

Mt Weld Mining Pty Limited Fauna Management Plan

Plan MTW-EN-PLA-0014_2 July 2023



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Version History

Version	Description	Author	Approved by	Date
9	Project EMP	KASA Consulting	OEPA (AC05-2015-0044)	15/09/16
MTW-EN-PLA-0014_1	Updated to current EPA Guidance	Carmel Sullivan Jade Pitman	Adam Cargill	07/03/23
MTW-EN-PLA-0014_2	Update to SRE provisions	KASA Consulting	Adam Cargill	20/07/2023

Executive Summary

Mt Weld Mining Pty Limited (MWM), a wholly owned subsidiary of Lynas made a referral for its Life of Mine Expansion under Section 38 of *the Environmental Protection Act, 1986 (EP Act)*, 16 August 2022. The EPA determined the level of assessment for the Proposal would be "Assessment on Referral Information – with Additional Information Requested", and issued a Notice Requiring Information for Assessment, under Section 40(2)(a) of the EP Act, dated 14 November 2022.

This Fauna Management Plan (FMP) forms part of additional information requested by EPA Services to progress assessment of the proposal. The purpose of this FMP plan is to provide a framework which describes how MWM will address, manage, monitor and mitigate potential impacts to terrestrial fauna and receiving environments during construction and operations, with a primary focus on key environmental factors of relevance to the EPA's assessment of the Project.

Project Name:	Mt Weld Rare Earths Project – Life of Mine Proposal				
Proponent Name:	It Weld Mining Pty Limited				
Ministerial Statement No.:	MS 476				
EPA Assessment Number:	2350 (Life of Mine Expansion)				
Purpose of Management Plan:	o provide a framework which describes how MWM will manage, monitor, nd mitigate potential impacts to terrestrial fauna values during the onstruction, operation phases of the Project.				
Key Environmental Factor:	Terrestrial Fauna				
Key Environmental Objectives:	 To protect terrestrial fauna so that biological diversity and ecological integrity are maintained¹. Specifically: Minimise disturbance and other environmental impacts on significant fauna habitats; Minimise fauna vehicle strikes; Minimise increase to introduced fauna; Minimal light pollution from Accommodation Camp; Minimise noise pollution from Accommodation Camp; and Avoid fauna entrapment. 				
Key Components in the Management Plan:	 Project description. Receiving Environment and Assessment of Potential Impacts. Management Plan Objectives and Actions. Monitoring and Reporting. Adaptive Management and Review of this Plan. 				
Proposed Construction Date:	July 2023				
Required Pre-Construction:	🛛 Yes 🗌 No				

Table 1: Management Plan Summary

Mt Weld Mining Pty Limited | Fauna Management Plan | February 2023

¹ Ecological integrity is the composition, structure, function and processes of ecosystems, and the natural range of variation of these elements.

Glossary

Term	Definition
AER	Annual Environmental Report
DMP	Department of Mines and Petroleum
EMP	Environmental Management Programme
EMS	Environmental Management System
EP Act	Environmental Protection Act, 1986
EPA	Environmental Protection Authority
На	Hectares
HDPE	High Density Polyethylene
Km	kilometres
LOM	Life of Mine
Lynas	Lynas Rare Earths Limited
Mining Act	Mining Act, 1978
MWM	Mt Weld Mining Pty Ltd
OEPA	Office of the Environmental Protection Authority
RE	Rare Earth
ROM	Run of Mine
SRE	Short-range Endemic
the Project	Mt Weld Rare Earths Project
TSF	Tailings Storage Facility

1. Context, Scope and Rationale

Lynas Rare Earths Limited (Lynas) is a publicly listed company incorporated in Australia and headquartered in Perth, Western Australia. Lynas was established as an ethical and environmentally responsible producer of rare earth (RE) materials, and today, the company is the world's only significant producer of separated RE materials outside of China.

The materials Lynas produces are essential inputs to future-facing technologies designed to lower carbon emissions and reduce energy consumption, as well as improve the efficiency, performance, speed, durability, and thermal stability of these emerging technologies. This includes permanent magnet motors for technologies such as electric vehicles and wind turbines.

Mt Weld Mining Pty Limited (MWM) is a wholly owned subsidiary of Lynas, and currently operates the Mt Weld Rare Earths Project (the Project).

The Project was originally assessed, approved and currently operates under the:

- WA Environmental Protection Act 1986 (EP Act) (Part IV and Part V); and
- WA Mining Act 1978 (Mining Act).

MWM referred its Life of Mine Expansion Project (the Proposal) under Section 38 of *the Environmental Protection Act, 1986 (EP Act)* on 16 August 2022. The Environmental Protection Authority (EPA) determined the level of assessment for the Proposal would be "Assessment on Referral Information – with Additional Information Requested", and issued a Notice Requiring Information for Assessment, under Section 40(2)(a) of the EP Act, dated 14 November 2022. Additional Information requests received from the EPA Services Division on 15 February 2023 included a request for an updated Fauna Management Plan in order to progress assessment of the proposal.

1.1 Purpose of Fauna Management Plan

The purpose of this FMP plan is to provide a framework which describes how the Proposal will address, manage, monitor and mitigate impacts to terrestrial fauna and receiving environment during construction and operations and incorporates previous management actions approved by EPA in the 2015 Mt Weld Environmental Management Programme Version 9 (KASA, 2015).

1.2 Project Description

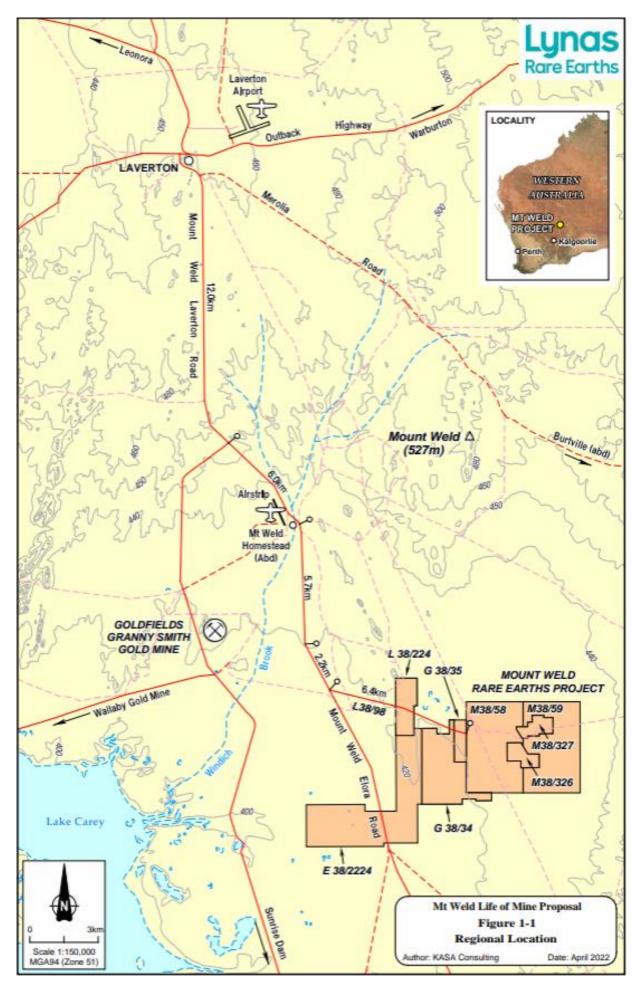
1.2.1 Current project

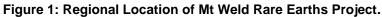
MWM operates the Mt Weld Rare Earths Project (the Project), which is located 35 kilometres (km) south-east of Laverton in the Northern Goldfields Region of Western Australia. The beneficiation plant has been operating for over ten years with four mining campaigns completed in that period.

