

1 RESPONSE TO DEPARTMENT OF WATER AND ENVIRONMENTAL REGULATION COMMENTS

Department of Water and Environmental Regulation (DWER) Comments	Proponent Response
Flora and Vegetation	
<p>1. The ERD (Section 7.4) identifies potential impacts of altered hydrology resulting in water starvation and shadow effects. The scale and extent of potential impacts on vegetation from altered hydrology have been mostly addressed. However, further detail is required to describe the methods listed as mitigation measures, please provide this detail in an updated Surface Water Management Plan (SWMP).</p>	<p>Table 2: Objective-based Management Plan provisions within the Surface Water Management Plan (SWMP; MTW-EN-PLA-0009) has been updated to include the methods associated with mitigation measures to minimise the potential to alter surface hydrology as a results of stormwater diversion infrastructure.</p> <p>Measures relevant to mitigating potential impacts on vegetation from altered hydrology are defined in both the SWMP and Flora and Vegetation Management Plan (FVMP; MTW-EN-PLA-0015), and include the following:</p> <p>Clearing</p> <ul style="list-style-type: none"> No clearing is to be undertaken unless it complies with the Proposal's approval conditions. All clearing shall be minimised through design, and only be undertaken to the extent required to safely and efficiently complete the works. All clearing shall follow the Mt Weld Clearing and Disturbance Procedure (MTW-EN-PRO-0017) controls and be limited to the battery limits defined in the relevant Clearing and Disturbance Certificate (CDC) issued for works to which it applies. Undertake post-clearing inspections to verify clearing within internal and external approval conditions. Extend the existing photographic monitoring of vegetation health condition to continue to monitor potential changes in vegetation health as a result of drainage shadow impacts. <p>Avoid</p> <ul style="list-style-type: none"> Clearing of vegetation within watercourses on G38/34 where possible. <p>Minimise</p> <ul style="list-style-type: none"> Design overland flow bunds to divert surface water flows around the project to maintain safe and dry operations. Design clearing to retain vegetation where possible, such as around stockpiles, landforms, infrastructure, and landscaped areas. Prior to any clearing, a CDC is required to be approved by the Mt Weld Environmental Advisor. Where practicable retain vegetation between Project components during construction to reduce erosion and undertake clearing on a staged basis and incrementally to minimise the amount of exposed land area. Land clearing will be undertaken progressively and incrementally during operations. Ensure areas to be cleared are clearly demarcated. Park vehicles and machinery only in designated locations. Ensure spills are promptly contained, cleaned up and spill waste appropriately disposed of. Dispose of solid or liquid wastes in one of the designated waste disposal areas (e.g., overburden waste landforms, general landfill). Hazardous wastes such as waste oils and spent liquid chemicals taken offsite by a licensed contractor. Use existing tracks where possible and minimise off-road driving unless necessary (e.g., for exploration work). <p>Rehabilitate</p> <ul style="list-style-type: none"> Attempt to reinstate valuable vegetation habitat elements to the landscape via progressive rehabilitation of area no longer suitable for ongoings operations. Progressive rehabilitation of disturbed areas to encourage the return of vegetation. Topsoil, rootstock, log debris and leaf litter should be removed for future use in rehabilitation programmes. If possible, stockpiled topsoil should be directly replaced on disturbed areas as this increases the success of seedling establishment and propagule regeneration. Undertake rehabilitation trials to research appropriate soil preparation, drainage works, seed mixes and any other methods used to promote revegetation.
<p>2. The ERD (Section 7.6) states that an Environmental Management Plan (EMP) is in implementation and lists general management actions. This plan will need to be amended to be suitable for a significantly larger site and should provide reasoning to why and how these actions will manage impacts along with expected outcomes. DWER notes that an Environmental Monitoring Program has been provided (Appendix C), however no EMP has been provided. The updated EMP should be provided to inform the assessment.</p>	<p>The FVMP (MTW-EN-PLA-0015) is provided with this response. Specific mitigation measures now defined within the FVMP are as listed in Item 1 above.</p> <p>The Mt Weld Rare Earths Project is a critically important global project which is necessary to boost critical mineral products for renewables, to support the global energy transition. The Carbonatite Boundary, illustrated in Figure 2-2 of the Environmental Review Document (ERD), represents significant mineralised area for future resource opportunities. The Carbonatite Boundary is 835 ha in area which is 37% of the proposed Area of Disturbance. Mt Weld Mining Pty Ltd (MWM) has carefully considered its approach to the Proposal's Development Envelope and intends to locate all permanent landforms outside of this mineralised area to avoid rehandling of materials over the life of the Project.</p> <p>During the detailed design phases, which will occur across the life of the Project, MWM will only disturb areas necessary for infrastructure and safe operating conditions.</p>

Department of Water and Environmental Regulation (DWER) Comments	Proponent Response
Terrestrial Fauna (Vertebrate)	
<p>1. Justify the chosen locations of the Malleefowl surveys and provide further details of the methods and alignment with the Survey guidelines for Australia's threatened birds and the National Malleefowl Monitoring Manual.</p> <p>a) Appendix L has stated that the methods adopted for their surveys align with the Survey Guidelines for Australia's Threatened Birds (DEWHA 2010), however, no further detail on the survey techniques and effort for Malleefowl have been provided. Table 6-1 notes that targeted survey effort included Malleefowl transects at 11 locations, but the methods outlined (Section 4) do not provide the locations of these transects, number of transects, hours spent searching along transects, and timing of searches e.g., phase 1 or phase 2 survey. It is acknowledged that areas of dense cover of mulga and shrubs within the mulga on clay loam habitat may provide suitable habitat for Malleefowl (Section 5, p. 42). The woody debris and leaf litter cover was higher in these dense areas and may provide materials for the construction of mounds by Malleefowl. As the survey area is within the species range, and there is long unburnt suitable habitat for the species, survey effort for Malleefowl needs to be further clarified.</p>	<p>Habitat assessments were conducted in all habitats described and delineated within the Survey Area (Section 4.1.3, page 25 of the Mt Weld Detailed Terrestrial Fauna Survey Report (Appendix L of the ERD)). These descriptions were used to assess the likelihood of occurrence for significant fauna, including the Malleefowl (Table 4-9, page 55 of the Mt Weld Detailed Terrestrial Fauna Survey Report). Habitat throughout the Survey Area was assessed as marginal habitat for Malleefowl and the species was only considered as "Possible" to occur within the Survey Area.</p> <p>Targeted searches were undertaken for all significant fauna that were either confirmed, likely or possible to occur within the Survey Area based on the desktop assessment – this was not confined to just Malleefowl. Within the Mt Weld Detailed Terrestrial Fauna Survey Report, Section 4.1.4.5 'Targeted searches' has been amended to clarify that targeted searches were undertaken for all significant fauna with potential to occur, using the methods presented within Table 4-4 and Figure 4-3, in areas where the species had potential to occur (this included but was not limited to Malleefowl).</p> <p>Spatial data illustrating the Malleefowl transect locations is not available.</p> <p>Given that Malleefowl were assessed as only possible to occur due to the marginal nature of the habitat present, intensive survey effort in accordance with the National Malleefowl Monitoring Manual (10-12 searchers that are spaced 20 m) was not deemed necessary. The National Malleefowl Monitoring Manual acknowledges that the intensive survey methods are to be applied in areas of 'suitable Malleefowl habitat where mounds are known to occur'.</p> <p>The Mt Weld Detailed Terrestrial Fauna Survey Report, Section 1.2 'report scope and objectives' have also been amended to clarify that the work was undertaken in accordance with the Survey Guidelines for Australia's Threatened Birds. Survey effort for Malleefowl within the Survey Area is believed to be appropriate given the likelihood assessment for the species being only possible to occur.</p> <p>Historical ecology survey coverage within Mt Weld Survey Area is shown in Figure 4 of the FMP (MTW-EN-PLA-0014). To date, all historical ecology surveys and with ten years of operating, there has not been any sightings of Malleefowl, including mounds, within the Mt Weld surrounds.</p> <p>The Malleefowl habitat was assessed as being marginal habitat with regards to the mulga on clay loam (<i>Acacia aneura</i> low open forest). This habitat type is relatively open with limited leaf litter but was assessed as possible to support Malleefowl.</p> <p>Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014) has been updated to include Management Actions to avoid disturbance and minimise indirect impacts to any possible Malleefowl mounds that may occur in marginal habitat.</p>
<p>2. Table 8-1 (ERD) should be revised to quantify the direct impacts to fauna habitats, including the approved area and the area to be impacted by the proposal.</p> <p>a) The proposed LOM disturbance has been added to Table 8-1, however, this column states a total proposed disturbance extent of 2241.6 ha across all fauna habitats rather than per habitat type, as has been presented for other columns. Quantify the disturbance extent and proportion individually for each of the seven fauna habitats.</p>	<p>Section 3.4 of the Environmental Protection Authority (EPA) guidance <i>How to identify the Content of a Proposal – Instruction and template</i> (EPA, October 2021), states that <i>"the maximum extent / capacity of Proposal elements must be included where relevant. A range of extents / capacities (including a maximum) can be included where some flexibility is needed given the stage of the Proposal development and assessment."</i> This is consistent with advice received from the Department of Water and Environmental Regulation's (DWER) EPA Services division (EPA/s) during a 17 December 2021 scoping meeting for the Proposal.</p> <p>As stated in Section 1.3 of the ERD, given this Proposal seeks to define a Project Area of Disturbance and Development Envelope for the foreseeable life of the Project (23 years), disturbance boundaries for all proposed future activities and infrastructure are not able to be defined at this stage.</p> <p>To this end, proposed activities and infrastructure across the life of mine (LOM) will be limited to a combined total Area of Disturbance extent of no more than 2,241.6 ha (which represents approximately 80% of proposed Development Envelope), of which 401.8 ha has previously been disturbed under approved MS 476 (505 ha Development Envelope and 429 ha Area of Disturbance).</p> <p>Given this required flexibility for future infrastructure placement, and the fact that MWM has yet to undertake detailed design processes to delineate the spatial extent of each item of proposed infrastructure over the LOM it is not considered appropriate nor possible to quantify exact disturbance extents for each of the seven fauna habitats. Table 8-1 has been revised, refer below, to reflect the area of each fauna habitat which has potential to be directly impacted by the Proposal. It is important to note that this reflects the maximum possible extent within each of the habitat types, up to the cumulative 2,241.6 ha Area of Disturbance.</p> <p>Notwithstanding the above, disturbance to the Outcropping habitat, which is significant to the Long-tailed Dunnart, has been carefully excluded from the Area of Disturbance, and the Fauna Management Plan (FMP; MTW-EN-PLA-0014) has been revised to include a Management Action to ensure that Outcropping habitat is excluded from Project clearing and disturbance.</p>
<p>3. Describe and quantify cumulative impacts to habitats and significant species (including percentages). The cumulative impacts should also take into consideration the approved proposal, the new proposal and the regional activities. See EPA Procedures Manual for definitions and considerations that should be taken into account to calculate cumulative environmental impacts.</p> <p>a) Extent of previous disturbance from the development has been included into Table 8-1, however, proposed disturbance extent has not been quantified for each fauna habitat.</p>	<p>As stated in Section 1.3 of the ERD, given this Proposal seeks to define a Project Area of Disturbance and Development Envelope for the foreseeable life of the Project (23 years), disturbance boundaries for all proposed future activities and infrastructure are not able to be defined at this stage.</p> <p>Given this required flexibility for future infrastructure placement, and the fact that MWM has yet to undertake detailed design processes to delineate the spatial extent of each item of proposed infrastructure over the LOM, it is not considered appropriate nor possible to quantify exact disturbance extents for each of the seven fauna habitats. Table 8-1 has been revised, refer below, to reflect the area of each fauna habitat which has potential to be directly impacted by the Proposal. It is important to note that this reflects the maximum possible extent within each of the habitat types, up to the cumulative 2,241.6 ha Area of Disturbance.</p> <p>Notwithstanding the above, disturbance to the Outcropping habitat, which is significant to the Long-tailed Dunnart, has been carefully excluded from the Area of Disturbance, and the FMP (MTW-EN-PLA-0014) has been revised to include a Management Action to ensure that Outcropping habitat is excluded from Project clearing and disturbance.</p>

