



## Fauna Management Plan

EMO

Environment

# Fauna Management Plan

Version	Date	Description	Reviewed	Approved
1	1/03/2010	New Document		
2	02/01/2015	Revised Plan	Jamie Coad	Bella Bamford
3	20/02/2017	Revised Plan	Kim Stone	Bella Bamford
4	20/03/2019	Revised Plan	Bella Bamford	Glenn Firth



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## 1. INTENT

This Fauna Management Plan provides a management framework for the implementation, monitoring and review of management actions aimed at minimising or avoiding adverse impacts to fauna and fauna habitats surrounding the operations. Specifically, Edna May Operations (EMO) proposes to:

- Prevent or minimise impacts to the abundance, diversity, geographic distribution and productivity of fauna at species and ecosystem levels;
- Minimise impacts to fauna habitats; and
- Adopt practices aimed at minimising impacts on fauna, including: controlling the extent of open excavations; regularly checking areas where animals could become trapped; actively managing features such as raw water storages, domestic waste storages, processing water storage, tailings supernatant pond and lighting which may attract fauna.

## 2. CURRENT STATUS

From published records and observations, a wide variety of fauna may reside on tenements in which the Edna May mine resides. The most recent fauna report (Outback Ecology/MWH, 2014) identified a total of 37 species (34 native species) comprising, 23 native birds, 8 native mammals, 3 reptiles and 3 introduced species. None of these species are of conservation significance and all were identified by the database searches as potentially occurring in the Study Area. The desktop study undertaken by Outback Ecology/MWH concluded that 13 species of conservation significance could potentially occur in the Study Area:

Likely of Occurring within the Survey Area	Species of Conservation Significance
Very Likely to occur	Western Spiny-tailed Skink ( <i>Egernia stokesii badia</i> ) Rainbow Bee-eater ( <i>Merops ornatus</i> ) Snails of the Short-range Endemic genus <i>Bothriembryon</i>
Likely to occur	Carnaby's Black Cockatoo ( <i>Calyptorhynchus latirostris</i> ) Carpet Python ( <i>Morelia spilota imbricata</i> ) Bush Stone-curlew ( <i>Burhinus grallarius</i> ) Brush Bronzewing ( <i>Phaps elegans</i> )
Possibly occur	Malleefowl ( <i>Leipoa ocellata</i> ) Shield-backed Trapdoor Spider ( <i>Idiosoma nigrum</i> ) Tree-stem Trapdoor Spider ( <i>Aganippe castellum</i> ) Chuditch ( <i>Dasyurus geoffroi</i> ) Red-tailed Phascogale ( <i>Phascogale calura</i> ) Australian Bustard ( <i>Ardeotis australis</i> )



If present, these species would most likely reside in remnant vegetation areas surrounding the mining operation rather than the disturbed areas associated with the current mine and cleared agricultural land. A number of feral animals have been reported and eradication / capture programmes are undertaken.

### 3. POTENTIAL IMPACTS

Potential impacts to fauna from mine activities include:

- Habitat loss as a result of clearing or land contamination;
- Population isolation as a result of habitat fragmentation;
- Noise impacting natural behavioural patterns of fauna;
- Death as a result of vehicle collisions;
- Death as a result of cyanide poisoning;
- Death as a result of becoming trapped in mine infrastructure and water storages; and
- Disturbance to rare or endangered species.

### 4. ENVIRONMENTAL OBJECTIVES

The Fauna Management Plan has been developed to satisfy the following objectives:

- Maintain the abundance, diversity, geographic distribution and productivity of fauna at species and ecosystem levels;
- Minimise impacts to fauna habitats;
- Adopt practices aimed at minimising impacts on fauna, including: controlling the extent of open excavations; regularly checking areas where animals could become trapped; actively managing features such as water storages, domestic waste storages, processing water storage, tailings supernatant pond and lighting which may attract fauna;
- Disturb land only within approved clearing envelopes; and
- Ensure that land rehabilitation is implemented progressively.