Major components of Mt Weld Rare Earths Project are:

- A Rare Earths (RE) open pit mine;
- Groundwater extraction bores;
- Beneficiation plant, including power generation and water treatment;
- Tailings Storage Facilities (TSFs);
- Evaporation ponds; and
- Waste / low grade ore stockpiles.

The location of the Project is shown in Figure 1.





1.2.2 Proposed Life of Mine Expansion

MWM proposes to increase production to meet the growing global demand for RE products. This will entail expansion of its West Australian operations with the construction of the Rare Earth Processing Facility (REPF)in Kalgoorlie and expansion of the Mt Weld operations (mining, processing and ancillary activities) to a life of mine (LOM) extent.

The expansion relates to the proposed increase to the Development Envelope for the LOM from the currently approved 505 ha to 2,802 ha, to allow for expansion of sustainable infrastructure and activities including:

- A staged transition from diesel-fuelled power generation to gas hybrid renewable power generation, including solar and battery energy storage system, and future wind generation;
- A worker accommodation village;
- Additional borefield and tailings water recycling infrastructure to increase recycling rates from 50% to >90%;
- Tailings, residue and by-product storage facilities designed to allow reclaim and future re-processing of unrecovered REs;
- Larger mine, waste rock and by-product and landforms designed for progressive rehabilitation;
- An expansion of the existing ROM Pad; and
- Surface water management to capture seasonal rain events and to divert surface water into managed aquifer / ground water recharge that also acts as flood protection infrastructure for climate change resilience.

At this stage of project development, the footprints for proposed activities and infrastructure have been generally defined. Additional detailed design will be completed in order to define their specific location and area within the 2,802 ha Proposal's Development Envelope. It is anticipated that proposed activities and infrastructure 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) (Figure 2).

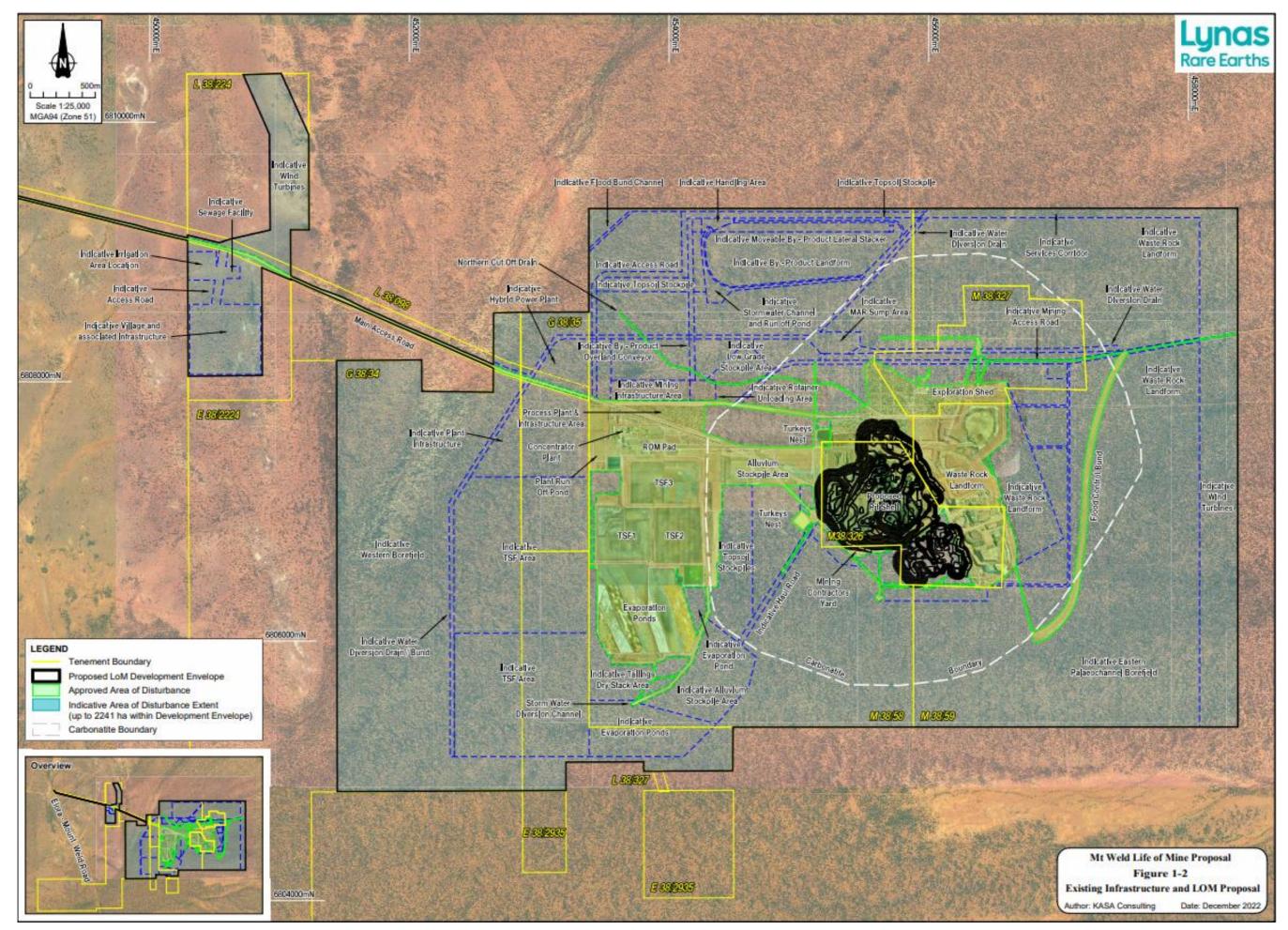


Figure 2: Existing Infrastructure and LOM Proposal

1.3 Key Environmental Factor – Terrestrial Fauna

The key environmental factor to which this Management Plan relates is Terrestrial Fauna.

The EPA's objective (EPA, 2016) for terrestrial fauna is:

"To protect terrestrial fauna so that biological diversity and ecological integrity are maintained".

Further guidance is contained in Environmental Factor Guideline: Terrestrial Fauna EPA, 2016.

EPA define ecological integrity as "the composition, structure, function and processes of ecosystems, and the natural range of variation of these elements".

In the context of the Mt Weld LOM Proposal, the intended outcome is to minimise terrestrial fauna impacts as far as reasonably practicable over the life of the Proposal.

1.3.1 Environmental Objectives

Consistent with the EPA's environmental objectives for Terrestrial Fauna, this FMP has the following objectives to protect terrestrial fauna:

- Minimise disturbance and other environmental impacts on significant fauna habitats; and
- Measures to be implemented to protect fauna for life of Project;

1.4 Rationale and Approach

As previously stated, this is a revision of the approved Version 9, EMP (KASA, 2015) relevant to MS476 Conditions. This revision is intended to:

- Address the additional information request received from EPA/s on 15 February 2023, in relation to description of the habitat and distribution of conservation significant species relevant to the proposal;
- Address guidance contained in Environmental Factor Guideline: Terrestrial Fauna EPA, 2016;
- Address Terrestrial Fauna Environmental Factor identified by the EPA as one of the preliminary environmental factors requiring assessment into management during the construction and operation of the Project;
- Reflect the LOM expansion proposed;
- Define management and monitoring measures that are informed by detailed terrestrial fauna surveys; and
- Align the form and structure of the FMP to be consistent with EPA Instructions on how to prepare *Environmental Protection Act 1986* Part IV Environmental Management Plans (EPA, 2021).

