Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6823/2
Permit type: Purpose

1.2. Proponent details

Proponent's name: **Avoca Mining Pty Ltd**

1.3. Property details

Property: General Purpose Lease 63/7
Mining Lease 63/515
Local Government Area: Shire of Dundas
Colloquial name: Mt Henry Mine Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
546.35		Mechanical Removal	Mineral production.

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 30 March 2017

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. Three Beard vegetation associations are located within the application area (GIS Database):

125: Bare areas; salt lakes,
221: Succulent steppe; saltbush; and
3106: Medium woodland; salmon gum & Dundas blackbutt.

A Level 1 Flora and Vegetation Survey of the application area was undertaken by Native Vegetation Solutions (NVS) (2016) during the periods 23 - 25 February and 8 - 11 August 2016. A previous Level 2 flora survey was undertaken by Mattiske Consulting Pty Ltd (Mattiske) over part of the application area (Mattiske, 2013). The Mattiske vegetation survey identified the following five vegetation communities in the application area (Mattiske, 2013):

Woodlands

W1: Woodland to open woodland of *Eucalyptus dundasii*, *Eucalyptus torquata* and other mixed *Eucalyptus* spp. over *Melaleuca sheathiana*, *Exocarpos aphyllus*, *Scaevola spinescens*, *Alyxia buxifolia*, *Eremophila glabra* subsp. *glabra* and *Pomaderris forrestiana* over *Westringia rigida* and *Ptilotus obovatus* on orange-brown clayey loam with gravel on slopes and ridges.

W2: Woodland of *Eucalyptus urna*, *Eucalyptus lesouefii* and *Eucalyptus oleosa* subsp. *oleosa* and other mixed *Eucalyptus* spp. over *Melaleuca sheathiana*, *Exocarpos aphyllus*, *Scaevola spinescens* and *Eremophila scoparia* over *Olearia muelleri* and *Westringia rigida* on orange sandy clayey loam on flats and slopes. Variation exists within the midstorey and understorey of this community, ranging in foliage cover from very sparse and almost non-existent to thickets. Generally, where thickets of *Melaleuca sheathiana* occur, other understorey species become sparse. Small pockets of dense *Cratystylis conocephala* also exist throughout the community.

Shrublands

S1: Open low shrubland of *Eremophila scoparia*, *Scaevola spinescens* and *Eremophila glabra* subsp. *glabra* over *Atriplex vesicaria*, *Tecticornia* spp., *Frankenia desertorum* and *Disphyma crassifolium* subsp. *clavellatum* with emergent *Eucalyptus* spp. on orange-brown sandy clay-loam on flats, lower slopes and mid slopes of salt lake margins.

S2: Open low shrubland to low shrubland of *Tecticornia* spp., *Lawrencia squamata*, *Hemichroa diandra*, *Atriplex nana*, *Frankenia* spp. and *Disphyma crassifolium* subsp. *clavellatum* on pale sands on flats around salt lake margins.

S4: Open scrub to scrub of *Acacia ?burkittii* and *Allocasuarina campestris* with occasional *Acacia neurophylla* subsp. neurophylla and occasional emergent *Eucalyptus griffithsii* over *Dodonaea microzyga* var. *acrolobata*, *Trymalium myrtillus* subsp. *myrtillus*, *Scaevola spinescens* and *Dampiera latealata* over *Lepidosperma* sp. *aff*

lyonsii and small annual and perennial herbs on red to brown clayey loam on flats, slopes, valleys and micro channels.

Clearing Description

Mt Henry Mine
Avoca Mining Limited proposes to clear up to 546.35 hectares of native vegetation within a total boundary of approximately 546.35 hectares, for the purpose of mineral production. The project is located approximately 15 kilometres south of Norseman in the Shire of Dundas.

Vegetation Condition

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

To:

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

Clearing Permit CPS 6823/1 was granted by the Department of Mines and Petroleum (DMP) on 24 December 2015 and allowed for the clearing of 450 hectares of native vegetation within a boundary of 455 hectares. An application to amend CPS 6823/1 was submitted to the DMP on 4 January 2017. The application requested an increase in the amount of clearing authorised, an increase in the clearing permit boundary and clearing on General Purpose Lease 63/7. The total amount of clearing required is 546.35 hectares.

3. Assessment of application against clearing principles

Comments

Avoca Mining Pty Ltd has applied to amend CPS 6823/1 for the purpose of increasing the clearing amount (from 450 hectares to 546.35 hectares), increasing the clearing permit boundary to 546.35 hectares and including clearing on General Purpose Lease 63/7.