**5. PERFORMANCE INDICATORS**

Edna May will monitor its environmental performance in relation to:

- Conformance with the fauna management and implementation strategy (Section 6) (completion of actions specified within nominated timeframe);
- Compliance with regulatory requirements; and
- Effectiveness and efficiency of management actions.

The means by which conformance with the management actions required under this Fauna Management Plan will be demonstrated are indicated under the column headed “evidence” in Table 1.

**6. FAUNA MANAGEMENT AND IMPLEMENTATION STRATEGY**

Fauna management strategies at EMO have been devised to comply with legislation and to minimise adverse impacts to fauna and fauna habitats (Table 1), along with the title of the role responsible for implementing each action and an indication of the timing for implementation.

**Table 1: Fauna Management Implementation Actions**

REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
<b>General</b>				
FnMIS 1	All land clearing activities and activities with the potential to impact on fauna habitat at Edna May operations will comply with clearing permits, programme of works (POW), relevant local and state regulations and Australian standards.	Prior to Clearing	General Manager, Senior Environmental Advisor	Clearing and Ground Disturbance Procedure, Clearing Register, Internal and External Clearing permits
<b>Stakeholder consultation</b>				
FnMIS 2	Where required, Edna May Operations will liaise with the operations neighbours and stakeholders where land clearing, or activities may have or have had impact upon the region's flora and fauna.	Prior to Clearing	General Manager, Senior Environmental Advisor	Communications register and records. Incident reporting (INX)
FnMIS 3	Maintain a Complaints Register to assist in indicating improvements or failings in flora management actions.	Continuous	Senior Environmental Advisor	Complaints register included in incident database (INX), Summarised in the Annual Environmental Report (AER)
<b>Native fauna management</b>				



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REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
FnMIS 4	Firearms are not permitted within the Edna May tenement boundary without Registered Manager approval. No shooting or deliberate harming of native fauna is permitted.	Continuous	General Manager	Induction presentation. No fire arms onsite.
FnMIS 5	Direct contact with fauna is to be avoided including no feeding of fauna, whether native or introduced.	Continuous	General Manager	Induction presentation.
FnMIS 6	Snakes and other reptiles will not be wilfully harmed or killed. Reptiles within work areas that pose a risk to people or the animal will be reported to the Environment Department immediately. A trained reptile handler will remove and relocate the reptile to a safe location away from work area.	Continuous	Environmental Advisor, Trained Reptile Handlers	Induction, Incident reporting (INX), Reptile Handlers licence, list and training certificates, Snake relocation register
FnMIS 7	Suspected sightings of any species of conservation significance will be reported to an Environmental Advisor. The sighting will be followed-up, investigated and confirmed and any potential risk to the species by the mining activities avoided.	Continuous	Environmental Advisor	Incident reporting (INX)
FnMIS 8	All fauna injuries and deaths must be reported to the Environment Department immediately. If an animal is injured during mining operations (including vehicle strike traveling to and from site or a suspected poisoning) stop and check the animal. If the animal is dead and is a female marsupial check if there is any offspring in the pouch that can be saved. If offspring is alive, contact the Environment department immediately. If fauna is injured during mining operations and it is unlikely that the animal can be saved, the Environmental Advisor will organise for the animal to be euthanised using the most humane method possible. If the animal can be saved the Environmental Advisor will organise for the animal to be taken to a qualified veterinarian or carer.	Continuous	Environmental Advisor	Induction presentation, Incident reporting (INX)