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<p>4. Justify why systematic trapping was undertaken in only three habitat types using evidence from previous surveys and clarify which habitats will be directly impacted.</p> <p>a) Appendix L has justified systematic trapping for only three of the seven fauna habitats stating these three “contributed the most to the overall extent of the survey area...” and “were most likely to be impacted by the proposed developments.” (Section 5.1). Despite ‘Outcropping’ (habitat supporting significant fauna species), ‘Mulga on stony plain’, and ‘Low mulga on clay loam’ habitat making up ‘Mulga on stony plain’ habitat is proposed to be cleared for the Village and Infrastructure, and a portion of ‘Low mulga on clay loam’ may be modified due to construction of wind turbines. Exact proportions of direct impacts to fauna habitat have not been provided in Table 8-1 of the ERD, as above.</p>	<p>The Outcropping habitat was not subject to systematic trapping as it was not physically possible to install pitfall traps in the hard substrate (rock) of this habitat type.</p> <p>To compensate for this, Section 4.1.4.1 (Long-tailed Dunnart motion-sensor cameras) of the Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey Report (Appendix L of the ERD) states “<i>motion-sensor cameras were established to target the Long-tailed Dunnart at 32 locations across four areas of suitable habitat within the Survey Area during Phase 1 (Figure 4-3). These were deployed in suitable habitat, such as Outcropping and Stony Rises.</i>”</p> <p>In addition to being recorded on 25 motion cameras, two Long-tailed Dunnarts were also captured at systematic trapping site B during the survey (Section 5.3.1). Site B is on Stony Rise habitat in close proximity to Outcropping habitat.</p>
<p>5. Provide detail description on the application of mitigation hierarchy to avoid, minimise, and manage impacts to significant fauna and their habitats. (e.g., long-tailed dunnart and Malleefowl).</p> <p>a) The Proponent has re-structured their mitigation section (Section 8.6) to address avoidance and minimisation of impacts. The Proponent has listed avoidance and mitigation measures for the long-tailed dunnart, but not for Malleefowl as the proponent considers it unlikely to occur in the DE (refer to the above comments on survey adequacy for Malleefowl). Comments relating to the adequacy of the FMP are outlined above.</p>	<p>Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014) has been updated to include Management Actions to avoid disturbance and minimise indirect impacts to any possible Malleefowl mounds that may occur in marginal habitat.</p>
<p>6. Justify why the supporting infrastructure are proposed within the fauna habitat with higher value to fauna as opposed to being located in lower value habitat.</p> <p>a) The Proponent has justified the placement of the accommodation village based upon worker safety during flooding events. As above, the FMP has stated they will avoid clearing of rocky/boulder habitat that may contain micro-habitat for the longtailed dunnart. The FMP should implement buffers/avoidance areas for these micro-habitats to ensure these areas aren’t cleared during construction of the Village.</p>	<p>Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014) have been updated to include a Management Action which states that an exclusion zone for Outcropping (rocky / boulder) habitat on L38/224 will be established. No clearing to Outcropping micro-habitat is to occur during construction of the Accommodation Village.</p>
Short-range Endemics (SREs)	
<p>DWER has previously provided comments on SREs invertebrates. Further comments will be provided after reviewing additional information concerning SREs. Following comments were previously provided by DWER:</p> <p>1. The proponent needs to demonstrate that the SRE specimens (rather than the potential habitat) are widespread and not restricted to the areas of disturbance to meet the EPA’s objective.</p> <p>2. At least eight spider specimens have only been collected from the proposed impact footprint. These specimens have been identified to family (i.e., Idiopidae) or genus level (i.e., Idiosoma and Aganippe) only, not to species level, therefore their distributions cannot be inferred. Resolution of the species identifications is required. This can be achieved through genetic analysis of the specimens as discussed in Appendix L (p. 60). There is a large amount of genetic information available for spiders through international databases online (Genbank), through scientific publications for trapdoor spiders of the family Idiopidae (e.g., Rix et al.,2017), and the Western Australian Museum. Genetic analysis can also be used to determine whether the spiders collected outside impact areas are the same species as those only collected inside impact areas.</p> <p>3. It is recommended that, as a minimum, the following three species (Buddelundia ‘103’ and Buddelundia ‘106’ and the pseudoscorpion Synsphyronus ‘weld’) only collected from impact sites also undergo genetic analysis to determine whether they may represent taxa that have already been sequenced and occur outside the impact footprint.</p>	<p>MWM can now demonstrate potential Short-range Endemic (SRE) species are widespread and not restricted to areas within the Development Envelope, with exception to <i>Synsphyronus ‘weld’</i> specimen.</p> <p>Additional morphological and genetic analysis was undertaken in May 2023 to better understand the potential distributions of these taxa outside of the proposed Development Envelope. This analysis revealed that five of the nine potential SRE taxa were now known to have distributions that extend outside the Survey Area. These taxa were:</p> <ul style="list-style-type: none"> • <i>Aname ‘MYG629’;</i> • <i>Idiosoma ‘MYG722’;</i> • <i>Proshermacha ‘MYG715’;</i> • <i>Buddelundia ‘103’;</i> and • <i>Buddelundia ‘106’</i> <p>However, four of these taxa remained only known from the Development Envelope. These taxa were:</p> <ul style="list-style-type: none"> • <i>Idiosoma ‘MW1’;</i> • <i>Idiosoma ‘MW2’;</i> • <i>Synsphyronus ‘weld’;</i> and • <i>Urodacus sp. 1</i> (sequencing inconclusive). <p>MWM completed a further Targeted SRE Survey between 29 May – 2 June 2023 to determine whether the four taxa known only from the Development Envelope were present in the broader region, by surveying an expanded Survey Area.</p>

