



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4878/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Edna May Operations Pty Ltd

1.3. Property details

Property: Mining Lease 77/88
Mining Lease 77/110
Mining Lease 77/124
Local Government Area: Shire of Westonia
Colloquial name: Edna May Gold Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.78		Mechanical Removal	Road Infrastructure, Powerlines, Pipeline and Access Roads

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 26 April 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database; Shepherd, 2009):

536: Medium woodland; morel & rough fruited mallee (*Eucalyptus corrugata*).

Clearing Description Edna May Operations Pty Ltd is proposing to clear up to 0.78 hectares of native vegetation for the purpose of installing road infrastructure, powerlines, pipeline and access roads.

Clearing will be conducted by using a mechanised plant such as a bulldozer.

Vegetation Condition Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment The application area is located within the Avon Wheatbelt region of Western Australia and is situated approximately 2 kilometres north of Westonia.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**

The application area occurs within the Avon Wheatbelt P1 subregion of the Avon Wheatbelt Interim Biogeographical Regionalisation for Australia (IBRA) bioregion (GIS Database). At a broad scale the vegetation of this region can be described as proteaceous scrub-heaths, rich in endemics on residual lateritic uplands and derived sandplains; mixed eucalypt, *Allocasuarina huegeliana* and Jam-York Gum woodlands on quaternary alluvials and eluvials (CALM, 2002).

A flora and vegetation survey conducted by Ecologia (2012) on 8 November 2011 identified 41 plant species from 14 families and 32 genera within the application area. This is considered to be very low diversity for this area and is therefore it is considered unlikely that the proposed clearing will significantly impact on floral diversity within the area (Ecologia, 2012).

The flora survey of the application area conducted by Ecologia (2012) identified one Threatened Flora species,

Eremophila resinosa, and no Priority Flora within the application area. A total of two individual plants of *Eremophila resinosa* are likely to be impacted by the proposed clearing (Ecologia, 2012). Potential impacts to this species may be minimised by the implementation of a flora management condition.

According to available databases, there are no Priority Ecological Communities or Threatened Ecological Communities within the application area (GIS Database).

A flora and vegetation survey conducted by Ecologia (2012) identified seven weed species, *Avena sativa*, *Brassica barrelieri*, *Carrichtera annua*, *Centaurea melitensis*, *Emex australis*, *Mesembryanthemum nodiflorum* and *Sonchus oleraceus*, within the application area. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This can in turn lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey of the application area was conducted by Ecologia (2012) on 8 November 2011. This survey included a desktop survey and a reconnaissance survey to determine the fauna habitats present within the application area (Ecologia, 2012). One fauna habitat, tall eucalypt woodland with a mixed shrub layer, was identified in the application area and was considered to have a relatively high level of disturbance (Ecologia, 2012). This habitat is unlikely to contain a high level of faunal diversity and the small size of the proposed clearing (0.78 hectares) is not likely to significantly impact the faunal diversity of the area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology CALM (2002)
Ecologia (2012)
GIS Database:
- IBRA WA (regions – subregions)
- Threatened Ecological Sites Buffered

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments Proposal is not likely to be at variance to this Principle

A fauna survey of the application area was conducted by Ecologia (2012) on 8 November 2011. This survey included a desktop survey and a reconnaissance survey to determine the fauna habitats present within the application area (Ecologia, 2012). One fauna habitat, tall eucalypt woodland with a mixed shrub layer, was identified in the application area and was considered to have a relatively high level of disturbance (Ecologia, 2012).

Based on the desktop survey and the habitat present, the following five conservation significant fauna species have been assessed as having a medium likelihood of occurring within the application area (Ecologia, 2012):

- Western Quoll (*Dasyurus geoffroii*) – Listed as Vulnerable under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1986*, Schedule 1 under the *Wildlife Conservation Act 1950* and Vulnerable by the Department of Environment and Conservation (DEC). Suitable habitat exists within the application area and at least ten records are known within 100 kilometres;
- Malleefowl (*Leipoa ocellata*) – Listed as Vulnerable and Migratory under the *EPBC Act 1986*, Schedule 1 under the *Wildlife Conservation Act 1950* and Vulnerable by DEC. There are many records of this species nearby to the application area however, the habitat within the application area is not typically dense enough for this species;
- Rainbow Bee-eater (*Merops ornatus*) – Listed as Migratory under the *EPBC Act 1986* and Schedule 3 *Wildlife Conservation Act 1950*. Numerous records of this species in the vicinity of the application area;
- White-browed Babbler (Wheatbelt) (*Pomatostomus superciliosus ashbyi*) – Listed as Priority 4 by DEC. Numerous records of this species exist nearby the application area; and
- Crested Bellbird (Southern) (*Oreoica gutturalis gutturalis*) – Listed as Priority 4 by DEC. Numerous records of this species exist nearby the application area.

None of these species were recorded during the fauna survey of the application area conducted by Ecologia (2012). Given the small size of the proposed clearing and the disturbed nature of the application area, it is considered unlikely that the application area comprises the whole or part of, or is necessary for the maintenance of a significant fauna habitat for fauna indigenous to Western Australia.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Ecologia (2012)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is at variance to this Principle

The Department of Environment and Conservation (DEC) have one known record of Threatened Flora species *Eremophila resinosa* within the application area (Ecologia, 2012). A flora and vegetation survey of the application area conducted by Ecologia (2012) on 8 November 2011 was unable to locate the DEC record, however the survey did identify an additional location of *Eremophila resinosa*. Potential impacts to the Threatened Flora species *Eremophila resinosa* may be minimised by the implementation of a flora management condition.