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REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
<b>Land clearing / ground disturbance – mining and exploration activities</b>				
FnMIS 9	Conserve fauna habitat where possible by: (i) minimise the amount of native vegetation to be cleared; and (ii) reduce the impact of clearing on any environmental value. Clearing and exploration activities will only be undertaken in accordance with the EMO Flora Management Plan and the Clearing and Ground Disturbance Procedure.	Continuous	General Manager	Clearing and Ground Disturbance Procedure, Internal and External Clearing permits, Clearing Register
<b>Introduced fauna</b>				
FnMIS 10	An autumn and spring 1080 Baiting Programme will be completed each year to control foxes and rabbits. Cat trapping will be conducted regularly to control feral cat numbers. Cats will be humanely euthanised by the Shire Ranger or a veterinarian. Rodent baiting will be completed as required.	As required	Environmental Advisor	Cat Trapping Register, 1080 Baiting records and licence
FnMIS 11	Appropriate waste management (including the regular covering of the landfill) and ensuring bins on site / village containing food scraps have lids to prevent attraction of fauna and increase in feral animal population. For further detail on waste management refer to the Waste Management Plan.	Continuous	General Manager	Landfill covering procedure, Weekly landfill inspection records.
FnMIS 12	Domestic dogs and cats are not permitted within the Edna May tenement boundary. This is to prevent domesticated dogs and cats from harming native fauna.	Continuous	General Manager	Induction presentation. No domestic cats and dogs on site.





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REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
FnMIS 13	All employees are to report animal sightings (including feral animals) to the Environmental Department.	Continuous	Environmental Officer	Incident reporting (INX) Cat trapping register
<b>Dust</b>				
FnMIS 14	To minimise the impact of dust on fauna and their habitat dust will be managed as per the EMO Air Emissions Management Plan and Crusher and Coarse Ore Stockpile Dust Management Plan	Continuous	General Manager, Processing Manager, Mining Manager	Documented Procedures, Dust analysis readings and reports, Effective dust control systems in place and operational
<b>Vehicle Usage</b>				
FnMIS 15	In order to minimise disturbance and prevent unintentional impacts through the use of machinery and vehicles, no vehicles are to travel off designated road / tracks.	Continuous	All personnel	No vehicle off designated roads/ tracks. Incident reporting (INX)
<b>Fauna entrapment (and impact) from water bodies and excavations</b>				
FnMIS 16	Access by fauna to the decant pond within the TSF will be limited during operations and WAD CN levels to be maintained below 50 mg/L during operations.	Continuous	Processing Manager	Monitoring records of TSF Decant. Incident reporting (INX)
FnMIS 17	The surface of the TSF will be capped and rehabilitated with a design developed during operations.	Mine Closure	Environmental Advisor	Mine Closure Plan



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REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
FnMIS 18	An egress point will be in place where required on the edges of water storage ponds to prevent fauna from becoming trapped and drowning.	Continuous	Processing Manager	Evidence of egress points in place.
FnMIS 19	Excavations, sumps and drill holes will be backfilled or plugged shortly after use to prevent fauna entrapment.	Continuous	Exploration Manager, General Manager	Evidence that excavations, sumps, drill holes are backfilled or covered.
<b>Training and awareness</b>				
FnMIS 20	General site inductions and monthly prestart presentations will be used to raise the awareness of the workforce about conservation issues in regard to fauna and fauna habitat.	Continuous	Environmental Advisor	Fauna impacts and management included in induction presentation, Monthly Environmental Awareness Presentations
<b>Monitoring and Contingencies</b>				
FnMIS 21	Regular inspections of the TSF cells (as per the Tailings Operating Manual) including the observation of any stress or deaths of fauna surrounding or within the TSF.	Operations	Processing Manager	Tailings Operating Manual, Daily TSF Inspection Log Sheets
FnMIS 22	Regular monitoring for entrapment in excavations, sumps and water storage ponds will be undertaken.	Daily/ Weekly	Processing Manager, Mining	Weekly Borefields line inspections, Daily processing checks



