



## Weed and Vertebrate Pest Management Plan

Edna May Operations

Environment

# Weed and Vertebrate Pest Management Plan

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Attachment E - Updated Weed And Vertebrate Pest Management Plan



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### 1. SCOPE

This Weed and Vertebrate Pest Management Plan provides a management framework for the implementation, monitoring and review of actions aimed at minimising adverse impacts from weeds and vertebrate pests on the environment; including local fauna and flora communities. Specifically, Edna May Operation (EMO) proposes to:

- Maintain the abundance, diversity, geographic distribution and productivity of terrestrial flora at species and ecosystem levels;
- Protect and minimise impact to DRF and Priority Flora located within the Edna May Operations Leases;
- Disturb land only within approved clearing envelopes; and
- Ensure that land rehabilitation is implemented progressively.

### 2. CURRENT STATUS

Edna May is located in the eastern part of the central wheat-belt of Western Australia. It is located 312 km by road from Perth and 10 km north of the Great Eastern Highway. The climate, geology, flora, fauna, and water issues specific to the Edna May site are described in detail in the Edna May Operations Environmental Management Plan.

The current land uses within the Edna May Project area are mining, processing, mineral exploration, farming and conservation. Westonia town site, which includes sporting facilities and residences, is located approximately 0.8 km south of the southern end of the existing pit. The pit, run of mill (ROM) and plant are surrounded by native vegetation which acts as a buffer, separating the mine site from the town. Agricultural land is located immediately to the north, east and west of the Integrated Waste Landform (IWL) and evaporation ponds, which are located to the north of the plant on cleared farmland.

Vertebrate pests which are known to occur locally include the following;

- Red Fox (*Vulpes vulpes*);
- European Rabbit (*Oryctolagus cuniculus*);
- Cats (*Felis catus*); and
- Wild dogs (*Canis lupus familiaris*).

Weeds which may occur in the local area include;

- Double Gee (*Emex australis*);



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- Paterson's Curse (*Echium plantagineum*);
- Skeleton Weed (*Chondrilla juncea*)
- Saffron Thistle (*Carthamus lanatus*);
- African Lovegrass (*Eragrostis curvula*);
- Prickly Pear (*Opuntia stricta*);
- Ward's Weed (*Carrichtera annua*);
- Ruby Dock (*Acetosa vesicaria*);
- Caltrop (*Tribulus terrestris*);
- Paddy melon (*Cucumis myriocarpus*);
- Afghan melon (*Citrullus lanatus*);
- Wild radish (*Raphanus raphanistrum*); and
- Maltese Cockspur (*Centaurea melitensis*).

Many of these species are agricultural weeds. Although baseline vegetation surveys undertaken for the Project to-date did not extend to the 40 m buffer surrounding the Eucalypt Woodlands of the Western Australia Wheatbelt TEC, it can be expected that some of these weeds may occur within this buffer.

Skeleton Weed was detected on General Purpose Lease G77/122 in December 2015. The lease is a property which was purchased by EMO in 2014 for the construction of a waste dump. The weed was detected over an area less than 1 ha and had been stripped of topsoil for the construction of the waste dump. The WA Department of Primary Industries and Regional Development (DPIRD) - Agriculture and Food, is notified as and when detection is made. DPIRD visited the site in this instance to view the plants. They also provided coordinates of other areas on the property where the plants had been detected in previous years. Adjacent landholders were also notified of the detection and invited to view the site, of which some took up the offer.

The detected plants were sprayed with herbicide at the label rate however some of the plants had already set seed (Figure 1). EMO signed a Landholder Acknowledgement of Obligations which details the control and monitoring commitments required. Ongoing monitoring of these areas is continuing.



*Figure 1: Skeleton Weed plants detected on the EMO lease which had set seed*

Feral cat numbers fluctuate on site and where required a feral cat trapping programme is implemented (Figure 2). This programme relies on the support of the Shire Ranger based in Merredin who also covers the Westonia Shire. This ensures that all trapped feral cats are able to be euthanised whilst complying with relevant legislation and guidelines.