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<p>4. Once identifications have been resolved, the proponent should identify the possible outcomes and subsequent actions required (which may differ between taxa) to mitigate any significant impacts.</p> <p>5. Should any species not be found to be widespread, the proponent may have to consider the design of the proposal to avoid these species and ensure that indirect impacts would not be averse to the species e.g., such as through the use of suitable buffers.</p>	<p>Twenty-four (24) specimens were collected within an expanded Survey Area and sequenced by Genotyping Australia. Pairwise comparisons of the specimens collected during the 2023 Survey, including comparison with specimens collected during the 2020 and 2014 Surveys, was completed in June 2023 and represents a preliminary analysis and does not include species level identification of all 24 specimens. Based on these preliminary results, the following three taxa are confirmed to be present outside the Development Envelope:</p> <ul style="list-style-type: none"> • <i>Idiosoma</i> 'MW1'; • <i>Idiosoma</i> 'MW2'; and • <i>Urodacus</i> sp. 1 (final sequencing analysis in process at time of Response). <p><i>Synsphyronus</i> 'weld' was not collected during the 2023 Targeted SRE Survey due to survey effort prioritising the above three taxa within priority Indicative Footprint. This species is known from only one record within the Development Envelope (Non-priority Indicative Footprint), recorded from Mulga on clay loam habitat which was assessed as having a low potential to support SRE taxa. This taxon has the potential to be widespread as they were recorded from a widespread habitat type. Additional targeted searches for <i>Synsphyronus</i> 'weld' within Mulga on clay loam habitat outside the Development Envelope may confirm this.</p> <p>MWM will apply a 100 m radial buffer around the known location of <i>Synsphyronus</i> 'weld' and is committed to future efforts to identify this species outside of the Development Envelope.</p>
Fauna Management Plan (FMP) – Terrestrial Fauna	
<p>1. In Table 2, clarification required regarding: "No domestic animals will be allowed on site...", and whether this refers to all domestic animals including feral herbivores and further detail is required on how control will be implemented e.g., exclusion fencing, barbed wire, shooting.</p>	<p>The relevant Management Action has been amended to state that "<i>No domestic animals (e.g. pets) will be allowed on site, unless the animal qualifies as an Assistance Animal as a disability support</i>".</p> <p>Exclusion fencing, barbed wire or shooting is currently not proposed as a Management Action relevant to feral animal management; however, this may be considered in the future.</p>
<p>2. In Table 2, the FMP has stated they will avoid clearing of rocky/boulder habitat that may contain micro-habitat for the long-tailed dunnart. The FMP should implement buffers/avoidance areas for these micro-habitats to ensure these areas aren't cleared during construction of the Village.</p>	<p>Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014) has been updated to include a Management Action which states that an exclusion zone for Outcropping (rocky / boulder) habitat on L38/224 will be established. No clearing to Outcropping micro-habitat is to occur during construction of the Accommodation Village.</p>
<p>3. In Table 2, the monitoring action, "Report all native fauna deaths and injuries.", should ensure that both species level and cause of death are reported. Fauna strike from wind turbines should be included as part of this monitoring action.</p>	<p>The monitoring activity description has been amended to state the requirement to "<i>Report all native fauna deaths and injuries detailing species level and suspected cause of death</i>".</p>
<p>4. Altered fire regimes should be recognised as a potential impact to terrestrial fauna habitat and should be managed under the FMP.</p>	<p>Altered fire regimes as a result of clearing is now included as a Risk in Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014).</p>
<p>5. Minimisation of dust should be included in the FMP.</p>	<p>Minimise fugitive dust by implementing the Dust Management Plan (MTW-SH-PLA-0006) has been added as a Management Action within Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014).</p>
<p>6. Please provide an updated Figure 3 using clearly distinguishable colours for, 'Stony rise' and 'Rocky ridge and outcropping' areas. The colours are diluted making these habitats difficult to interpret. The colours used should be easily distinguishable, as per Figure 8-1 in ERD.</p>	<p>Figure 3 within FMP (MTW-EN-PLA-0014) has been amended to improve visibility of outcropping on L38/224.</p> <p>Figure 3 within FMP and Figure 8-1 of ERD are supported by spatial data maintained by the Mt Weld Survey and Environmental Department. This spatial data is used to inform decision-making within the internal Clearing and Disturbance Procedure (MTW-EN-PRO-0017).</p>
<p>7. Note: The proposed wind turbines within the development envelope may pose a collision risk to birds and bats. Previous studies conducted in Victorian windfarms (Moloney et al., 2023) have identified white-striped free-tailed bats as the most commonly affected bat species during mortality surveys. Additionally, Gould's wattled bat was found to comprise the majority of fatalities at two windfarms in Tasmania (Hull and Cawthen, 2013). Both of these species were recorded at all systematic sites (4) within the survey area (Appendix E of Appendix L), indicating their potential susceptibility to direct collisions with the proposed wind turbines.</p> <p>a) To address this concern, it is recommended that the Fauna Management Plan (FMP) include the reporting of potential fauna deaths and injuries resulting from wind turbine structures. The reporting process should provide details on the species level and cause of death, provided that the carcasses are intact enough for identification. Furthermore, monitoring efforts at wind turbine sites should be conducted rigorously and consistently to ensure adequate detection of bird and bat carcasses, while also accounting for scavenger uptake.</p>	<p>Inspection regime and associated reporting of winged animal injuries or deaths associated with Wind Turbine Structure has been added as a Monitoring activity in Table 2: Objective-based Management Plan Provisions of the FMP (MTW-EN-PLA-0014).</p>

2 RESPONSE TO PUBLIC SUBMISSIONS

2.1 Flora and Vegetation

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	The proposed expansion will result direct impacts on flora and vegetation of up to 2241.6 hectares (ha) which is unacceptable.	<p>The Mt Weld Rare Earths Project is a globally important project necessary to boost critical mineral products which are essential to support the transition to renewable energy in order for the world to decarbonise.</p> <p>MWM has quantified, assessed and presented the potential environmental impacts associated with the proposed Development Envelope through initiation of a wide range of environmental investigations, including flora and fauna surveys conducted by Subject Matter Experts (SMEs) in accordance with the EPA's guidelines. These investigations show that:</p> <ul style="list-style-type: none"> None of the seven vegetation types represented within the Development Envelope are aligned with known Threatened Ecological Communities or Priority Ecological Communities known from the Murchison bioregion, and all were determined to be well represented at all levels (statewide, bioregional [IBRA region and IBRA sub-region] and local), with >99% of the pre-European extent as the Beard (1975) remaining intact. There were no Commonwealth or State listed Threatened Flora taxa or DBCA listed Priority flora taxa recorded from within the Development Envelope. There was a historical record for one individual of the Priority 3 flora taxon <i>Goodenia lyrata</i> from a widespread vegetation type within the Survey Area. <p>The investigations have informed mitigation measures to minimise potential impacts to flora and vegetation, which are included within the SWMP (MTW-EN-PLA-0009), FMP (MTW-EN-PLA-0014) and FVMP (MTW-EN-PLA-0015). With these mitigation measures in place, the Mt Weld LOM Proposal will not have a significant impact on flora and vegetation.</p> <p>Project Justification and Holistic Impact Assessment</p> <p>The Proposal needs to be considered relative to the holistic impacts, as presented in Section 5 of the ERD. Whilst MWM is cognisant of the step change in the scale of the proposed Development Envelope, relative to current approvals, it is important to consider that in absolute terms, the magnitude of the overall footprint is modest relative to other operational mining projects in the State of Western Australia, and is located in a region where terrestrial and biological values are well represented with limited to no species of conservation significance likely to be impacted.</p> <p>MWM considers that the potential impacts associated with the scale of the Development Envelope extent needs to be considered in the context of other mineral development projects previously approved or currently under assessment by the EPA. At 2,802 ha, MWM considers the Proposal Development Envelope remains modest, relative to other EPA-assessed Major Projects in Western Australia.</p> <p>Three examples of recent significantly larger project Development Envelopes include:</p> <ul style="list-style-type: none"> Greater Paraburdoo Iron Ore Hub – 17,422 ha (August, 2022) West Musgrave Copper and Nickel Project – 20,852 ha (April, 2022) Revised Proposal for the Roy Hill Iron Ore Mine – 94,474 ha (May, 2022) <p>Significant benefits of the Proposal, as described in Section 5 of ERD, include:</p> <ul style="list-style-type: none"> Sustainable power generation: With a staged transition from diesel fuelled power generation to gas and then hybrid renewable power generation through solar, battery and wind to achieve a significant reduction in CO₂ emissions per tonne of production. Optimisation of Mine Plan to reduce fugitive greenhouse emissions: The LOM will remove approval constraints to MWM's mine planning process in regard to redefining and optimising haul routes to the shortest practicable distances, as well as redesigning pit ramp slope angles and configurations. Each of these processes will result in increased efficiency in transport energy usage and reduction in greenhouse emissions from mining activities. Water recycling: Installation and operation of a state-of-the-art water recycling plant will significantly reduce aquifer abstraction, thereby extending the life of the Carbonatite Aquifer. Western borefield: Development of an alternative western borefield to supplement water supplied from the Carbonatite Aquifer. Protection of groundwater resources: The proposed expanded Development Envelope will continue to enable the medium- to long-term planning of proposed containment infrastructure (including TSFs, evaporation ponds and the by-product landform) to be located outside of Carbonatite Aquifer boundary. Waste minimisation and reuse opportunities: An expanded tailings storage footprint will allow for circular economy uses such as access for future potential reprocessing of high grade tailings. Additionally, MWM will continue research and trials to identify opportunities for the sale and safe reuse of by-products. Commitment to progressive rehabilitation. Improved closure outcomes through enhanced tailings management: Adoption of Accelerated Mechanical Consolidation (AMC) of tailings, which results in 50% reduction in land required for tailings storage over the LOM. <p>In addition to the above, the proposed Project changes should also be regarded relative to the significant nett environmental benefits that will now be realised through implementation of the Proposal, which otherwise could never be attained to the same extent.</p>

2.2 Terrestrial Fauna

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	The expansion could indirectly impact fauna, through land clearing or contamination, including three significant species just outside of the development envelope: Long-tailed Dunnart, Wood Sandpiper, and Common Sandpiper.	<p>The Mt Weld Rare Earths Project is a globally important project necessary to boost critical mineral products which are essential to support the transition to renewable energy in order for the world to decarbonise.</p> <p>MWM has quantified, assessed and presented the potential environmental impacts associated with the proposed Development Envelope through initiation of a wide range of environmental investigations including flora and fauna surveys conducted by SMEs in accordance with the EPA's guidelines. The investigations have informed mitigation measures to minimise potential impacts to terrestrial fauna, which are included within the SWMP (MTW-EN-PLA-0009), FMP (MTW-EN-PLA-0014) and FVMP (MTW-EN-PLA-0015). With these mitigation measures in place, the Mt Weld LOM Proposal will not have a significant impact on terrestrial fauna.</p> <p>Potential Indirect Impacts to Conservation Significant Fauna</p> <p>MWM has been operating under an approved Environmental Management Programme for over ten years to manage indirect impacts to fauna. The FMP (MTW-EN-PLA-0014) has been revised to address the EPA's terrestrial fauna environmental factor, as relevant to the Proposal.</p> <p>The SWMP (MTW-EN-PLA-0009) and FVMP (MTW-EN-PLA-0015) have both been revised to address indirect impacts to flora and vegetation (fauna habitat) that may arise from altered surface hydrology as a results of Proposal activities. The FMP (MTW-EN-PLA-0014) has been developed to address potential direct impacts to terrestrial fauna.</p> <p>Disturbance to the Outcropping habitat, which is significant to the Long-tailed Dunnart, has been carefully excluded from the Area of Disturbance, and the FMP has been revised to include a Management Action to ensure that Outcropping habitat is excluded from Project clearing and disturbance. No habitat significant to Long-tailed Dunnart occurs within the Project's mining and processing operational footprint.</p> <p>As stated in Section 8.3.3 of the ERD, the survey area was determined not to contain any important habitat nor support an ecologically significant proportion of the population of either the Wood Sandpiper or Common Sandpiper, due to limited aquatic habitat.</p> <p>The Wood Sandpiper and Common Sandpiper have only been recorded at artificial water sources within the existing operational footprint. A single Wood Sandpiper was recorded at the evaporation ponds within a previously approved and cleared portion of the survey area and a single Common Sandpiper was recorded at the return water pond within a previously approved and cleared portion of the survey area. Neither species has been recorded within the proposed Development Envelope since operations commenced in 2011.</p>

