33 (below) not NV32.<br>Reinstate NV32. |
| NV33 | | Equipment will be selected with noise emissions that do not exceed the sound values used in the project noise modelling. | | | Refer to comment accidentally added to NV32 in Tabled Document 505 – this comment applies to NV33 not NV32. Therefore, NV33 should be deleted. |
| NV34 | | Construction of the proposed Fernbank East rail siding will be restricted to daytime hours (Monday | Missing in RTP. Adopted in EES version | | |

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| | | to Friday (7:00 a.m. to 6:00 p.m.) and Saturday (7:00 a.m. to 1:00 p.m.)). | which will become the consolidated register. | | |
| NV35 | | 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. | Missing in RTP. Adopted in EES version which will become the consolidated register. | 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. Adherence to the relevant practices and requirements will be verified by an inspection and audit program.<br>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar] | |
| NV36 | | 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. | Missing in RTP. Adopted in EES version which will become the consolidated register. | 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 as defined under the Noise Protocol.<br>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 | |

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| | | | | 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.<br>[Yellow highlighted text is quoted from EPA submission (no. 514) and accepted by Kalbar] | |
| NV37<br>(This reflects NV16 (RTP) which was missing from the EES version) | | | | 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.<br><br>[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 | |

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| | | | | 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]. | |
| NV38 | | | | 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.<br>[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 with acoustic penetrations to reduce noise levels by at least 5dB] | |
| NV39 | | | | Earth mounds will be constructed to shield centrifuge cake haul noise emissions to sensitive receivers. | |
| SE22 | Timely responses will be provided to any community complaints raised | Timely responses will be provided to any community complaints raised. | Same | | |

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| SE26 | A community complaints procedure will be developed and implemented. | A community complaints procedure will be developed and implemented. | Same | | |