*Figure 2: A feral cat caught onsite in the trapping programme*

A fox and rabbit control programme using 1080 baiting is also implemented on site during autumn and spring periods. Baiting is completed under a current valid Restricted Chemical Product (RCP) permit issued by DPIRD and baiting is only undertaken by a nominated person listed on the Permit who is an Authorised Person and has successfully completed the DPIRD restricted chemical product training.

### **3. POTENTIAL IMPACTS**

Potential impacts resulting from poor management of weeds and vertebrate pests include:

- Damage to crops and native vegetation;
- Competition with livestock and native animals for pasture and food;
- Erosion;
- Livestock losses; and
- Damage to neighbour relationships.



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#### 4. ENVIRONMENTAL OBJECTIVES

This Weed and Vertebrate Pest Management Plan has been developed to satisfy the following objectives:

- Manage and minimise adverse impacts from exploration, construction and mining activities to native flora and fauna;
- Identify and control species which impact native flora and fauna;
- Comply with relevant legislation and commitments made in applications (*e.g.*, Mining Proposals);
- Be responsible Land Managers and neighbours.

#### 5. MANAGEMENT AND IMPLEMENTATION STRATEGY

A Weed and Vertebrate Pest Management Strategy has been devised to comply with legislation and to minimise adverse impacts to native flora and fauna (Table 1), along with the title of the role responsible for implementing each action and an indication of the timing for implementation.

Table 1: Weed and Vertebrate Pest Management and Implementation Strategy

MANAGEMENT ACTION	TIMING	RESPONSIBILITY	EVIDENCE	
<b>Weeds</b>				
WPIS 1	Weed control activities will follow current best practice.	Ongoing	All employees / contactors	Weekly, monthly reports
WPIS 2	During vegetation clearing activities: <ul style="list-style-type: none"> <li>• Earth moving machinery must be cleaned of soil and vegetation prior to entering and leaving the area to be cleared.</li> <li>• The clearing permit holder must ensure that no weed-affected soil, mulch, fill or other material is brought into the area to be cleared.</li> </ul> The movement of machines and other vehicles must be restricted to the limits of the area to be cleared.	Ongoing	Environmental Department / Mining Supervisors	Field Inspections
WPIS 3	Heavy machinery being mobilised and demobilised to site shall be clean and free of soil material.	Ongoing	All employees / contactors	Force Delivery Inspection Sheets
WPIS 4	In order to minimise disturbance and prevent unintentional impacts through the use of machinery and vehicles, no machinery or vehicle is to travel off designated roads and tracks.	Ongoing	All employees / contractors	Field Inspections
WPIS 5	Cleared areas will be progressively rehabilitated as they become available.	Ongoing	General Manager	Site Rehabilitation Plan. Summarised in AER.





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MANAGEMENT ACTION		TIMING	RESPONSIBILITY	EVIDENCE
<b>Vertebrate Pests</b>				
WPIS 6	Site and Camp bins which may contain food to utilise lids to dissuade animal pests.	Ongoing	All employees / contactors	Field Inspections
WPIS 7	Landfill areas to be fenced and covered with fill on a weekly basis	Weekly	Mining Supervisors	Weekly Landfill Inspection Sheets
WPIS 8	Vertebrate pest control activities will implement current best practice	Ongoing	Environmental Department	Weekly, monthly reports
WPIS 9	Site will implement a fox and rabbit baiting programme and also participate in any community-coordinated baiting activities	Ongoing	Environmental Department	Weekly, monthly reports
WPIS 10	A record of trapping activities will be kept	Ongoing	Environmental Department	Trapping Record Spreadsheet
<b>Monitoring</b>				
WPIS 11	Areas will be informally surveyed to detect the presence of weeds.	Ongoing	Environmental Department	INX Field Inspection Sheets
WPIS 12	Significant weed populations will be recorded in GIS. If detected, this is the trigger for appropriate corrective actions for weed management as described in Appendix A.	Ongoing	Environmental Department	GIS Database, Property and Paddock Records submitted