2.3 Terrestrial Environmental Quality

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	<p>The proponent will be storing 132,000 tpa of Iron Phosphate and 330,000 dry tpa of Gypsum byproducts from Kalgoorlie REPF, long-term. The transport of waste materials is proposed to be over 14,000 trips per annum between the Kalgoorlie and Leonora site to the Mt Weld site.</p> <p>There is concern regarding scale of this storage and long-term viability of the proposal due to the enduring nature of radioactive waste products. There is a lack of clear examples demonstrating radioactive tailings and wastes have been effectively managed, safely secured and environmentally non-polluting.</p> <p>The mine closure plan and post-closure monitoring lack adequate details, and public and stakeholder engagement has been limited. Proper consideration and involvement are necessary for addressing the significant industrial and radioactive waste that will be produced in our state.</p>	<p>MWM has effectively managed Naturally Occurring Radioactive Materials (NORMs) at the Mt Weld Rare Earths Project site since 2011, and during that time has demonstrated that Mt Weld concentrate, ore and tailings are safely secured and environmentally non-polluting, in accordance with the approved Radiation Management Plan (RMP; v10, dated 5 November 2021).</p> <p>Demonstrated Transport Management and Compliance</p> <p>As stated in Section 13.3 of the ERD, a robust Transport Management Plan (TMP), supported by an Emergency Response Plan, is currently implemented at the Mt Weld Rare Earths Project to manage transport.</p> <p>The existing TMP was prepared in accordance with the following legislation:</p> <ul style="list-style-type: none"> Western Australian <i>Road Traffic Act, 1974</i> and Road Traffic Code, 2000 <i>Mines Safety and Inspection Act, 1994</i> and Regulations, 1995 <i>Environmental Protection Act, 1986</i> <i>Occupational Safety and Health Act, 1984</i> <i>Radiation Safety Act, 1975</i> and Radiation Safety (General) Regulations, 1983 Radiation Safety (Transport of Radioactive Substances) Regulations, 2002 Code of Practice for Fatigue Management for Commercial Vehicle Drivers, 2004 <p>The TMP will apply to transport of by-products from Kalgoorlie Rare Earths Processing Facility (REPF) once that activity commences and any necessary updates will be made at that time.</p> <p>As stated in Section 14.4.2 of the ERD, the Australian (ARPANSA, 2014) and International Transport Safety (International Atomic Energy Agency, 2012) Regulations do not apply to either the lanthanide ore or concentrate produced at Mt Weld, or the by-products from the Kalgoorlie REPF as the combined concentrations of uranium and thorium do not exceed 10 Bq/g. The NORM radiation level of the iron phosphate (IP) by-product has a specific activity in the range of 6.0 – 6.5 Bq/g, which is similar of the Mt Weld concentrate. The gypsum by-products do not contain any NORM.</p>

No.	Submitter	Submission and/or Issue	Response to Comment
			<p>In its response to the Section 43A application for the Kalgoorlie REPF (Notice of Decision to Consent to Change to Proposal During Assessment, dated 9 September 2021), the EPA stated:</p> <p><i>“The EPA considers the consequences of returning the by-products to the Mt Weld mine were assessed in the Mt Weld Rare Earths Project (Ministerial Statement 476) and will also be regulated through other legislation.</i></p> <p><i>Both the Department of Mines, Industry Regulation and Safety and the Radiological Council of Western Australia have confirmed that the transport of by-products from Lot 500 Great Eastern Highway will be managed and regulated under the Radiation Safety (Transport of Radioactive Substances) Regulations which requires compliance with Australia’s Code for the Safe Transport of Radioactive Material published by ARPANSA and a Transport Management Plan (Radiation Protection Programme). The Department of Mines, Industry Regulation and Safety have also confirmed that the storage of NORM waste at Mt Weld will be regulated through amendments to the existing Radiation Management Plan.”</i></p> <p><u>Demonstrated NORM Storage Facility Management and Compliance</u></p> <p>MWM has effectively managed NORM materials at the Mt Weld Rare Earths Project site since 2011, and during that time has demonstrated that Mt Weld concentrate, ore and tailings are safely secured and environmentally non-polluting, in accordance with the approved RMP (v10, dated 5 November 2021). The NORM radiation level of the IP by-product has a specific activity in the range of 6.0 – 6.5 Bq/g, which is similar of the Mt Weld concentrate and therefore there is no increased impact as a result of the Proposal.</p> <p>As stated in Section 3.3.1 of the ERD, the current version of the RMP approved by the Department of Mines, Industry, Regulation and Safety (DMIRS) on 21 March 2022. The RMP is revised on an iterative basis and will continue to be revised in consultation with DMIRS and the Radiological Council to incorporate LOM components, as required.</p> <p>Lynas Rare Earths Ltd (Lynas) is recognised to be an industry leader in tailings management best practice. In October 2022, Lynas was a finalist for the prestigious Golden Gecko Award for Environmental Excellence, administrated by DMIRS. The Golden Gecko Awards recognise leading practice and innovation in environmental management and provides an opportunity to share experiences between government, industry and the community. Lynas’ submission was for the adoption of the Accelerated Mechanical Consolidation (AMC) process for tailings management at Mt Weld, which has resulted in a 50% reduction in the total tailings footprint over the LOM. MWM will adopt this best practice for future tailings storage including TSF4.</p> <p><u>Mine Closure Planning and Post Closure Monitoring</u></p> <p>MWM operates with an approved Mine Closure Plan (MCP). As stated in Section 6.6.5 of the ERD, the most recent revision of the MCP (v4, dated 30 March 2021) was approved by DMIRS in July 2021 (REG ID: 96627). The MCP will be revised periodically across the life of the Proposal to reflect advancements in knowledge and learnings from rehabilitation trials, and to include closure of additional LOM components, including the storage of REPF by-products. MWM’s key proposed closure objective is to design all landforms within the constraints of the waste material properties, to ensure they are physically (geo-technically) stable, (geo-chemically) non-polluting / non-contaminating, and capable of sustaining an agreed post-mining land use.</p> <p>A revision to the MCP which includes the by-product storage landform along with a Summary of Post Closure Monitoring and Reporting plan, was written in accordance with Statutory Guidelines for Mine Closure Plans (DMIRS, 2020) and submitted to DMIRS on 14 April 2023 and is currently under assessment in parallel with the assessment of this Proposal.</p> <p><u>Public and Stakeholder Engagement</u></p> <p>Section 3 of the ERD details the comprehensive stakeholder engagement programme conducted by MWM for this Proposal. MWM has engaged with the community about the impacts of its proposals and has an excellent track record of working closely with the Laverton community since the commencement of activities at Mt Weld in 2011. To this end, MWM held two Information Sessions in Laverton which were advertised and opened to the local community to engage on the Proposal. No issues of concern relevant to the environmental aspects of the ERD were raised by the community at these forums.</p> <p>Additionally, assessment of this Proposal has included a seven-day consultation period at referral and a four-week public review of the ERD. Only one public submission was received from the review period.</p> <p>On the 9 June 2023, MWM provided a Project site tour for representatives from Department of Jobs, Tourism, Science, & Innovation (JTSI), DWER – Part V (Major Projects) and DMIRS (Mines Safety). The site tour provided an opportunity for JTSI and DWER – Part V to see firsthand MWM effective management, safely secured and environmentally responsible tailings management and discuss potential radiation impacts in the presence of a DMIRS (Mines Safety – Radiation) Subject Matter Expert who was able to respond independently, (DMIRS Inspection Record: Reference ID: SV-328-528873).</p>