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			Manager Geology Manager	
FnMIS 23	Regular inspections for signs or observations of introduced fauna.	Continuous	Environmental Advisor	Records of inspection findings.
FnMIS 24	If adverse impacts to fauna or fauna habitat are observed, the Environment department will be notified immediately, and an incident report prepared and submitted within 24 hrs. The incident report will identify corrective actions to be implemented and the date for their completion.	Continuous	General Manager	Incident reporting (INX). Summarised in the AER Inspection and audit reports, complaints register, stakeholder consultation database and records
<b>Auditing and Reporting</b>				
FnMIS 25	Fauna related activities and impacts will be summarised in the AER.	Annually	Environmental Advisor	Summarised in the AER
FnMIS 26	If adverse impacts to fauna or fauna habitat are observed, the Environment Department will be notified immediately, and an incident report will be prepared and submitted within 24 hours. The incident report will identify contingency actions to be implemented and the date for completion of contingency actions.	Continuous	All Personnel	Incident reports within incident data base. These incident reports should document contingency actions. Summarised in the AER



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REF	MANAGEMENT ACTIONS	TIMING	DELEGATED RESPONSIBILITY	EVIDENCE
FnMIS 27	Breaches of licence or tenement conditions will be reported to the relevant authority (DWER or DMIRS) within 24 hours and summarised through the Annual Audit Compliance Report (AACR) and the AER, as part of the operating licence. External reporting of incidents is the responsibility of the General Manager with assistance from the Environmental Advisor.	Continuous	General Manager / Environmental Advisors	Incident database. Summarised in AER. Communications register.
FnMIS 28	EMO incident management system will be used to record all environmental incidents; to track and manage corrective actions resulting from environmental incidents; to track and address community complaints; and to record audit outcomes.	Continuous	All Personnel	Incident reporting (INX) Action tracking (INX) Summarised in the AER
FnMIS 29	Annual environmental audits will be organised by the Group Environment Manager.	Annually	General Manager	Audit reports
<b>Review and Revision</b>				
FnMIS 30	The General Manager will review this EMP and allocate resources to implement it. They will ensure appropriate action is being taken on non-compliances, and offer support to environmental staff through directives to site personnel	Annually	General Manager	Fauna management actions on site
FnMIS 31	The Fauna Management Plan will be internally reviewed as required. Reviews will be conducted at key stages of the Project based on planning requirements; review of incidents, audits and corrective actions; legal requirements; and analysis of monitoring results. The reviews will incorporate feedback from relevant Community Stakeholders and DWER / DMIRS staff.	As required	Environmental Advisor	Revision Record



## **7. STAKEHOLDER CONSULTATION**

EMO has developed a Complaints Register to record complaints from stakeholders, and record actions taken to address these complaints by site personnel. EMO aims to maintain a healthy relationship with neighbouring stakeholders by promoting open and honest communications regarding any hazards that may impact upon the operations neighbours or the environment.

It is unlikely that any incident relating to fauna management will impact upon neighbouring residents or that any complaints will be made in relation to fauna management.

Further detail regarding community consultation undertaken for the EMO is provided in the Environmental Management System Manual.

## **8. TRAINING AND AWARENESS**

General site inductions and pre-start presentations are used to raise the awareness of the workforce about conservation of fauna and fauna habitat. Additional area specific training is undertaken where required. Posters are also provided around the site describing the native fauna found in the Westonia Region. A snake poster has also been provided, describing the types of snakes in the area and their level of venom.

## **9. PERFORMANCE MONITORING**

The following monitoring activities are undertaken:

- Daily inspections of the TSF cells (as per Tailings Operating Manual) including the observation of any stress or deaths of fauna surrounding or within the TSF (tailings ponded water);
- Regular monitoring for entrapment in excavations, sumps and water storage ponds will be undertaken;
- Regular inspections for signs or observations of introduced fauna;
- Undertake flora and vegetation monitoring as per the Flora Management Plan for the monitoring of fauna habitat;
- Inspections by regulatory bodies such as the DWER and DMIRS; and
- Annual environmental audits.