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MANAGEMENT ACTION		TIMING	RESPONSIBILITY	EVIDENCE
WPIS 13	Skeleton weed monitoring will occur as per the DPIRD Landholder Acknowledgment of Obligations	Ongoing	Environmental Department	Property and Paddock Records submitted
<b>Stakeholder Consultation</b>				
WPIS 14	Complaints Register to assist in indicating improvements or failings in management actions	Ongoing	Environmental Department	INX Incidents. Recorded in the AER.
WPIS 15	A minimum of 72 hours' notice will be given in writing to all landholders adjacent to Edna May prior to any baiting activities taking place	Ongoing	Environmental Department	Copies of Landholder Notification Letters
<b>Training and Awareness</b>				
WPIS 16	Education of personnel through site-wide notifications, environmental alerts, inductions, toolbox talks, and newsletters	Ongoing	Environmental Department	Records
WPIS 17	All personnel collecting, or handling 1080 baits will have successfully completed the DPIRD restricted chemical product training and be an approved user	Ongoing	Environmental Department	Valid DPIRD permit
WPIS 18	1080 baiting signage will be displayed around site and at farm entrances as per the DPIRD permit map	Ongoing	Environmental Department	Field Inspections
<b>Auditing and Reporting</b>				
WPIS 19	The presence of weeds or vertebrate pests shall be reported to the Environment Department and recorded as a hazard in INX.	Ongoing	All employees / contactors	INX



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MANAGEMENT ACTION		TIMING	RESPONSIBILITY	EVIDENCE
WPIS 20	Weed and Vertebrate Pest control activities will be reported in the Annual Environmental Report (AER).	Annually	Environmental Advisor/s	Summarised in AER
WPIS 21	The Skeleton Weed Property and Paddock Record is submitted to DPIRD by February 15 of each calendar year.	Ongoing	Environmental Department	Property and Paddock Records
<b>Review and Revision</b>				
WPIS 22	The Registered Manager (General Manager) will review this Management Plan, and allocate resources to implement it, ensure appropriate action is being taken, and offer support to the Environmental Department.	Ongoing	General Manager	Compliance Audits
WPIS 23	This Management Plan will be internally reviewed on an as-needed basis. Reviews will be conducted at key stages of the Edna May project based on planning requirements, review of incidents, audits and corrective actions; legal requirements; and monitoring. The reviews will incorporate feedback from relevant EMO, DWER, DPIRD, DMIRS staff.	Ongoing	Environmental Department	Revision Record



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### 6. STAKEHOLDER CONSULTATION

Edna May 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.

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

### 7. TRAINING AND AWARENESS

Management practices to identify and minimise the spread of weeds and pest awareness programmes will be outlined to contractors and employees through Environmental Alerts and toolbox meetings. Additional area-specific training will be undertaken where required or when requested.

### 8. PERFORMANCE MONITORING

Monitoring of operational controls is performed through:

- Reduced incidence / reporting of vertebrate pests;
- No new weed species introduced to site;
- Existing weed populations are monitored and controlled where required;
- Inspections by regulatory bodies such as the DWER and DMIRS; and
- Regular area inspections and quarterly group assurance audits.

### 9. RELEVANT LEGISLATION

The following relevant legislation applies to this Plan:

- *Animal Welfare Act 2002;*
- *Biodiversity Conservation Act 2016;*
- *Biosecurity and Agriculture Management Act 2007;*
- *Cat Act 2011;*
- *Conservation and Land Management Act 1984;*



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- *Environmental Protection Act 1986;*
- *Environment Protection and Biodiversity Conservation Act, 1999*
- *Environmental Protection Regulations 1987;*
- *Mining Act 1978;*
- *Mines Safety and Inspection Act 1994;*
- *Mines Safety and Inspection Regulations 1995; and*
- *Soil and Land Conservation Act 1945.*

### 10. RELEVANT INTERNAL DOCUMENTS

The following relevant internal documents can be located on INX:

- *Environmental Management System Manual*
- *Fauna Management Plan;*
- *Topsoil Management Plan;*
- *Clearing and Ground Disturbance Procedure;*
- *Skeleton Weed Procedure;*
- *Photo Point Monitoring Procedure;*
- *Topsoil Stripping Procedure;*
- *Weed Spraying Procedure; and*
- *Exploration Rehabilitation Procedure.*