This FMP applies to the construction and operating phases of Mt Weld Rare Earths Project.

1.5 Receiving Environment

1.5.1 Regional Setting

The Mt Weld Project is located within the Northern Goldfields Region of Western Australia, approximately 23 km southwest of the township of Laverton (Figure 1). The landscape of the Northern Goldfields is generally low relief with undulating areas of sandplain and granite outcrops, and north-trending ridges influenced by the strike of greenstone belts. The local topography is generally below 500m AHD and is dominated by mulga and mixed eucalypt shrub.

1.5.2 Survey and Study Findings

Mt Weld commissioned detailed flora and vegetation survey and detailed terrestrial fauna survey work in 2020 over a total area of 3,254.81 ha within the vicinity of the Mt Weld Rare Earths Project (herein referred to as the 'Survey Area'). The baseline surveys were undertaken to determine flora, vegetation, vertebrate fauna and short-range endemic (SRE) invertebrate fauna values, to inform environmental approvals for the Project.

Mt Weld have defined a 2,801.70 ha development area within which future expansion activities will be located (herein referred to as the 'Development Envelope'). Within the proposed Development Envelope 403 ha has previously been cleared.

A total of 95 species of vertebrate fauna were recorded from the Survey Area (Stantec 2020a). Three of these species were determined to be of conservation significance; the Long-tailed Dunnart (*Sminthopsis longicaudata*; Priority 4), the Wood Sandpiper (*Tringa glareola*; Migratory) and the Common Sandpiper (*Actitis hypoleucos*; Migratory) (Figure 3). A likelihood of occurrence for Conservation Significant Fauna within Development Envelope is shown in Appendix 1.

The Long-tailed Dunnart was recorded from nine locations within the Survey Area. Three of these locations were within the Development Envelope, associated with the 'stony rise' habitat in the L38/244 tenement area (Figure 3). Additionally, the species has been recorded at a total of 33 locations within a 5 km radius of the Survey Area, outside of the Development Envelope area. These records occur along the continuation of the preferred 'stony rise' and 'rocky ridge and outcropping' habitats which extend outside the Survey Area to the northwest and south (Figure 3).

Approximately 37.93 ha of the 'stony rise' habitat occurs within the Development Envelope, which represents 35.07% of the total extent of this habitat within the Survey Area. The Long-tailed Dunnart was also recorded at the 'rocky ridge and outcropping' habitat within the Survey Area. This habitat was represented over 1.85 ha within the Development Envelope representing a proposed impact to 27.99% of the total habitat extent mapped within the Survey Area. There were no Long-tailed Dunnart records from the area of 'rocky ridge and outcropping' habitat represented within the Development Envelope.

A single Wood Sandpiper was recorded at the evaporation ponds within a previously approved and cleared portion of the Survey Area (Figure 3). The evaporation ponds provide an artificial water source that would have attracted this species to the site, noting that it may utilise other freshwater sources in the vicinity of the Survey Area. The Wood Sandpiper has not previously been recorded from the Development Envelope.

A single Common Sandpiper was recorded at the return water pond within a previously approved and cleared portion of the Survey Area (Figure 3). The species is known to occur at steep-sided ponds and dams and may utilise other artificial water sources in the vicinity of the Survey Area. The Common Sandpiper has not previously been recorded from the Development Envelope.

1.5.2.1 Short Range Endemics - 2023 Investigations

Morphological and genetic analysis was undertaken in May 2023 to better understand the potential distributions of the following taxa outside of the proposed LOM 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:

- Aname 'MYG629';
- Idiosoma 'MYG722';
- Proshermacha 'MYG715';
- Buddelundia '103'; and
- Buddelundia '106'

Four of these taxa remained only known from the Development Envelope.

- Idiosoma 'MW1';
- Idiosoma 'MW2';
- Synsphyronus 'weld'; and
- Urodacus sp. 1 (sequencing inconclusive).

Accordingly, MWM completed a further Targeted SRE Survey between 29 May – 2 June 2023 to determine whether the four taxa known only from the LOM Development Envelope were present in the broader region, by surveying an expanded Survey Area.

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

Based on these results, the following three taxa are confirmed to be present outside the LOM Development Envelope:

- Idiosoma 'MW1';
- Idiosoma 'MW2'; and
- Urodacus sp. 1 (final sequencing analysis in process at time of Response).

Synsphyronus '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 Synsphyronus 'weld' within Mulga on clay loam habitat outside the Development Envelope may confirm this.

1.5.3 Fauna Habitat

Attributes of broad fauna habitat types within the Project Area is described in Appendix 2 and shown in Figure 3. Historical ecology survey coverage within Mt Weld Survey Area is shown in Figure 4. To date, all historical ecology surveys and with ten years of operating, there has not been any sightings of Malleefowl within the Mt Weld surrounds.

The Malleefowl habitat was assessed as being marginal habitat with regards to the mulga on clay loam (*Acacia aneura* low open forest). This habitat type is relatively open with limited leaf litter but was assessed as possible to support Mallefowl.