2	ANON-5PZY-4J5C-E	<p>Potential environmental and health impacts include hydrocarbons spillage, groundwater evaporation from waste storage structures, and seepage of toxic products. If not properly managed, these impacts could exceed those observed in Kuantan, Malaysian Lynas mine, where the proponent store RE by-products such as Iron Phosphate and Gypsum. This poses a significant threat to local communities and the environment.</p>	<p>The potential environmental and health impacts together with mitigation measures are presented within the ERD as part of the Proposal for assessment. The Proposal does not pose a significant threat to local communities or the environment. Further details of Lynas' demonstrated environmental management and compliance are set out below.</p> <p>In respect of the comment in relation to the "Kuantan, Malaysian Lynas mine" no details or evidence of any alleged impacts have been provided in the public comment. Lynas does not operate a mine in Malaysia. Lynas' Malaysian processing facility is regulated by the relevant Malaysian regulatory authorities and has been subject to environmental assessment under Malaysian law. Lynas' Malaysian processing facility has been the subject of four independent scientific reviews, including two reviews by the International Atomic Energy Agency (IAEA) and the Malaysian Government's 2018 Executive Review Committee. All of the reviews have found that Lynas Malaysia is low risk and compliant with the relevant laws and regulations. The 2015 IAEA Report stated that "...the fears demonstrated by those who oppose the continuation of the operations did not find any support on scientific evidence.". No impacts to environment and health have been observed in Kuantan. Lynas has never been involved in an incident resulting in harm to public health or the environment, reflecting the strength of our processes and policies.</p> <p><u>Demonstrated Environmental Management and Compliance</u></p> <p>MMW implements various Management Plans and Procedures to ensure compliance with existing environmental approvals under the <i>Environmental Protection Act, 1986</i> (EP Act) (e.g., Prescribed Premises Licence L8141/2007/2) and the <i>Mining Act, 1972</i> (Mining Act), with regards to chemical and hydrocarbon management, groundwater and surface management and tailings management including:</p> <ul style="list-style-type: none"> • Environmental Management Plan (Groundwater MP within) (MTW-EN-PLA-0001) • Surface Water Management Plan (MTW-EN-PLA-0009) • Chemical and Hydrocarbon Management Plan (MTW-EN-PLA-0011) • Chemical and Hydrocarbon Spill Response Procedure (MTW-EN-SOP-0002) • Tailings Storage Facility and Evaporation Pond Operating Manual (MTW-PR-MAN-0002) • Surface and Groundwater Monitoring Procedure (MTW-EN-PRO-0022) • Emergency Response Management Plan (MTW-EN-PLA-0001) <p>Proposed management, mitigation, monitoring and contingency measures are defined in respective management plans which are prepared in consultation with relevant Decision Making Authorities including DWER as part of its assessment and approvals under Part V of the EP Act.</p> <p>It is noteworthy that after ten years of seepage monitoring from Mt Weld's lined tailings facilities shows negligible impacts to water quality and groundwater levels which aligns with seepage modelling assessments.</p> <p>Since 2013, water monitoring data has and will continue to be submitted to DWER and DMIRS annually, which reports on pH, salinity, major anions and cations, heavy metals and radiation.</p> <p><u>Extensive Knowledge Base to Inform Impact Assessments</u></p> <p>MWM has commissioned a range of extensive investigations and assessments to fully characterise the receiving environment within which the Project is sited. These investigations have been conducted by subject matter experts in their respective fields and in accordance with established technical guidelines including those published by the WA EPA.</p> <ul style="list-style-type: none"> • Mt Weld Mine TSF Seepage Assessment (AECOM, June 2018) • Mt Weld TSF4 Seepage Assessment (AECOM, 2023) • Heritage Site Identification (and Work Area Clearance) – Mt Weld Central Lanthanide Deposit (Tenements L38/224, G38/35, G38/34) (Taylor, 2019) • Long-tailed Dunnart Desktop Assessment (Stantec, January 2019) • Memorandum- Heritage Advice Australia Pty Ltd: Aboriginal Heritage Surveys – Results Summary (Heritage Advice Australia, October 2019) • Report on Archaeological Assessment and Site Recording at Mount Weld Concentration Plant (Archae-aus, October 2019) • Mt Weld Level 1 Subterranean Fauna Assessment (Stantec, November 2019) – provided with ERD • Mt Weld Proposed TSF Expansion Desktop Topsoil Resources Assessment (Stantec, 2019) • Mt Weld Waste Materials Characterisation (Stantec, 2020b) • Mt Weld Rare Earths Project: Detailed Flora and Vegetation Survey – Phase 2 (Stantec, February 2021) – provided with ERD • Technical Review – Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey (Onshore Environmental, December 2020) – provided with Referral • Technical Review – Mt Weld Rare Earths Project: Detailed Flora and Vegetation Survey (Onshore Environmental, February 2021) – provided with Referral • Report on Aboriginal Heritage Survey and Consultation for Lynas Mt Weld (Integritat, March 2022) – provided with ERD • Mt Weld Rare Earths Project: Proposed Disturbance Footprint Impact Memorandum (Onshore Environmental, April 2022) – provided with Referral • Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey (Stantec, March 2023) – provided with ERD <p>Seepage modelling (AECOM, April 2023) indicates that proposed infrastructure will not have a significant impact on the groundwater regime and ultimately all local groundwater flows to the open pit hydraulic sink, rather than towards the west and Lake Carey. The predicted impact of proposed TSF4, evaporation ponds and byproduct landform on groundwater is localised and cannot be observed in regional groundwater setting.</p>
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2.4 Inland Waters

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	<p>The proposal has significant water requirements which may disrupt water supply for the area.</p> <p>The proponent has access for abstraction of up to 4 GL of water per year from the Mt Weld Carbonatite Aquifer in partnership with Goldfields Granny Smith, and from October will be the sole abstractor. An assessment indicated there may be 18 GL remaining in the Carbonatite Aquifers. The proponent intends to abstract 2.8 GL per year, and to source from alternative aquifers or water sources if supplementary supplies are required. These alternative sources will likely be the few community water sources in the area and may lead to disruption of water supply for the area. There is concern that similar outcomes to the Lynas Malaysian mine could occur, where water supply has been abruptly and regularly disrupted for locals since 2013.</p>	<p>The Carbonatite Aquifer is a semi-confined aquifer that is disconnected from any public drinking water resources. The Proposal, which proposes alternative sources of water from within the Development Envelope, will not impact on community water sources nor will it disrupt water supply for the area.</p> <p>In respect of the comment in relation to the “Lynas Malaysia Mine” no details or evidence of any alleged impacts have been provided in the public comment. Lynas does not operate a mine in Malaysia. Lynas does not abstract groundwater in Malaysia. The water used by Lynas in its Malaysian processing facility is sourced from a third-party supplier, PAIP, who is the local water utility provider. Disruptions to the water supply in the city of Kuantan are unrelated to Lynas Malaysia’s operation and it is misleading to suggest otherwise.</p> <p>No Impacts to Laverton Community Drinking Water Supply</p> <p>With regard to potential risks to contamination of drinking water resources used by the local community, reference is made to Laverton Water Reserve and Catchment Area Drinking Water Source Protection Plan, Laverton Town Water Supply, Report No. 74 (June 2007) which clearly defines the boundary of the gazetted and proposed Laverton Water reserve and catchment areas. These boundaries do not extend to the Mt Weld Rare Earths Project nor the anticipated zone of influence of its activities. The Proposal does therefore does not have any impact on community water sources.</p> <p>As stated in Section 5.3.4 of the ERD, the Proposal will provide an opportunity to optimise on-site water treatment and recycling measures to reduce the overall Project water intensity.</p> <p>As part of the Proposal, installation and operation of a state-of-the-art water recycling plant will significantly reduce aquifer abstraction intensity, and new borefields will be established to provide additional brackish water supply to complement abstraction of and to reduce reliance on the Carbonatite Aquifer.</p> <p>This new water recycling plant:</p> <ul style="list-style-type: none"> • Represents 5 years of development work. • Addresses water quality challenges of silica, organics and hardness fouling membranes to deliver a robust flowsheet. • Is a step change improvement in tailings supernatant water recycling (30% to +90%). <p>Demonstrated Environmental Management and Compliance</p> <p>MMW implements various Management Plans and Procedures to ensure compliance with existing environmental approvals under the EP Act (e.g., Prescribed Premises Licence L8141/2007/2) and the Mining Act, with regards to chemical and hydrocarbon management, groundwater and surface management and tailings management including:</p> <ul style="list-style-type: none"> • Environmental Management Plan (Groundwater Management Plan within) (MTW-EN-PLA-0001) • Surface Water Management Plan (MTW-EN-PLA-0009) • Chemical and Hydrocarbon Management Plan (MTW-EN-PLA-0011) • Chemical and Hydrocarbon Spill Response Procedure (MTW-EN-SOP-0002) • Tailings Storage Facility and Evaporation Pond Operating Manual (MTW-PR-MAN-0002) • Surface and Groundwater Monitoring Procedure (MTW-EN-PRO-0022) • Emergency Response Management Plan (MTW-EN-PLA-0001) <p>Proposed management, mitigation, monitoring and contingency measures are defined in respective management plans which are prepared in consultation with relevant Decision Making Authorities, including DWER, as part of its assessment and approvals under Part V of the EP Act.</p> <p>Seepage modelling (AECOM, April 2023) indicates that proposed infrastructure will not have a significant impact on the groundwater regime and ultimately all local groundwater flows to the open pit hydraulic sink, rather than towards the west and Lake Carey. The predicted impact of proposed TSF4, evaporation ponds and byproduct landform on groundwater is localised and cannot be observed in regional groundwater setting.</p> <p>Outcomes of previous fate and transport modelling (AECOM, 2014) concluded the predicted concentrations at the groundwater table were between one and two orders of magnitude below the ANZECC (2000) guidelines for livestock drinking water. Furthermore, leachate data for the selected radionuclides (lead, thorium, and uranium) indicated that the radioactivity levels are below the criteria of 1 mSv/yr for individual radionuclides, which are considered to be the ‘worst case’ concentrations.</p> <p>A summary of the existing monitoring and inspection programme implemented at the Project is included as Appendix C of the ERD. Groundwater is monitored in accordance with amended DWER Licence L8141/2007/2, and MWM will extend this monitoring programme to monitor potential impacts associated with the Proposal, in accordance with relevant Works Approval applications associated with Proposal activities, under Part V of the EP Act.</p> <p>It is noteworthy that after ten years of seepage monitoring from the Project’s lined tailings facilities shows negligible impacts to water quality and groundwater levels which aligns with seepage modelling assessments. Since 2013, water monitoring data has and will continue to be submitted to DWER and DMIRS annually, which reports on pH, salinity, major anions and cations, heavy metals and radiation.</p>

No.	Submitter	Submission and/or Issue	Response to Comment
2	ANON-5PZY-4J5C-E	<p>The expansion has potential to result in contamination of confined and unconfined aquifers at Mt Weld, and surrounding regions, including the Laverton Water Reserve and Catchment Area, located 40 km away from the proposal area and 5 km away from the waste materials transport route. The storage of waste might be for at least 10,000 years, which raises concerns about potential seepage that could affect the drinking water source for the Shire of Laverton.</p> <p>Safeguarding against the contamination is crucial due to the aquifers being the sole drinking water source in the area. Mineral exploration increases the risk of pathogen contamination, as well as hydrocarbon and chemical hazards, jeopardising the provision of safe, affordable, and reliable water to the region. There is concern about the possibility of similar incidents to the Lynas Malaysian mine, where significant groundwater contamination was detected by the Malaysian government in 2018.</p>	<p>MWM refers to its response set out in (1) above. The Carbonatite Aquifer is a semi-confined aquifer that is disconnected from any public drinking water resources. The Proposal which proposes alternative sources of water from within the Development Envelope will not impact on community water sources, nor will it disrupt water supply for the area.</p> <p>In respect of the comment in relation to the “Lynas Malaysian mine” no details or evidence of any alleged impacts have been provided in the public comment. Lynas does not operate a mine in Malaysia. Lynas’ Malaysian processing facility is regulated by the relevant Malaysian regulatory authorities and has been subject to environmental assessment under Malaysian law. Lynas’ Malaysian processing facility has been the subject of four independent scientific reviews, including two reviews by the International Atomic Energy Agency (IAEA) and the Malaysian Government’s 2018 Executive Review Committee. All of the reviews have found that Lynas Malaysia is low risk and compliant with the relevant laws and regulations. The 2015 IAEA Report stated that “...the fears demonstrated by those who oppose the continuation of the operations did not find any support on scientific evidence.” No impacts to environment and health have been observed in Kuantan. Lynas has never been involved in an incident resulting in harm to public health or the environment, reflecting the strength of our processes and policies.</p> <p>Lynas carries out regular, ongoing environmental monitoring (including groundwater monitoring) of its Malaysian processing facility. No groundwater contamination due to Lynas has been detected by either Lynas or the Malaysian regulatory authorities. The Malaysian Department of Environment confirmed in 2018 that water leaving the Gebeng Industrial Estate (GIE) is of a higher quality than water entering the industrial estate due to water treatment undertaken at the GIE. Furthermore, in May 2019, the Minister for Water, Land and Natural Resources said the latest tests gave negative readings of heavy metals.</p>