Other relevant documents include:

- DWER Site Operating Licence L8422/2010/2
- DWER WWTP Licence L8811/2014/1
- Westonia Gold Mine Threatened Flora Management Plan, 2007 (Outback Ecology, 2007);
- Edna May Gold Mining Proposals;



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- EMO Edna May Gold Project Works Approval, March 2009, Works Approval Number 4546/2009/1;
- Request for Addendum to Works Approval W4546/2009/1 Granted on 2 July 2009 for the Edna May Gold Mine, Westonia.
- Permit to Take applications / reports
- EMO Mine Closure Plan (2018) and
- EMO Compliance Register.

### 11. AUDITING AND REPORTING

This Plan and its outcomes, commitments and the implementation of the management actions will be audited and revised where required. The key management actions identified in Table 1 will be the basis for this audit.

The results of inspections, audits and incident reports or complaints received relating to weed and pest control activities will be included in the AER submitted to the statutory authorities. This will be additional to any event-based reporting.

The Edna May internal reporting system of INX will record any incidents relating to the management of weeds and vertebrate pests. These will also be summarised in the AER.

Breaches of licenses, permits or tenement conditions which result in an adverse effect on the environment will be reported to DWER or DMIRS as soon as practicable but no later than 5pm of the next working day and summarised in the AER. External reporting of incidents is the responsibility of the Registered Manager with assistance from the Environmental Department.

Compliance assurance audits will be undertaken by Ramelius on an annual basis and may include this Management Plan.

### 12. REVIEW AND REVISION

This Plan is intended to be adaptive and is subject to change as new information becomes available. It incorporates the formal requirements of the DWER Operating Licence as well as Tenement Conditions.

This Plan will be reviewed by the Environmental Department on an as-required basis or in the following circumstances:

- Procedures are required to be modified; or
- The Project scope has changed significantly.



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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 reissued.

### 13. DEFINITIONS

- Weed: Any plant that requires some form of action to reduce its effect on the environment, economy, human health or amenity.
- Vertebrate Pest: A skeletal animal which can cause problems of a social, environmental or economic nature.



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### 14. APPENDICES

#### 14.1 APPENDIX A – CORRECTIVE ACTIONS TO MANAGED SIGNIFICANT WEED OUTBREAKS

The ex-farmland to be rehabilitated has historically been utilised for cropping (wheat, barley, canola) and pasture for sheep grazing. The site features a number of agricultural weeds given that has been the previous land use for a significant period of time. Of the comprehensive list of weed species occurring in the district, some of the more prevalent and common agricultural weeds which are present on the site and need to be controlled include:

- Matricaria (*Oncosiphon suffruticosum*);
- Roly Poly (*Salsola australis*);
- Marshmallow (*Malva parviflora*);
- Annual rye grass (*Lolium rigidum*);
- Sowthistle (*Sonchus oleraceus*);
- Burr Medic (*Medicago polymorpha*); and
- Windmill grass (*Chloris truncata*).

Skeleton weed (*Chondrilla juncea*) occurs in the district and has been detected previously on the farm. However, surveillance activities and chemical control has successfully limited the weed and an ongoing programme continues to monitor for this weed and results are reported to DPIRD in February of each year.

Weed control is a key site preparation activity. Weed control of identified revegetation areas is commenced as early as possible and target grasses and broadleaf weeds. Spraying generally commences a year prior to planting and seeding providing the area isn't being cropped. A spray during winter and early spring in the year prior is sometimes followed by another application in late summer if there has been sufficient rainfall for a germination. A follow-up weed spraying campaign is completed again in March / April, and then once more immediately prior to direct seeding, however again it is entirely rainfall-dependent.

Weed spraying in the year prior to seeding and planting generally consists of applying a non-selective chemical and applied by a tractor-mounted or towed agricultural boom spray. Weed applications are intended to preserve soil moisture and reduce competition between plants. Broadacre spraying of the site will take place on an as-needed basis post-planting and seeding and most successfully applied after the first rainfall event (>5 mm).