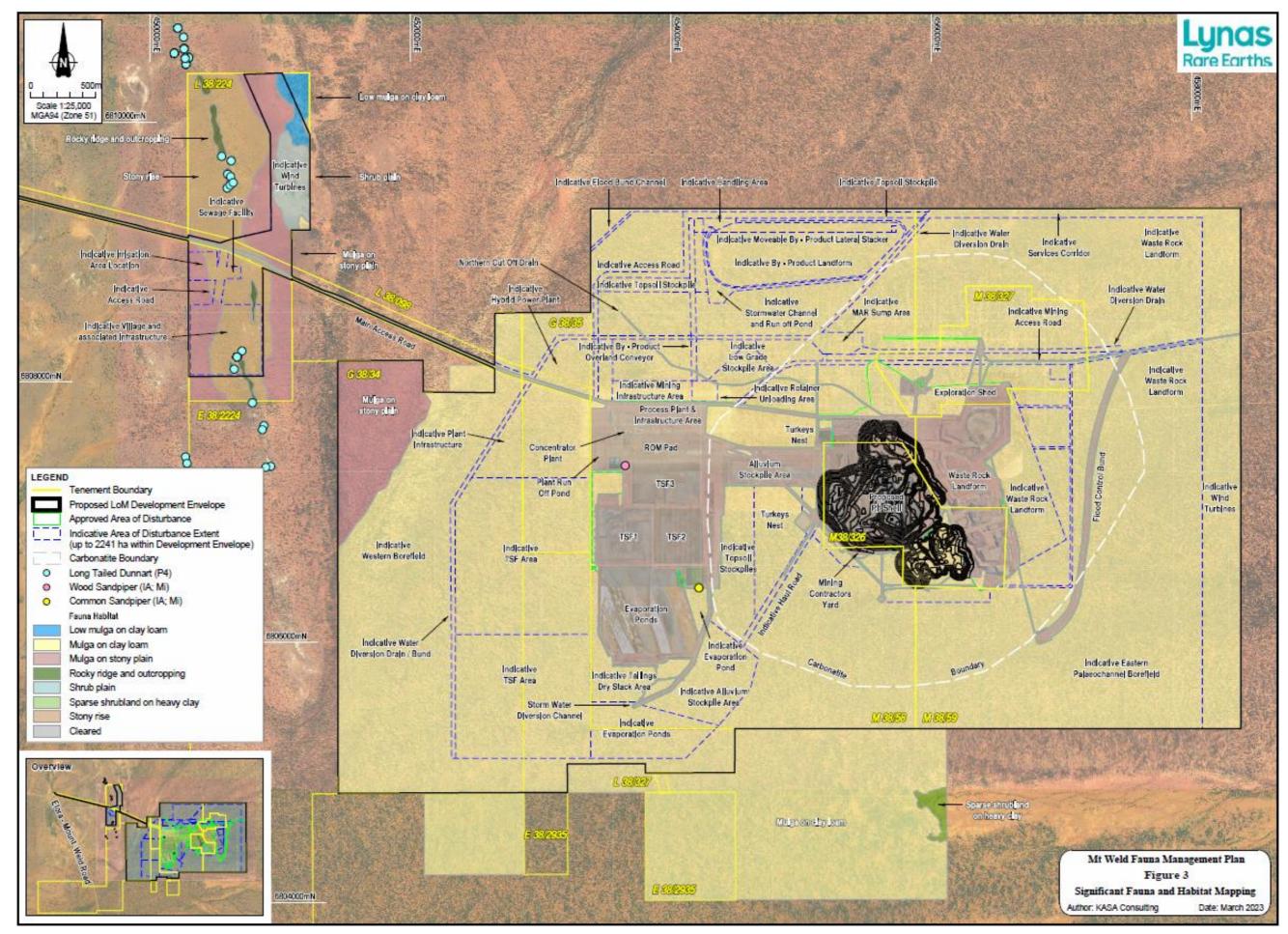


Figure 3: Significant Fauna and Habitat Mapping.

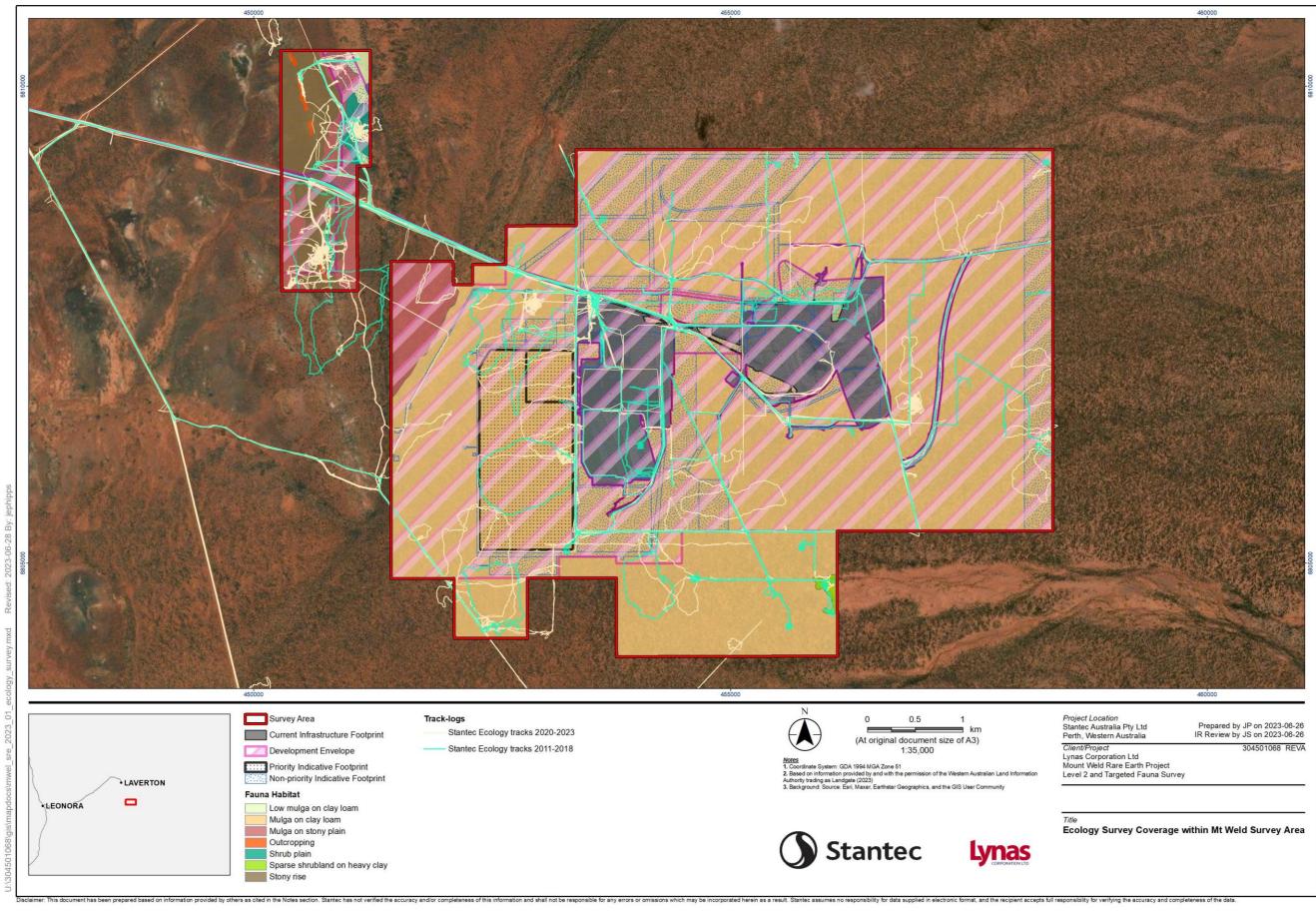


Figure 4: Historical Ecology Survey Coverage within Mt Weld Survey Area.

1.6 Key Assumptions and Uncertainties

This FMP has been prepared on the basis of information provided in the environmental surveys completed in 2020 (Stantec, 2020) and 2021 (Stantec, 2021) and based upon knowledge gained through 12 years of operating Mt Weld. The key assumptions and uncertainties relevant to the LOM Proposal are:

- The relevant studies and surveys have been undertaken in accordance with the latest technical guidance issued by the EPA and accurately recorded the terrestrial environment within the Proposal Area:
 - Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016a);
 - Environmental Factor Guideline Flora and Vegetation (EPA, 2016b);
 - Environmental Factor Guideline Terrestrial Fauna (EPA, 2016c);
 - o Technical Guidance Sampling Methods for Terrestrial Vertebrate Fauna (EPA, 2016d);
 - o Technical Guidance Terrestrial Fauna Surveys (EPA, 2016i); and
 - Technical Guidance Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020) (November 2020)
- Environmental survey reports have been independently verified. These surveys were undertaken by suitably
 qualified individuals experienced in fauna ecology and habitat identification and are therefore assumed to have
 accurately recorded the presence and locations of habitat (including breeding habitat such as nest hollows,
 where relevant);
- If unmanaged, the Proposal may have the potential for an indirect impact to conservation significant fauna individuals and habitat;
- Significant direct and indirect impacts to conservation significant fauna that may result from the Proposal have been identified;
- Malleefowl was assessed as *Possible* to occur within the Survey Area (Stantec, 2020). The Survey Area occurs within the species range (Stantec, 2020) and the species has been recorded recently in the surrounding area, the closest of which are a swathe of secondary sign records from 2019 however, their certainty is not assured (Stantec 2020). The next closest certain records of which are once during 2015, twice during 2014 and once during 2013 between 25 30 km south of the Survey Area (Stantec, 2020). However, the Survey Area only contains marginal habitat. Due to these factors, the species is considered to possibly occur (Stantec, 2020).
- Malleefowl breed annually, between September and January. The male tends to the mound while the eggs are incubating. After they hatch, usually between November and January, chicks dig to the surface of the mound unaided and can fly and fend for themselves within a few hours.
- Direct impacts to fauna during construction are limited to habitat loss and mortality during construction activities (clearing and plant movement);
- Mobile fauna will disperse in front of clearing activities;
- Existing cleared areas within the Proposal Area do not contain habitat for or known records of conservation significant species;
- Conservation significant fauna are not expected to occur within areas previously cleared of native vegetation, therefore these areas do not require management during the construction of the Proposal to meet the environmental objectives; and
- If any conservation significant species assumed not to occur in the Proposal Area are subsequently recorded, the proposed management actions would ensure there are no additional impacts.

1.7 Assessment of Potential Fauna Related Impacts

The Proposal includes a total disturbance area of up to 2,241.6 ha with all areas except some access roads, mine void and other agreed infrastructure to be rehabilitated over the life of mine.

In addition to direct habitat disturbance, fauna may be impacted by:

- Unearthing of burrowing species during earthworks;
- Entrapment of small reptiles and mammals in the process water ponds, evaporation ponds, TSFs, open trenches, sumps or pits;
- Accidental death and injury from vehicles and machinery;
- Indirect disturbance to fauna as a result of disturbance to their habitat fugitive dust and lighting impacts;
- Noise and lighting impacts; and
- Reliance on the Proposal for food (e.g. if waste is not disposed of appropriately) and water (e.g. Project water supplies).

The presence of feral animals such as cats, wild dogs, hooved animals, and rabbits result have the potential to impact on habitats used by native fauna. Their presence also results in competition for food resources. The control of feral animals is therefore integral to the management of native fauna.

Mt Weld is located on the Mt Weld Pastoral Station and provides access to the Pastoralist who performs broadscale feral animal management including aerial animal baiting and mustering of hooved animals.

2. Management Plan Components

2.1 Objective-based Management Plan

The key objectives of the FMP are to:

- Define measures to manage potential impacts from project activities;
- Design management actions that are implementable and easily understood by site personnel;
- Develop mechanisms that enable adaptive management and continuous improvement throughout the life of the Proposal; and
- Facilitate evidence-based review and auditing to demonstrate compliance.

2.2 Fauna Management Requirements

Fauna management is a key consideration to protect biodiversity. MWM has developed this FMP to minimise potential impacts to terrestrial fauna associated with activities at the Mt Weld Rare Earths Project by:

- Identifying significant habitat for conservation species and defining proposed management strategies that can be implemented to mitigate associated impacts; and
- Identifying potential activities that will impact on significant habitats and species that require appropriate controls.

2.3 Roles and Responsibilities

During construction and operation, responsibility for implementing the Fauna Water Management Plan will lie with Mt Weld Mining' personnel, whose roles have the potential to impact on fauna in the Project area.

Ultimate responsibility for implementing day to day inspections, demonstrating compliance with the Fauna Management Plan and reporting will lie with the Senior Site Executive or delegate.

3. Management Provisions

Table 2 summarises the Objective based Management Actions to be implemented in order to meet the EPA's objectives for the Terrestrial Fauna key environmental factor, prepared in line with the EPA's *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2021).

EPA factor and objective:

Terrestrial Fauna –To protect terrestrial fauna so that biological diversity and ecological integrity are maintained Outcome: To –

Minimise disturbance and other environmental impacts on significant fauna habitats; •

- Minimise fauna vehicle strikes; •
- Minimise increases in introduced fauna; •
- Minimal light pollution from Accommodation Camp;
- Minimise noise pollution from Accommodation Camp; and
- Avoid fauna entranment

Management Objective	Risk	Management Action	Monitoring	Frequency of Monitoring	Reporting
To protect terrestrial fa	una so that biological diversity	and ecological integrity are maintained.	1	1	1
Minimise Disturbance to Significant Fauna Habitat	Clearing of vegetation can lead to direct loss or fragmentation of fauna habitat. Clearing of vegetation can lead to altered fire regimes.	 Clearing No clearing is to be undertaken unless it complies with the Proposal's approval conditions. All clearing shall be minimised 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. Avoid Disturbance to <i>Rocky Ridge</i> and <i>Outcropping</i> habitat significant to Long-tailed Dunnart has been carefully excluded from Disturbance Envelope north of the main Site Access Road. Following design optimisation, proposed clearing of this habitat type has been significantly 	Area of vegetation cleared and under rehabilitation via Area of Disturbance Table. Vegetation health photo monitoring at various locations within the project to assess potential drainage shadow impacts.	Prior to any disturbance Annually	Incident Register. Pre-clearance survey reports. Monthly Environmental Repor Annual Environmental Repor
		 reduced. Avoid clearing of rocky/boulder habitat that may contain micro-habitat suitable for refuge for some small terrestrial mammal species, including the Long-tailed Dunnart. An exclusion zone for <i>Outcropping</i> (rocky/boulder) habitat on L38/224 will be established. No clearing to <i>Outcropping</i> micro-habitat is to occur during construction of the Accommodation Village. Avoid disturbance to active Malleefowl mounds: Pre-clearance surveys may be completed prior to all clearing to record the presence/absence of Malleefowl and mounds in the area to be cleared. Buffers of 100m will be applied to active/recently active mounds to be flagged in the field as no-go zones. Minimise Design clearing to retain vegetation where possible, such as around stockpiles, landforms, infrastructure, and landscaped areas. All active Malleefowl mounds will be avoided and flagged with a 100m radial buffer. Where mounds occur in essential areas (e.g. over the ore body or tailings infrastructure), the following will apply: Clearing will be delayed for a suitable period of time that allows monitoring of the mound, to inform the most appropriate timeframe for clearing; If clearing is unavoidable and the mound contains eggs, under the appropriate fauna licence, they will be removed and incubated, with chicks released to suitable habitat close to the Project or to another location as advised by DBCA; Clearing (of mounds) will preferentially be undertaken outside of the Malleefowl breeding season; Following a pre-clearance survey, the following management measures during clearing works will be considered: Clearing outside Malleefowl breeding season; 	Monitoring for visual presence of Long- tailed dunnart in significant habitat on L38/224, within and outside of Development Envelope. Internal audits /Malleefowl inspections of areas before and after clearing. Report all native fauna deaths and injuries detailing species level and suspected cause of death.	Monthly Within 24- hours of incident being identified.	Conservation Significant Fau Database