2.5 Greenhouse Gas Emissions

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	<p>The proponent’s transition to a lower Greenhouse Gas (GHG) emissions fuel supply is welcomed, however, gas-hybrid power still generates significant emissions. It is recommended that a shift towards a fully renewable energy sources is considered to align with net-zero goals.</p>	<p>Lynas recognises the global challenges of climate change and supports the Paris Agreement goal to limit the global temperature increase to well-below 2°C compared to pre-industrial levels and have developed a publicly available Greenhouse Gas Policy: https://lynasrareearths.com/wp-content/uploads/2021/09/GHG-Policy-September-2021.pdf</p> <p>Lynas is committed to net zero 2050 through its membership of the Minerals Council of Australia and Lynas will seek to increase renewable penetration as baseload power storage technologies improve.</p> <p>Greenhouse Gas Emissions were not considered as an Environmental Factor for Part IV Assessment as emission estimates are unlikely to exceed:</p> <ul style="list-style-type: none"> • 100,000 tonnes CO₂-e of scope 1 emissions in any year; or • 100,000 tonnes CO₂-e of scope 2 emissions in any year. <p>As set out in the LOM, renewable energy sources (wind, solar and battery storage) will be installed to operate in parallel with the gas-hybrid power.</p> <p>Lynas will continue to report publicly through annual Environmental, Social, and Governance reports available via Lynas’ website and to the Clean Energy Regulator via National Greenhouse Gas and Energy Reporting.</p>

2.6 Social Surroundings

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	The proposal area contains 3 Registered Aboriginal Heritage Sites, which will undoubtedly be impacted by the Mt Welds Rare Earth project expansion.	<p>MWM, in consultation with the Nyalpa Pirniku Native Title Claimant group, have established a Social Surrounds and Cultural Heritage Management Plan (SCHMP) for implementation at the Proposal with a key objective to protect Aboriginal Heritage Sites.</p> <p>A workshop was held with representatives and senior elders, from the Nyalpa Pirniku Native Title Claimant group in May 2022 to discuss the key objectives, management measures and reporting actions for inclusion in the SCHMP. A draft revision of the document was prepared for stakeholder review and comment, and the agreed SCHMP was signed on 6 February 2023 by a senior representative from the Nyalpa Pirniku Native Title Claimant group and Lynas' CEO.</p> <p>The SCHMP will be implemented to ensure future best-practice management of Aboriginal heritage sites across the Proposal area, and will be implemented to meet the following objectives:</p> <ol style="list-style-type: none"> 1. Establish a framework and process to identify and record significant heritage sites and cultural values in collaboration with the relevant Traditional Owners. 2. Avoid, where possible, and minimise impacts to significant heritage sites and cultural values. 3. Proactively manage and minimise potential indirect impacts, including visual, noise, dust and vibration impacts to social and cultural places and activities. 4. Where possible, maintain access to areas for the relevant Traditional Owners to undertake traditional activities. 5. Avoid, where possible, and minimise impacts to culturally significant flora and fauna. 6. Avoid, where possible, and minimise changes to water regimes of water resources known to have Aboriginal cultural values. 7. Establish a framework for ongoing consultation with the relevant Traditional Owners through the life cycle of the Project. 8. Work collaboratively with the relevant Traditional Owners to identify training, employment and contracting opportunities, in association with, but not limited to the objectives above. <p>In accordance with the SCHMP, MWM submitted a notice under Section 18 of the AHA (dated 13 January 2023) to the Aboriginal Cultural Material Committee (ACMC) for consent to disturb Lodged Sites which are located within the proposed Area of Disturbance. This application was prepared with the consent of Nyalpa Pirniku, and MWM will invite representative from the Nyalpa Pirniku Native Title Claimant group to assist with salvage activities.</p> <p>The request was approved by the Minister of Aboriginal Affairs on 20 June 2023 (ref. 80-10088), in a letter that stated:</p> <p><i>"I take this opportunity to acknowledge the consultation that Lynas Rare Earths Ltd has undertaken with representatives of the Nyalpa Pirniku People's Native Title Claim group and support the agreements that have been reached. I note that support was provided subject to:</i></p> <ul style="list-style-type: none"> • <i>cultural salvage being undertaken prior to the initial ground disturbing activities;</i> • <i>ongoing consultation with Nyalpa Pirniku representatives; and</i> • <i>the establishment of a comprehensive Social Cultural Heritage Management Plan (SCHMP) that will cover heritage, social values and environmental considerations.</i> <p><i>I also note that Lynas Rare Earth Ltd has agreed to the above requests and express my appreciation."</i></p> <p>MWM considers that this acknowledgement demonstrates MWM's commitment to close consultation with the Nyalpa Pirniku Native Title Claimant Group at all phases of Proposal development, and a commitment to protect heritage values at the site.</p>

2.7 Human Health

No.	Submitter	Submission and/or Issue	Response to Comment
1	ANON-5PZY-4J5C-E	<p>The proposal will increase radiation exposure risk to health of workers, environment, and community. The proposal should be considered a nuclear action under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) and trigger EPBC assessment.</p> <p>There is a strong view that the proposed activities of transporting and storing radioactive waste are nuclear actions under the EPBC Act:</p> <ol style="list-style-type: none"> transporting spent nuclear fuel or radioactive waste products. establishing or significantly modifying a facility for storing radioactive waste products – and therefore be a nuclear action and trigger EPBC assessment. <p>The proponent intends to process 1.15 million tonnes per annum (tpa) of RE from the deposit from Mt Weld. The RE deposit will contain 1,630 ppm of thorium and 43 ppm of uranium. The proponent is aiming to process the RE deposit to reduce the combined NORM content of thorium and uranium to 6.5 bp/g.</p> <p>The EPBC Regulations 2000 section 2.02 outlines the trigger for Nuclear activity level (Act s 22(1)):</p> <ol style="list-style-type: none"> For paragraphs (c) and (d) of the definition of nuclear installation in subsection 22(1) of the Act, the activity level is: <ol style="list-style-type: none"> if the installation contains only 1 type of nuclide and all sources of that nuclide are sealed sources—109 times the activity value for the nuclide set out in Part 1 of Schedule 1 to the Australian Radiation Protection and Nuclear Safety Regulations 2018; or if the installation contains only 1 type of nuclide and all sources of that nuclide at or above the activity concentration value mentioned for the nuclide in Part 1 of Schedule 1 to the Australian Radiation Protection and Nuclear Safety Regulations 2018 are unsealed sources—106 times the activity value for the nuclide set out in that Part; or in any other case—a level for which a mixture of sealed and unsealed sources of nuclides is excessive. 	<p>The Mt Weld LOM Proposal in respect of radiation exposure, radiation management and NORM storage, does not result in any relevant change to the previously approved Mt Weld Rare Earths Project under Ministerial Statement 476 with regards to exposure risk to health of workers, environment and community. MWM's Ministerial Statement allows for handling and stockpiling of NORM (i.e. tailings, low level mineralised ore).</p> <p>The Proposal will be implemented in a manner that protects the community and the environment. Preventative Actions described in the Mt Weld LOM Proposal ERD and approved RMP (v10), include mitigation and management measures consistent with ARPANSA Code of Practice and Safety Guide "Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing" (RPS-9) (ARPANSA (2005)).</p> <p><u>Demonstrated Radiation Management and Compliance</u></p> <p>Mt Weld rare earths are found alongside low-level radioactivity that is classified as Naturally Occurring Radioactive Material (NORM) (>1 Bq/g). It is not considered radioactive for transport purposes (<10 Bq/g) and has very low radioactivity in comparison to other rare earth and mineral sands projects in Western Australia. Radionuclide concentrations of RE concentrate and the IP are very similar. In relation to IP by-products to be transported and stored at Mt Weld from the Kalgoorlie REPF, a comprehensive characterisation of NORM and the radionuclide department is set out in the Kalgoorlie Radiation Impact Assessment and RMP documents, which were included as Appendix T and Appendix U of the Kalgoorlie REPF ERD, which has already been the subject of an EPA Assessment (2269) and Ministerial Statement 1181. The Kalgoorlie REPF ERD presents an assessment of potential radiation exposure under a range of scenarios during the handling and transport of by-products, each of which concludes that the exposure risks are extremely low.</p> <p>Monitoring of mining operations at Mt Weld indicates that the exposure dose for plant operators is a fraction of and well below statutory limits. Doses to occupational workers are conservatively estimated to be less than 1 mSv/yr, which is well below the 20 mSv/yr limit for radiation workers. These occupational doses have remained around the public exposure limit (1 mSv/yr) throughout Mt Weld operational history, against a maximum annual occupational dose of 1.3 mSv/yr (7% of limit for radiation workers). Environmental levels have remained unchanged throughout Mt Weld operational history. While some radiation exposures will continue to be detectable as part of Mt Weld operations, the Proposal demonstrates that neither employees, members of the public, nor the environment would be adversely impacted by radiation from Mt Weld operations under this Proposal. The Proposal does not increase radiation exposure risk to health of workers, environment and community.</p> <p>MWM considers that the Proposal's anticipated increase in transport movements presents minimal risk of radiation exposure for the public. Such public radiation exposure is extremely low and would be indistinguishable from natural background radiation. There are very few circumstances conceivable in which members of the public would be sufficiently close to concentrate or IP by-product being transported for long enough that they would absorb doses discernible from background levels. Public doses are only likely as a result of concentrate transport from Mt Weld to the Kalgoorlie REPF, with doses estimated between 0.0001 to 0.0015 mSv/year which is well under 1% of the 1 mSv/year limit.</p> <p>There is no expected radiological impact to non-human species outside the Proposal area.</p> <p>MWM is currently in revision 10 dated 5 November 2021 of its RMP approved by DMIRS in March 2022 (Appendix I of Mt Weld LOM Proposal ERD) which outlines management controls and a monitoring programme for human health and the environment. MWM has not recorded any radiation incidents across the Project's history. Monitoring data is reported to DMIRS annually, and MWM has a collaborative and transparent relationship with regulatory agencies.</p> <p>MWM has been carrying out environmental and radiation management at the Mt Weld Rare Earths Project site since 2011, and have demonstrated that Mt Weld concentrate, ore and tailings have all been effectively managed, safely secured and environmentally non-polluting, in accordance with the approved RMP.</p> <p>The health, safety and comfort of the MWM workforce is regulated under the <i>Work Health and Safety Act, 2020</i>, administered by DMIRS, and access to the Project area is restricted as is a requirement under the <i>Mines Safety and Inspections Act, 1994</i> (MSIA). The operations will continue to be regulated by the Radiological Council and DMIRS, and managed in accordance with the current RMP, as approved.</p> <p>The Mt Weld LOM Proposal does not result in any material or significant change in respect of radiation exposure, radiation management or NORM storage from prior approvals.</p> <p><u>Demonstrated NORM Storage Facility Management and Compliance</u></p> <p>MWM has effectively managed NORM at the Mt Weld Rare Earths Project site since 2011, and during that time has demonstrated that Mt Weld concentrate, ore and tailings are safely secured and environmentally non-polluting, in accordance with the approved RMP (v10, dated 5 November 2021). The NORM radiation level of the IP by-product has a specific activity in the range of 6.0 – 6.5 Bq/g, which is similar to the Mt Weld concentrate and therefore there is no increased impact as a result of the Proposal.</p> <p>As stated in Section 3.3.1 of the ERD, the current version of the RMP was approved by the Department of Mines, Industry, Regulation and Safety (DMIRS) on 21 March 2022. The RMP is revised on an iterative basis and will continue to be revised in consultation with DMIRS and the Radiological Council to incorporate LOM components, as required.</p> <p>MWM is recognised to be an industry leader in tailings management with demonstrated best practice. In October 2022, MWM was a finalist for the prestigious Golden Gecko Award for Environmental Excellence, administered by DMIRS. The Golden Gecko Awards recognise leading practice and innovation in environmental management and provides an opportunity to share experiences between government, industry and the community. MWM's submission was for the adoption of the Accelerated Mechanical Consolidation (AMC) process for tailings management at Mt Weld, which has resulted in a 50% reduction in the total tailings footprint over the LOM. MWM will adopt this best practice for future tailings storage including TSF4.</p> <p><u>Mine Closure Planning and Post Closure Monitoring</u></p> <p>MWM operates with an approved MCP. As stated in Section 6.6.5 of the ERD, the most recent revision of the MCP (v4, dated 30 March 2021) was approved by DMIRS in July 2021 (REG ID: 96627). The MCP will be revised periodically across the life of the Proposal to reflect advancements in knowledge and learnings from rehabilitation trials, and to include closure of additional LOM components, including the storage of REPF by-products. MWM's key proposed closure objective is to design all landforms within the constraints of the waste material properties, to ensure they are physically (geo-technically) stable, (geo-chemically) non-polluting / non-contaminating, and capable of sustaining an agreed post-mining land use.</p>