## 10. CONTINGENCIES

If adverse impacts to fauna and fauna habitat are observed, the Environment Department will be notified immediately, and an incident report will be prepared and submitted within 24 hours. The incident report will identify contingency actions to be implemented and the date for completion of contingency actions

## 11. AUDITING AND REPORTING

This Management Plan and its outcomes, commitments and the implementation of the management actions will be audited annually and where required, they will be revised.

The results of inspections, audits and incident reports or complaints received relating to fauna and fauna habitat impacts will be included in AER. This will be additional to any event-based reporting.

The EMO internal reporting system (INX) will record any non-compliance relating to fauna and fauna habitat. The non-compliances will be recorded and will not be closed out until corrective measures are in place. These will also be summarised in the AER.

Breaches of licences, permits or tenement conditions will be reported within 24 hrs to the DWER or DMIRS and summarised in the AER. The timelines and responsibilities associated with reporting are detailed in Table 1. External reporting of incidents is the responsibility of the Registered Manager with assistance from the Environmental Advisor.

## 12. REVIEW AND REVISION

This Management Plan is intended to be adaptive and is subject to change as new information becomes available. The plan will be reviewed to incorporate the formal requirements of DWER Operating Licence.

This plan will be reviewed by the Environmental Advisor as required from the commencement of operation, or in the following circumstances:

- Routine inspections detect that a trigger has been breached or that a trigger is at risk of being breached; or
- The Project scope has changed significantly.

Review of this plan will seek to address the following questions:

- Is the background information about the Project current?
- Are there cross references to other documents (including procedures) that should be added?
- Has any further consultation of a material nature been undertaken?



- Has the scope of the plan changed in a material way?
- Is there any new or revised legislation or policy that should be considered?
- Are any of the management actions fully complete such that they can be removed?
- Should any new management actions be added, either as a result of incident reports, inspection results, project changes or other developments?
- Are the performance indicators effective in assessing performance?
- Are there better alternative indicators?
- Has monitoring highlighted any gaps in the programme, and should the existing monitoring programme be modified?
- Is the allocation of responsibilities for each management action appropriate?
- Is the review period for this plan appropriate?

If the assessment identifies the need for changes to the Management Plan, such changes will be implemented, and the Plan re-issued.

### 13. RELEVANT LEGISLATION AND DOCUMENTS

#### 13.1 RELEVANT LEGISLATION AND GUIDANCE MATERIAL

- *Biodiversity Conservation Act 2016*
- *Biodiversity Conservation Regulations 2018;*
- *Conservation and Land Management Act 1984;*
- *Environment Protection and Biodiversity Conservation Act, 1999 (Cth);*
- *Environmental Protection Act 1986;*
- *Environmental Protection Regulations 1987;*
- *Mines Safety and Inspection Act 1994;*
- *Mines Safety and Inspection Regulations 1995;*
- *Soil and Land Conservation Act 1945;*
- *Wildlife Conservation Act, 1950;*



- DMP/EPA (2015) Guidelines for Preparing Mine Closure Plans;

### 13.2 INTERNAL DOCUMENTS

- Environmental Management Systems Manual
- Traffic Management Plan/Pit Permit Road Rules
- Flora Management Plan
- Landfill Management Plan
- Clearing and Ground Disturbance Procedure
- Covering of Landfill Procedure
- Native Fauna Procedure
- Managing Injured and Deceased Native Fauna
- Outback Ecology (MWH) (2014) *Edna May and Greenfinch Projects Level 1 Fauna Assessment*. Report for Evolution Mining Limited

### 14. DEFINITIONS

**Adverse impacts:** With reference to fauna and fauna habitat, an adverse impact (threatening process) is a practice that reduces or will reduce the biodiversity and ecological integrity of a regional ecosystem and its wildlife. Relevant processes that are threats to wildlife include unlawful land clearing, invasive plants and animals and firewood collection.

**Fauna:** All the animals that live in a particular area, time period, or environment.

**Habitat:** The natural home or environment of an animal, plant, or other organism.