Management Objective	Risk	Management Action	Monitoring	Frequency of Monitoring	Reporting
		 Utilisation of a fauna spotter. 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. Staff training and awareness including an induction and Toolbox sessions. Minimise fugitive dust by implementing the Dust Management Plan (MTW-SH-PLA-0006). Rehabilitate Attempt to reinstate valuable microhabitat 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 native fauna; Fauna habitat shall be recreated as part of the site rehabilitation; Salvage and re-use of habitat elements (for example hollow logs, rocky outcrops) in rehabilitation where practicable; and Use of cleared vegetation in rehabilitation to provide refuge for smaller animals and assist in the replacement of fauna habitats (e.g. hollow logs, branches and litter). 			
Minimise impacts on known SRE locations within the proposed Development Envelope	Construction and mining related activities may directly impact on habitats of certain SRE's that have yet to be identified beyond the Development Envelope	MWM will apply a 100 m radial buffer around the known location of Synsphyronus 'weld' and is committed to future efforts to identify this species outside of the Development Envelope.	Inspection of ground disturbance in accordance with MWM Clearing and Disturbance Certificate (CDC)	During clearing	Incident Register. Monthly Environmental Report Annual Environmental Report Conservation Significant Fauna Database
Minimise fauna strikes.	Impacts with moving vehicles can cause injury or death of native fauna. Impacts with moving wind turbine structures can cause injury or death winged animals such as bats and birds.	 Avoid Unauthorised access to undisturbed non-operational areas will be restricted. Minimise Vehicle speeds will be managed on site (including entry and exit points) via Mt Weld Traffic Management Plan (MTW-SH-PLA-0005) by enforcing speed limits in construction and operational areas to reduce the potential for vehicle strikes. Vehicle operators must yield right-of-way to fauna, unless unsafe to do so. All personnel are required to record and report any native fauna strikes via incident reporting system. Roadkill will be removed at a sufficient distance into surrounding vegetation, when safe to do so, to avoid further strikes of fauna feeding on carcasses. Personnel will be inducted regarding the key risk times for vehicle strike to fauna (e.g. dusk and dawn) and introduce personnel to local conservation significant fauna. Upon discovery of a deceased or injured animal (non-vehicle strike) the Environmental Department will be notified whom will try to identify the animal. Injured fauna will be assessed for repartiation and sent to a wildlife rehabilitation centre if practicable (unless a feral animal). If the injured animal is severely injured, is a feral animal, or it is not practicable or safe to send the animal to a wildlife rehabilitation centre, then the animal is to be euthanised humanely on advice from Wildcare Helpline in accordance with Animal Trapping and Handling Procedure (MTW-EN-PRO-0014). All sightings and interactions with the Malleefowl to be reported to the Environmental Department. 	Report all fauna vs vehicle strikes. Daily inspection for injured/deceased winged animals of wind turbine structure area for the first two months of turbine operation, then weekly for the third month, then monthly for the remainder of first year of operation, then quarterly from therein. Frequency of inspections should be increased upon evidence of injured or deceased winged animals. Report all fauna vs wind turbine structures strikes detailing species level and suspected cause of injury or death (provided that the carcasses are intact enough for identification).	Within 24- hours of incident being identified.	Incident Register. Monthly Environmental Report Annual Environmental Report Conservation Significant Fauna Database

Management Objective	Risk	Management Action	Monitoring	Frequency of Monitoring	Reporting
Minimise increase to introduced fauna.	Food waste and increased water availability within the Project Area could potentially increase introduced fauna numbers.	 Waste will be stored in a way that does not attract vermin or native fauna. Waste receptacles will have lids and be labelled and maintained to hold the intended waste stream securely. Avoid No domestic animals (e.g. pets) will be allowed on site, unless the animal qualifies as an Assistance Animal as a disability support. No feeding or other means of attracting native or feral animals to Project Area will be allowed. Minimise Predator control (wild dogs: <i>Canis lupus familiaris</i>, feral cats: <i>Felis catus</i>, red foxes: <i>Vulpes vulpes</i>) has been identified as a priority to minimise the impact to Long-tailed Dunnart: <i>Sminthopsis longicaudata</i> at the accommodation camp located adjacent to significant habitat. Continue to implement feral animal controls to reduce the number of feral fauna around the site. Introduce and implement hygiene procedures which result in the reduction of food waste around the processing facility, accommodation camp and putrescible landfill to ensure that feral predators are not attracted to those areas. Liaise with members of Nyalpa Pirniku Native Title Claimant group to participate in existing and/or planned catchment wide feral animal management programs. Ensure that the landfill meets the requirements as outlined in the Environmental Protection (Rural Landfill) Regulations 2002 and/or applicable DWER Licence Conditions. 	Monitor for presence of pest fauna (particularly feral cats at Accommodation Camp and Landfill) during construction and operational activities associated with the Project. Motion sensor cameras may be utilised.	Quarterly	Incident Register. Monthly Environmental Report Annual Environmental Report
Minimal light pollution from Accommodation Camp.	Artificial light can alter foraging patterns, increase predation risk, disrupt biological clocks, and disrupt of dispersal movements.	 Light pollution impacts around the accommodation camp area will be managed to avoid impact on Long-tailed Dunnart. Avoid Avoid the use of white lights that directly projects on Rocky Ridge and Outcropping habitat significant for Long-tailed Dunnart Where practicable, lighting should be kept low, shielded and directional and away from rocky habitat. Minimise Lighting will be designed in accordance with AS 4282-1997: Control of Obtrusive Effects of Outdoor Lighting Guidelines where practicable; Lighting preferred to be installed around the accommodation area includes amber, yellow or red in colour; Lighting will be used only for required accommodation and amenity areas, all light sources will be aimed towards specific accommodation and amenity areas requiring light for safe use, with a low vertical angle. Where possible, lighting will be the minimum wattage, whilst not compromising Work Health Safety obligations. 	Inspection of Accommodation Camp Area	Monthly	Monthly Environmental Report Annual Environmental Report
Minimise noise pollution from Accommodation Camp	Noise can alter foraging patterns, increase predation risk, disrupt biological clocks, and disrupt of dispersal movements.	 Avoid Where practicable, avoid installation of thermal power generation equipment at accommodation camp. Minimise Implementation of scheduled maintenance program for all fixed and mobile equipment used onsite to ensure the sound power levels remain at or below original equipment manufacturer (OEM) nominated levels; The mobile and fixed equipment used in the accommodation camp will be the quietest reasonably available (buy quiet policy) to achieve the objectives of this management plan; Ensure noise control measures (e.g. mufflers, silencers or other noise attenuation on mobile equipment) are operating correctly; Muffle or shield high-noise equipment; Locate high-noise equipment within an enclosed structure where practicable; Install any emergency thermal power generator(s) to OEM design specifications to ensure adequate noise control when temporarily operating. 	Inspection of Accommodation Camp Area	Monthly	Monthly Environmental Report Annual Environmental Report

Management Objective	Risk	Management Action	Monitoring	Frequency of Monitoring	Reporting
Avoid fauna entrapment.	Fauna may be trapped in artificial water bodies and excavations leading to injury and/ or death.	 Avoid Sumps within the process plant will be provided with trash screens/mesh to prevent vertebrate fauna from entering. Minimise Fauna egress will be installed on all HDPE lined water ponds, and excavations, even if temporary. 	Open excavations will be checked daily.	Within three hours of sunrise if left open overnight.	Incident Register. Monthly Environmental Report Annual Environmental Report
	 All excavations that must be left open for more than 12 hours, must have gentle ramped egress that all fauna are capable of using and will be checked for trapped vertebrate fauna within three hours of sunrise if left open overnight. Inspections of the TSFs and evaporation ponds on at least a daily basis; Integrity of capping on exploration or other boreholes will be checked regularly; 	TSFs and Evaporation Ponds will be checked daily.	Daily	TSF and Evaporation Pond Daily Inspection Log.	
		 All fauna should be removed by qualified personnel. Upon discovery of a deceased or injured animal (non-vehicle strike) the Environmental Department will be notified whom will try to identify the animal. Injured fauna will be assessed for repatriation and sent to a wildlife rehabilitation centre if practicable (unless a feral animal). If the injured animal is severely injured, is a feral animal, or it is not practicable or safe to send the animal to a wildlife rehabilitation centre, then the animal is to be euthanised humanely on advice from Wildcare Helpline in accordance with Animal Trapping and Handling Procedure (MTW-EN-PRO-0014). 	Report all native fauna deaths and injuries detailing species level and suspected cause of death.	Within 24- hours of incident being identified.	