The proposed amendment to the previously approved clearing footprint will impact on vegetation communities S1, S2, S4, W1, and W2 (NVS, 2016). The majority of the proposed amended clearing area is located within vegetation community W2: Woodland of *Eucalyptus urna*, *Eucalyptus lesouefii* and *Eucalyptus oleosa* subsp. *oleosa* and other mixed *Eucalyptus* spp. over *Melaleuca sheathiana*, *Exocarpos aphyllus*, *Scaevola spinescens* and *Eremophila scoparia* over *Olearia muelleri* and *Westringia rigida* on orange sandy clayey loam on flats and slopes (NVS, 2016). NVS (2016) reported Woodland of Eucalyptus species (vegetation community W2) to be the most widespread vegetation community (632.53 hectares) within the broader flora survey area (1,585 hectares) (NVS, 2016). The vegetation within the amendment clearing areas is described as very good to excellent (Keighery, 1994; NVS, 2016).

A flora survey of the Mt Henry project undertaken by NVS (2016) did not locate any Threatened flora or Threatened or Priority Ecological Communities within the amended clearing area (NVS, 2016). However, six Priority flora species were recorded within the amended clearing area (NVS, 2016). These Priority flora species include; *Allocasuarina eriochlamys* subsp. *grossa* (P3), *Eucalyptus brockwayi* (P3), *Eucalyptus ?jimberlanica* (P1), *Eremophila purpurescens* (P3), *Goodenia laevis* subsp. *laevis* (P3) and *Philotheca apiculata* (P1) (NVS, 2016). As there is the potential for clearing activities to have a significant impact on Priority flora species, a flora management condition exists on CPS 6823/1. Authorisation was given to Avoca Mining Pty Ltd on 14 April 2016 by the DMP to clear the following Priority flora; *E. brockwayi*, *E. ?jimberlanica*, *E. purpurescens*, *G. laevis* subsp. *laevis* and *P. apiculata* at specified GPS locations. While the majority of Priority flora species are recorded outside of the application area, clearing impacts on Priority flora should be carefully managed and minimised. Potential impacts to Priority flora may be minimised by the existing flora management condition.

Western Wildlife (2013) completed a Level 2 fauna survey of the original clearing permit and amendment clearing areas. Rainbow Bee-eater individuals are known to occur within the application area and one nesting burrow was also recorded during the fauna survey (Western Wildlife, 2013). A fauna management condition exists on CPS 6823/1 to manage potential impacts to Rainbow Bee-eater nesting burrows. The majority of the amended clearing area consists of Woodland of Eucalyptus species which may be utilised by Rainbow Bee-eaters (NVS, 2016; Western Wildlife, 2013). However, it is unlikely that the proposed clearing will have a significant impact on Rainbow Bee-eater individuals and the amendment application is not likely to contain critical habitat for native fauna species.

Two non-perennial watercourses and a small part of Lake Dundas intersect the application area. Vegetation growing in association with a wetland will be impacted and minor impacts to surface water quality may occur.It is unlikely that the proposed clearing will have a significant impact on surface or groundwater. Potential impacts to watercourses and riparian vegetation may be minimised by the existing watercourse management condition.

The proposed amendment is unlikely to result in any significant change to the environmental impacts of the proposed clearing. The assessment against the clearing principles remains consistent with the assessment contained in decision report CPS 6823/1.

Methodology

NVS (2016)
Western Wildlife (2013)

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

Comments

The clearing permit application was advertised on 23 January 2017 by the Department of Mines and Petroleum inviting submissions from the public. There were two submissions received in relation to the clearing permit amendment. One submission related to impacts to local historical and European heritage sites and the other submission related to Aboriginal heritage. The applicant has amended the clearing boundary to exclude the European heritage site and consultation is ongoing with regards to the local historical site and Aboriginal Heritage issues.

There is one Native Title claims over the application area (WC 1999/002) (DAA, 2017). However, 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 sites of significance within the application area (DAA, 2017). 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 Regulation, Department of Parks and Wildlife 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.

Methodology

DAA (2017)

4. References

DAA (2017) Aboriginal Heritage Inquiry System. Department of Aboriginal Affairs. http://maps.dia.wa.gov.au/AHIS2 (Accessed 2 February 2017).

Keighery B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of Western Australia (Inc.). Nedlands, Western Australia.

Mattiske (2013) Flora and Vegetation Survey of the Mt Henry Survey Area. Report prepared for Panoramic Resources Ltd. Mattiske Consulting Pty Ltd, Perth, Western Australia, September, 2013.

NVS (2016) Level 1 Flora and Vegetation Survey of the Mt Henry Project (M63/366, M63/515, M63516, G63/6 and G63/7), Report prepared for Metals X Limited, Avoca Resources Pty Ltd, Higginsville Gold Operation (HGO) by Native Vegetation Solutions, Western Australia, December 2016.

Western Wildlife (2013) Mt Henry Study Area Baseline Fauna Survey, Level 2 Fauna Survey 2012 and 2013. Report prepared for Panoramic Resources Ltd, by Western Wildlife, Perth, Western Australia, November 2013.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotEE	Department of the Environment and Energy, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotEE)
EPA	Environmental Protection Authority, Western Australia
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
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act.*

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act.*

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN **Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU **Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX **Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA **Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD **Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS **Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P **Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such

species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring:**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Principles for clearing native vegetation:

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

(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.

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

(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.

(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.

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

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

(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.

(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.

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