Based on the above, the proposed clearing is at variance to this Principle.

Methodology Ecologia (2012)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments Proposal is not likely to be at variance to this Principle

There are no records of Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is approximately 182 kilometres south west of the application area (GIS Database). At this distance there is little likelihood of any impact to the TEC as a result of the proposed clearing.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal may be at variance to this Principle

The application area is located within the Avon Wheatbelt Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 18.24% of the pre-European vegetation remains within the Avon Wheatbelt bioregion.

The vegetation in the application area has been broadly mapped as Beard vegetation association:

536: Medium woodland; morel & rough fruited mallee (*Eucalyptus corrugata*).

According to Shepherd (2009) approximately 43.36% of this Beard Vegetation Association remains at a state level and 35.32% remains at a bioregional level. The threshold below which species loss appears to accelerate exponentially at an ecosystem level is 30% (Shepherd, 2009), which this Vegetation Association is above.

The application area lies within the Shire of Westonia which has approximately 35.31% of Pre-European vegetation remaining (Shepherd, 2009). Whilst the Shire of Westonia remains above the 30% threshold the Avon Wheatbelt Bioregion and Avon Wheatbelt subregion are both below 30% and have been extensively cleared. Aerial imagery indicates that the application area is within a remnant of vegetation in an area that has been extensively cleared (GIS Database). Crown Reserve 14983, within which the application area is located, has been identified as being regionally significant as it contains one of the largest 'reserved' red morel woodlands within the intensive land use zone (McLellan, 2007).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)
IBRA Bioregion - Avon Wheatbelt	9,517,110	1,736,215	~18.24	Vulnerable	~1.75 (~6.95)
IBRA Subregion - Avon Wheatbelt P1	6,524,180	1,323,985	~20.29	Vulnerable	~1.82 (~6.50)
Local Government - Westonia	331,941	117,219	~35.31	Depleted	~8.10 (~22.30)
Beard vegetation associations - State					
536	13,178	5,714	~43.36	Depleted	~93.82 (~22.59)
Beard vegetation associations - Bioregion					
536	11,171	3,946	~35.32	Depleted	~11.58 (~32.72)
Beard vegetation associations - subregion					
536	11,171	3,946	~35.32	Depleted	~11.58 (~32.72)

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

The vegetation within the application area may be considered to be a remnant of native vegetation in an area that has been extensively cleared. However, given the small scale of the proposed clearing (0.78 hectares) within the Avon Wheatbelt Bioregion (1,736,215 hectares), the vegetation is not likely to be considered significant.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
 McClellan (2007)
 Shepherd (2009)
 GIS Database:
 - IBRA WA (regions – subregions)
 - Pre-European Vegetation
 - Westonia 50cm Orthomosaic – Landgate 2004 (image)

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments **Proposal is not at variance to this Principle**

According to available databases, there are no permanent or non perennial wetlands or watercourses within the application area (GIS Database).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology GIS Database:
 - Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal is not likely to be at variance to this Principle**

According to available databases, the soil type within the application area is described as undulating plains with some low Gilgai's: chief soils seem to be hard alkaline red soils in intimate and complex associations with calcareous earths (GIS Database). These soil types are said to be slowly permeable and have low wind erodability (Schoknecht, 2002). Therefore, the likelihood of erosion during normal rainfall events is low.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Schoknecht (2002)
 GIS Database:
 - Soils, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposal is not likely to be at variance to this Principle

The proposed clearing is not located within a conservation reserve (GIS Database). The nearest conservation reserve is Sandford Rocks Nature Reserve, located approximately 6 kilometres north east of the application area (GIS Database). At this distance it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments Proposal is not likely to be at variance to this Principle

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Brookton Happy Valley Water Reserve located approximately 192 kilometres south west of the application area (GIS Database).

The groundwater salinity within the application area is between 14,000 – 35,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Given the small scale of the proposed clearing (0.78 hectares), it is considered unlikely to alter salinity levels within the application area.

There are no permanent wetlands or watercourses within the application area (GIS Database). It is therefore considered unlikely that the proposed clearing will impact on the quality of any surface water.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Goundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSA)

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments Proposal is not likely to be at variance to this Principle

The application area experiences a semi-arid Mediterranean climate with an annual average rainfall of approximately 334.2 millimetres (CALM, 2002; BoM, 2012). There are two distinct seasons, hot dry summer and mild wet winter, with the majority of the rain falling from May to September (Ecologia, 2012). Given the small size of the proposed clearing and the low average annual rainfall, it is considered unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology BoM (2012)
CALM (2002)
Ecologia (2012)

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are no Native Title Claims over the area under application (GIS Database). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Site of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 27 February 2012 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received requesting monitors be present when vegetation clearing is conducted. This request has been passed on to the applicant, however there is no scope

to enforce this through the clearing permit process.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

- BoM (2012) BoM Website - Climate Averages by Number, Averages for WESTONIA.
www.bom.gov.au/climate/averages/tables.shtml (Accessed 18 April 2012)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Ecologia (2012) Evolution Mining Pty Ltd Edna May Gold Project Vegetation Clearing Permit Supporting Documentation. Unpublished report dated January 2012.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- McLellan, R. (2007) Westonia BioBlitz Report 2007. Unpublished report by Richard McLellan for WWF Australia.
- Schoknecht, N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
 (a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
 (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
 (a) is not critically endangered; and
 (b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
 (a) is not critically endangered or endangered; and
 (b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with

the prescribed criteria.

CD

Conservation Dependent: A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.