3.1 Incidents and Corrective Actions

Environmental incidents are defined as non-adherences to objectives and procedures applied to the Project and described in this FMP. Consistent with Mt Weld's Environmental Management System, environmental incidents are to be reported to the Environmental Department by the person responsible for the incident or the first person at the site of the incident following the Mt Weld Incident Reporting and Investigation Procedure (MTW-SH-PRO-0021).

The Environmental Department will assess the type and severity of the incident, in accordance with the Mt Weld's EMS procedures.

3.2 Monitoring

Regular inspections and audits are required to assure the environmental protection outcomes outlined in this FMP. Site inspections will assess the effectiveness of all fauna management controls and will raise corrective actions where required.

Fauna observations and sightings within the Project area will be recorded and, where required, corrective actions will be implemented should any adverse fauna impact be likely.

No specific fauna monitoring programme is proposed at this stage, other than monitoring via motion sensor cameras for the presence of Long tailed dunnarts and feral animals on significant habitat located on L38/224, within and outside of Development Envelope.

3.2.1 Conservation Significant Fauna Database

A Conservation Significant Fauna Database will be developed and maintained for the Proposal. The database will include information reported quarterly from motion sensor camera monitoring for Long-tailed dunnarts or alternate methods of reporting. Development and maintenance of a Malleefowl Register to record all Malleefowl, active and inactive mounds which will include date, observer, status of mound/Malleefowl/ GPS/location and a description will be implemented.

3.3 Reporting

A Consolidated Annual Environmental Report will be prepared in accordance with project regulatory instrument compliance obligations. The Consolidated AER will include general conformance, new risks and hazards identified, corrective actions implemented, sampling results and incident and investigation reports.

Any records of sick, injured, deceased or otherwise disturbed native animals and the likely cause within the Project area designated with conservation code of *Least Concern*, will be stored in an incident register and reported in the AER. Animals designated as conservation significant species recorded as sick, injured, deceased or otherwise disturbed will be reported to Parks and Wildlife Service.

4. Adaptive Management and Review

4.1 Review

Revision of this FMP will be undertaken on an as-needs basis following the annual review and reporting process.

4.2 Continuous Improvement

This FMP will be subject to internal reviews annually or as part of any major Project modification that could impact on the Management Plan provisions. The internal review will consider the effectiveness of proposed measures and maintain relevance to current works or operations. Should performance controls be deemed inadequate then the measures will be updated to achieve performance objectives. The need to submit any update to this Management Plan to the WA EPA will be subject to MWM's consideration of the significance of the changes conducted to surface water management and residual risks.

4.3 Change Management

MWM have implemented a Management of Change Procedure (MTW-SH-PRO-0008) to identify and communicate and consult proposed changes to all potentially affected areas; and mitigate potential threats to operational objectives associated with implementing the change with appropriate departmental area involvement.

4.4 Training and Induction

Mt Weld will ensure that all personnel undertaking works, including visitors, have undertaken a site induction training program, or are escorted to the site. Mt Weld will evaluate all personnel undertaking the site induction training program through a written test to ensure that all personnel have an understanding of the environmental requirements for the Proposal. Where it is identified that personnel have not undertaken the works in accordance with the environmental requirements for the Proposal, Mt Weld will require such personnel to repeat the site induction training program including terrestrial fauna management provisions.

5. Stakeholder Consultation

MWM is committed to an open, transparent and comprehensive engagement programme for the Mt Weld Rare Earths Project and LOM Proposal at all key stages. MWM's process for stakeholder engagement includes the identification of key stakeholders that MWM would engage with from Federal, State and Local Government, key agencies and regulatory authorities, and the community and of interest groups.

The scope and scale of the stakeholder engagement to date has considered the nature and significance of potential environmental factors for the Project, particularly any real or perceived community concerns about activities specific to Mt Weld's operations to date. In light of this, MWM considers that the focus of engagement associated with the proposed LOM should be commensurate with that view and should be at local community level and with key DMAs.

Additional details on the range and content and outcomes of stakeholder engagement conducted to date on the Proposal is presented in the ERD for the LoM Expansion (KASA Consulting, 2023).

Specific to this FMP, this updated plan has been developed to address regulatory stakeholder feedback on the draft ERD as discussed in Section 1.1.

During the assessment process for the Proposal, Mt Weld will continue to engage with, and build support from, stakeholders in the Laverton surrounds and liaise with members of Nyalpa Pirniku to ensure objectives within the Social Cultural Heritage Management Plan can be achieved.

6. Document Revision History

The review, revision and change control of this Management Plan is recorded in Table 3 below.

Table 3: Management Plan Change Control

Complexity of changes	Minor revisions		Moderate revisions		Major revisions	
Number of key environmental factors:	🖂 One		2 to 3		□ > more than 3	
Date revision submitted to EPA:	[Publish Date]	<revision brief="" description=""></revision>				
Proponent's operational requirement timeframe for approval of revision:	<pre>one month</pre>	\Box < six months \Box > six months \boxtimes Non		🛛 None		
Reason for timeframe:	Existing EMP v9 (KASA, 2015) covers approved site activities. Timeframe tied to EPA Assessment under Part IV.					

ltem	Section	Page	Summary of Change	Reason for Change
Whole	of Document	Update	FMP within EMP v9 (KASA, 2015) amended to align with EPA, 2021.	Supplied as additional information for Mt Weld LOM Assessment, Environmental Review Document.

7. References

- EPA. (2016a). Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment.
- EPA. (2016b). Environmental Factor Guideline Flora and Vegetation, EPA, Western Australia.
- EPA. (2016c). Environmental Factor Guideline Terrestrial Fauna.
- EPA. (2016d). Technical Guidance Sampling Methods for Terrestrial Vertebrate Fauna.
- EPA. (2016i). Technical Guidance Terrestrial Fauna Surveys.
- EPA. (2021). Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans. Environmental Protection Authority, Western Australia, October 2021.
- REE. (2023). *Mt Weld TSF4 Detailed Design Report Appendix F Stormwater Management Plan.* Perth: Red Earth Engineering.
- Stantec. (2020). Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey. Prepared for Mt Weld.
- Stantec. (2021). Mt Weld Rare Earths Project: Detailed Flora and Vegetation Survey Phase 2.
- Stantec. (November 2020). *Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey.* Prepared for Mt Weld.