No.	Submitter	Submission and/or Issue	Response to Comment
			<p>A revision to the MCP which includes the by-product storage landform along with a Summary of Post Closure Monitoring and Reporting plan, was written in accordance with Statutory Guidelines for Mine Closure Plans (DMIRS, 2020) and submitted to DMIRS on 14 April 2023 and is currently under assessment in parallel with the assessment of this Proposal.</p> <p>Public and Stakeholder Engagement</p> <p>Section 3 of the ERD details the comprehensive stakeholder engagement programme conducted by MWM for this Proposal. MWM has engaged with the community about the impacts of its proposals and has an excellent track record of working closely with the Laverton community since the commencement of activities at Mt Weld in 2011. To this end, MWM held two Information Sessions in Laverton which were advertised and opened to the local community to engage on the Proposal. No issues of concern relevant to the environmental aspects of the ERD were raised by the community at these forums.</p> <p>Additionally, assessment of this Proposal has included a seven-day consultation period at referral and a four-week public review of the ERD. Only one public submission was received from the review period.</p> <p>Management of low-level NORM regulated by other Decision-Making Authorities</p> <p>As stated in Section 1.6.4 of the Mt Weld LOM Proposal ERD, as part of its expansion strategy, Lynas gained Ministerial approval (MS 1181) to construct a REPF near the town of Kalgoorlie. As there is presence of Naturally Occurring Radioactive Materials (NORM) in the Mt Weld RE concentrate feed and in the IP by-product produced by the REPF, the REPF proposal was referred to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) under the <i>Environmental Protection and Biodiversity Conservation Act, 1999</i> (EPBC Act) to assess whether the Proposal triggered the definition of “Nuclear Action” under the EPBC Act (Section 22(1)(g)) and the EPBC Regulations (Regulation 2.02), (DAWE, EPBC Ref: 2020/8719). The DAWE determined that Kalgoorlie’s Proposal is not a controlled action and approval under the EPBC Act was not required. Lynas proposed that all potential impacts could be fully managed and regulated through State-based legislation administered by the WA EPA, DWER, Radiological Council of WA and DMIRS.</p> <p>In the Appeals Convener’s Report to the Minister for Environment dated December 2021, regarding Appeals objecting to Report and Recommendations of EPA Report 1712 – Kalgoorlie REPF, the Appeals Convener found “<i>We also accept the EPA’s advice that the management of low-level radioactive materials will be regulated by other decision-making authorities under specific regulations and codes that have the objective of protecting human health and the environment from the harmful effects of radiation</i>”. (Office of Appeals Convener, 2021).</p> <p>Furthermore, the Appeals Convener noted “<i>the capacity of other statutory decision-making processes, under specific regulations and codes, have the objective of protecting human health and the environment from the harmful effects of radiation</i>” (Office of Appeals Convener, 2021).</p> <p>The Radiological Council has also provided advice to the EPA that the transport of products back to Mt Weld will be managed under the Radiation Safety (Transport of Radioactive Substances) Regulations, which require compliance with the ARPANSA Code for the Safe Transport of Radioactive Material.</p> <p>Ample additional evidence exists regarding the State’s acknowledgement of there being adequate State agency led regulatory oversight for the proposed development and implementation of the Proposal.</p>
2	ANON-5PZY-4J5C-E	It is unclear whether or not the trigger for Nuclear activity level applies based on the details provided. This should be taken into consideration, and the key knowledge gaps about the nuclide content in on-site tailings and wastes produced at Kalgoorlie REPF needs to be clearly addressed. This is not clear in the proposal, or may not easily be identifiable. This aspect of the project poses significant risks to public health, worker safety, and the environment and warrants a comprehensive assessment with the ability for the public to input with adequate time allowed for meaningful engagement.	MWM refers to its response at (1) above.

No.	Submitter	Submission and/or Issue	Response to Comment
3	ANON-5PZY-4J5C-E	<p>The proposed mining of Rare Earth (RE) concentrate, containing naturally occurring radioactive materials (NORM), poses long-term risks to the environment, communities, and workers. The inclusion of permanent storage of radioactive processing wastes from the Kalgoorlie facility in the Mt Weld proposal is not clearly articulated in the mine closure plan. The scale and impact of storing radioactive wastes are significant. The assessment of Radiation Management Plan without any public engagement and potentially not being publicly available sets a dangerous precedent. There is a need for a higher level of assessment with public engagement. Effective management of REE wastes including effective and long-term management of uranium mine wastes has yet to be demonstrated.</p>	<p>MWM refers to its response at (1) above. The Mt Weld LOM Proposal will not have a significant impact on the environment.</p> <p>Comparison of REPF by-products or tailings from the Mt Weld Rare Earths Project with uranium mine wastes is erroneous and misleading. Under the ARPANSA (RPS C3, 2008) and IAEA (GSG-11, 2009) Waste Codes, the IP by-product is considered a Very Low Level Waste.</p>

Table 8-1: Fauna Habitats within Survey Area and Proposed Development Envelope

Habitat	Vegetation Description	SRE Potential	Survey Area		Undisturbed within DE ^[1]		Existing Disturbance within DE ^{[1],[2]}		Area which has potential to be directly impacted by the proposal (worst-case)		Proposed LOM Disturbance within DE limited to 80%	
			Extent (ha) within Survey Area	Proportion (%) within Survey Area	Undisturbed Extent (ha)	Undisturbed Proportion (%)	Existing Disturbance Extent (ha)	Existing Disturbance Proportion (%)	Proposed Development Envelope (ha)	Proposed Development Envelope Proportion (%)	Proposed Disturbance Extent (ha)	Proposed Disturbance Proportion
Mulga on clay loam	<i>Acacia aneura</i> low open forest over <i>Acacia ramulosa</i> var. <i>ramulosa</i> tall shrubland over <i>Eremophila latrobei</i> subsp. <i>Filiformis</i> and <i>Eremophila margarethae</i> low open shrubland.	Low	2,644.11	81.24%	2,233.46	93.06%	389.59	96.97%	2,623.05	93.62%	2,241.6	80%
Mulga on stony plain	<i>Acacia aneura</i> low woodland over <i>Acacia tetragonophylla</i> open shrubland over <i>Acacia caesaneura</i> , <i>Maireana</i> sp. And <i>Ptilotus obovatus</i> low scattered shrubs.	Low	137.97	4.24%	104.94	4.37%	0.57	0.14%	105.51	3.76%		
Stony rise	<i>Hakea preissii</i> and <i>Acacia</i> sp. Low open woodland over <i>Senna</i> sp. And <i>Sida</i> sp. Shrubland over <i>Maireana</i> sp. And <i>Ptilotus obovatus</i> low open shrubland.	Medium	108.13	3.32%	37.93	1.58%	1.45	0.36%	39.38	1.40%		
Shrub plain	<i>Acacia aneura</i> low open woodland over <i>Acacia tetragonophylla</i> and <i>Santalum spicatum</i> tall open shrubland over <i>Eremophila youngii</i> subsp. <i>Youngii</i> scattered shrubs over <i>Ptilotus obovatus</i> scattered low shrubs.	Medium	16.98	0.52%	16.62	0.70%	0	0%	16.62	0.59%		
Low mulga on clay loam	<i>Acacia aneura</i> , <i>Acacia caesaneura</i> and <i>Acacia aptaneura</i> low open forest over <i>Acacia tetragonophylla</i> and <i>Santalum spicatum</i> tall open shrubland over <i>Ptilotus obovatus</i> scattered low shrubs.	Low	9.76	0.30%	5.17	0.22%	0	0%	5.17	0.18%		
Cleared	N/A	Low	326.01	10.02%	0	0%	10.19 ^[3]	2.53% ^[3]	10.19	0.36%		
Outcropping (excluded)	<i>Acacia aneura</i> , <i>Acacia pteraneura</i> , <i>Acacia ayersiana</i> low woodland over <i>Acacia minyura</i> tall, scattered shrubs over <i>Eremophila</i> sp., <i>Maireana</i> sp. And <i>Ptilotus obovatus</i> low open shrubland.	High	6.61	0.20%	1.85	0.07%	0	0%	1.85	0%	0	0%
Sparse shrubland on heavy clay	<i>Acacia aneura</i> , <i>Acacia pteraneura</i> and <i>Acacia aptaneura</i> low open woodland over <i>Acacia tetragonophylla</i> tall open shrubland over <i>Rhodanthe charsleyae</i> and <i>Sclerolaena</i> spp. Open hermland.	Low	5.24	0.16%	0	0%	0	0%	0	0%	0	0%
Totals			3,254.81	100%	2,400	100%	401.80	100%	2,802	99.93^[4]	2,241.6	80%

1. As of March 2023.
2. Existing disturbance within MS 476 Development Envelope (401.8 ha).
3. Elora Road historical disturbance within MS 476 Development Envelope.
4. Excludes 1.85 hectares of outcropping.

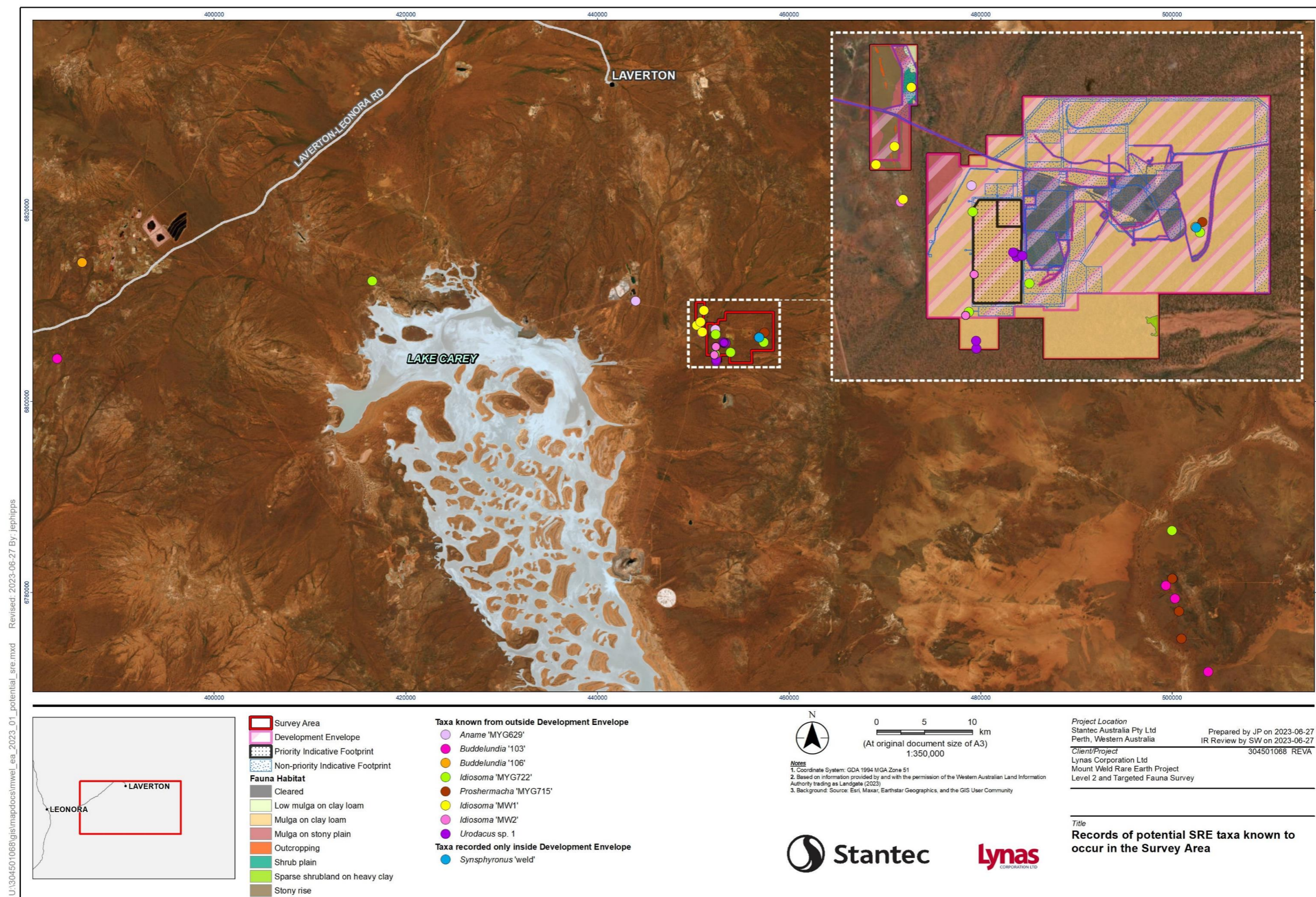


Figure 1: Records of potential SRE taxa known to occur within the Survey Area, and regional records

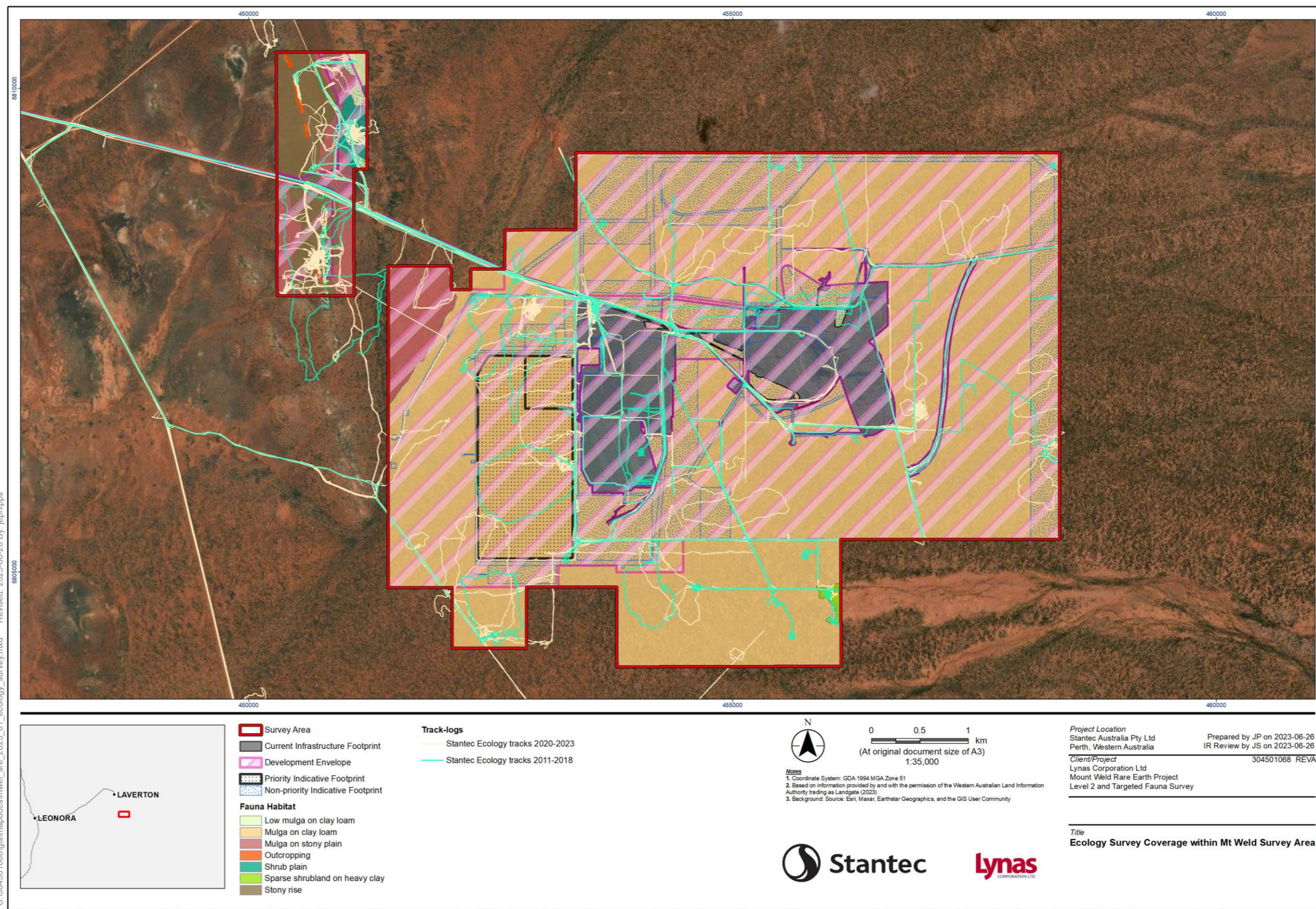


Figure 2: Historical Ecology Survey Coverage within Mt Weld Survey Area