Appendices

Table A1: Likelihood of occurrence for Conservation Significant Fauna within Development Envelope.

Species	Common Name	Cons	s. Status	Likelihood of occurrence within Mt Weld Project
		Cth	State	Stantec 2020
Mammals				
Sminthopsis longicaudata	Long-tailed Dunnart	-	P4	Confirmed
Dasycercus blythi)	Brush-tailed Mulgara	-	P4	Unlikely
Birds	-			
Pezoporus occidentalis	Night Parrot	En	CR	Unlikely
Leipoa ocellata	Malleefowl	Vu	VU	Possible
Polytelis alexandrae	Princess Parrot	Vu	P4	Unlikely
Tringa glareola	Wood Sandpiper	Mi	IA	Confirmed
Two wagtails from the family Motacillidae: • <i>Motacilla flava</i> • <i>Motacilla cinerea</i>	Yellow Wagtail Grey Wagtail	Mi	IA	Unlikely
Sterna nilotica	Gull-billed Tern	Mi	IA	Unlikely
Apus pacificus	Fork-tailed Swift	Mi	IA	Possible
Actitis hypoleucos	Common Sandpiper	Mi	IA	Confirmed
Seven ibis, plover, sandpiper, greenshank and stint species from the families; Threskiornithidae, Ardeidae Charadriidae, and Scolopacidae. • <i>Calidris acuminata</i> • <i>Calidris melanotos</i> • <i>Calidris ruficolli</i> • <i>Plegadis falcinellus</i> • <i>Tringa nebularia</i> • <i>Adrea modesta</i> • <i>Charadrius veredus</i>	Sharp-tailed Sandpiper Pectoral Sandpiper Red-necked Stint Glossy Ibis Common Greenshank Eastern Great Egret Oriental Plover	Mi	IA	Possible
Thinornis cucullatus	Hooded Plover	-	P4	Possible
Falco peregrinus	Peregrine Falcon	-	S	Possible
Reptiles				
Liopholis kintorei	Great Desert Skink	Vu	VU	Unlikely

Habitat Extent & Significance	Habitat Description	Vegetation Description	Representative Photo
Mulga on clay loam Widespread Limited Significance Malleefowl 	The mulga on clay loam habitat was the most widespread habitat in the Project Area. This habitat occurred in flat/level areas and was associated with sheet flow of water in a southwest direction across the Project Area. The habitat generally lacked stony substrate; however, pockets of sparse quartz were present in some areas. Vegetation typically comprised open to moderate mulga over sparse Acacia spp. and Eremophila spp. shrubs on clay loam soils. The woody debris and leaf litter cover was higher in dense areas and this may provide shelter for mammals and reptiles. However, where this is absent there was minimal alternative lower cover and low significance for fauna. This habitat had no significant fauna species recorded during the previous surveys. Generally, this habitat was relatively open, however areas of dense cover of mulga and shrubs may provide more suitable habitat for roosting and foraging avifauna and may provide some suitable marginal habitat for Malleefowl.		
 Mulga on stony plain Limited Extent Limited Significance 	The mulga on stony plain habitat was dominated by mulga, <i>Acacia tetragonophylla</i> over <i>Ptilotus obovatus</i> low scattered shrubs on clay loam soils. The habitat was characterised by a high cover of coarse fragment evenly spread over a level landscape. Many small patches of leaf litter were present, similarly woody debris was common throughout the habitat. These areas are unlikely to serve as significant habitat for fauna owing to the relatively open vegetation and lack of unique habitat features such as crevices and hollows. Taller trees may provide nesting and/or roosting for bird species, and the small networks of dense mulga may provide shelter for fauna. No significant fauna was recorded from within this habitat during previous surveys, nor are they expected to occur.	scattered shrubs.	

tograph



Habitat Extent & Significance	Habitat Description	Vegetation Description	Representative Photo
 Stony rise Limited Extent Significant Long-tailed Dunnart 	Stony rise habitat comprised low (1-20°) to moderately (21-45°) inclined rises, predominantly in the west of the Project Area. Upper and mid-story typically comprised mulga over Acacia spp. shrubs over a stony substrate with little bare soil present. The substrate comprised coarse fragments ranging from 1 to 20 cm, dominated by ironstone and to a lesser extent quartz. The Long-tailed Dunnart was recorded via trapping and a motionsensor camera within this habitat. This habitat may provide foraging resources for the Long-tailed Dunnart and may facilitate connectivity between individuals utilising the adjoining outcropping habitat.		
 Shrub plain Limited Extent Limited Significance 	The shrub plain habitat was characterised by very open areas largely lacking an upper storey. Vegetation was dominated by <i>Hakea preissii</i> and Acacia sp. over Senna spp. and Sida spp. with Maireana spp. low open shrubs. The habitat contained sparse or no woody debris, leaf litter or peeling bark. The sparse lower storey provided minimal cover for small mammals and reptiles, and the habitat did not contain a substantial amount of alternative shelters (woody debris, peeling bark etc.). No fauna of significance was recorded within this habitat during the Survey, nor are they expected to occur.	Acacia aneura low open woodland over Acacia tetragonophylla and Santalum spicatum tall open shrubland over Eremophila youngii subsp. youngii scattered shrubs over Ptilotus obovatus scattered low shrubs.	







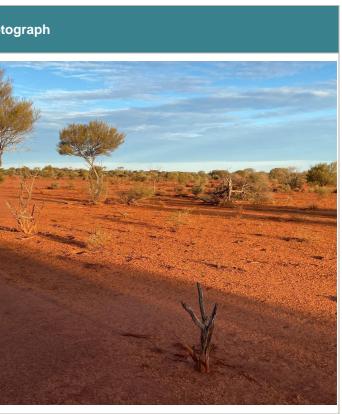
Habitat Extent & Significance	Habitat Description	Vegetation Description	Representative Photo
Low mulga on cla Limited Exten Limited Signif 	woodland over an open Acacia shrubland with scattered <i>Eremophila youngii subsp. youngii</i> and <i>Ptilotus obovatus</i> low shrubs. The	Acacia aneura, Acacia caesaneura and Acacia aptaneura low open forest aover Acacia tetragonophylla and Santalum spicatum tall open shrubland over Ptilotus obovatus scattered low shrubs.	
Outcropping Limited Exten Significant Long-tai Dunnart 	substrate covering most soil. This habitat contained a relatively complex substrate with rocky crevices and alcoves that provide	Acacia minyura tall, scattered shrubs over Eremophila sp., Maireana sp. and Ptilotus obovatus low open shrubland.	

tograph





Habitat Extent & Significance	Habitat Description	Vegetation Description	Representative Photo
clayLimited ExtentLimited Significance	The sparse shrubland on heavy clay habitat is characterised by very open vegetation over heavy clay substrate. The habitat was dominated by mulga over <i>Acacia tetragonophylla</i> and sparse <i>Rhodanthe charsleyae</i> and Sclerolaena spp. shrubs. This habitat is influenced by its low elevation and may become inundated after periods of heavy rainfall. There was only one relatively small area of this habitat in the southeast of the Project Area. The lack of vegetation and leaf litter provides minimal shelter for small mammals and reptiles. No fauna of significance was recorded within this habitat during previous surveys, however it has the potential to support waterbirds when inundated.	woodland over Acacia tetragonophylla tall open shrubland over Rhodanthe charsleyae and Sclerolaena spp. open herbland.	



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