



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6117/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Cristal Mining Australia Limited

1.3. Property details

Property: Mining Lease 70/758
Miscellaneous Licence 70/159
Local Government Area: City of Busselton
Colloquial name: Wonnerup South Mineral Sands Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
6.7		Mechanical Removal	Mineral sands extraction and associated infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 26 November 2015

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 and are useful to look at vegetation in a regional context. Three Beard vegetation associations have been mapped within the application area (Government of Western Australia, 2014; GIS Database):

- 990: Low forest: peppermint (*Agonis flexuosa*)

- 949: Low woodland; banksia

- 1136: Medium woodland; marri with some Jarrah, Wandoo, River Gum and Casuarina.

The application area falls within vegetation complex mapping conducted by Matisse and Havel (1998). The following vegetation complexes have been mapped in the application area (GIS Database):

- AB: Woodland and open forest of *Corymbia calophylla* on flats and low rises in the humid zone.

- Ad: Woodland of *Corymbia calophylla*, *Agonis flexuosa*, *Allocasaurina fraseriana* and *Nuytsia floribunda*.

- AF: Woodland of *Corymbia calophylla*-*Agonis flexuosa* and tall shrubland of Myrtaceae-Proteaceae spp. on terraces and valley floors in the humid zone.

- Aw: Tall shrubland of *Melaleuca viminea* and woodland of *Eucalyptus rudis*, *Melaleuca raphiophylla* with occasional *Corymbia calophylla*.

- Lw: Open woodland of *Melaleuca raphiophylla* and sedgelands of Cyperaceae-Restionaceae spp. on broad depressions in the subhumid zone.

Two flora and vegetation surveys have been undertaken over the application area; Onshore Environmental in April 2006 and Ekologica in October 2012. The Onshore Environmental (Onshore) survey identified four vegetation communities within the application area (Onshore, 2006):

- *Agonis flexuosa* Low Forest over **Lolium rigidum* Dense Low Grass.
- *Corymbia calophylla*/*Agonis flexuosa* Forest over **Lolium rigidum* Low Grass.
- *Melaleuca raphiophylla* Low Forest over **Zantedeschia aethiops*/**Rumex pulcher* Open Dwarf Scrub over **Lolium rigidum* Low Grass.
- *Corymbia calophylla* Woodland over **Rumex pulcher* Open Dwarf Scrub over **Lolium rigidum* Low Grass.

The Ekologica (2012) survey identified the following four vegetation communities within the application area:

- *Eucalyptus rudis* and *Agonis flexuosa* woodland over grassland/herbland of introduced taxa including **Pennisetum clandestinum*.
- *Corymbia calophylla* and *Eucalyptus marginata* woodland over *Agonis flexuosa*, *Nuytsia floribunda* low woodland over grassland/herbland of **Lolium rigidum*, **Hordeum leporinum*, **Arctotheca calendula* and other introduced species.
- *Melaleuca raphiophylla* low woodland over grassland/herbland of **Lolium rigidum*, **Hordeum leporinum*, **Arctotheca calendula* and other introduced species.
- *Melaleuca raphiophylla* low forest over **Zantedeschia aethiopica* and **Rumex pulcher* herbland.

* introduced species

Clearing Description	Wonnerup South Minerals Sands Project Cristal Mining Australia Ltd (Cristal Mining) proposes to clear 6.7 hectares of native vegetation within a total boundary of approximately 162.7 hectares for the purpose of mineral sands extraction and associated infrastructure. The project is located approximately 6 kilometres south-east of Busselton, in the City of Busselton.
Vegetation Condition	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994). To Degraded: Basic vegetation structure severely impacted by disturbance (Keighery, 1994).
Comment	The vegetation condition was determined by botanists from Ekologica and Onshore.

3. Assessment of application against clearing principles

Comments

Clearing Permit CPS 6117/1 was appealed on the grounds of impacts to habitat fauna and movement, and water quality. The Minister determined that the environmental impacts from the proposed clearing were appropriately assessed, however allowed the appeal in part by requiring that the conditions be amended to include a requirement for the installation of artificial dreys for Western Ringtail Possum in rehabilitated areas at a rate of at least two per hectare.

Cristal Mining has submitted a revised Offset Management Plan in response to this requirement (Cristal Mining, 2015).

The assessment against the clearing principles remains consistent with the assessment contained in decision report CPS 6117/1.

Methodology Cristal Mining (2015)

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

Comments

There are no native title claims over the application area (Department of Aboriginal Affairs (DAA), 2015). 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 (ie. 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 occurring in the vicinity of the application area (DAA, 2015). 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, the Department of Water, and the Department of Parks and Wildlife, 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 (2015)

4. References

- Cristal Mining Australia Limited (2015). Wonnerup South Mining Project – Sabina River Reserve Revegetation Program. Version 3, November 2015.
- DAA (2015) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs, Government of Western Australia. <http://maps.dia.wa.gov.au/AHIS2/default.aspx>.
- Ekologica (2012) Vegetation, Flora and Wetland Survey at the Wonnerup South Mineral Sands Deposit. Unpublished report prepared for Cristal Mining Australia Ltd.

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. Department of Parks and Wildlife, Perth.

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

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Onshore (2006) Grice & Location 7 Flora Survey. Unpublished report prepared for Cable Sands.

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
DotE	Department of the Environment, 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 DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T	<p>Threatened species: Specially protected under the <i>Wildlife Conservation Act 1950</i>, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).</p> <p>Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo <i>Calyptorhynchus latirostris</i> is specially protected under the <i>Wildlife Conservation Act 1950</i> as a threatened species with a ranking of Endangered.</p> <p><u>Rankings:</u> CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild. EN: Endangered - considered to be facing a very high risk of extinction in the wild. VU: Vulnerable - considered to be facing a high risk of extinction in the wild.</p>
X	<p>Presumed Extinct species: Specially protected under the <i>Wildlife Conservation Act 1950</i>, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).</p>
IA	<p>Migratory birds protected under an international agreement: Specially protected under the <i>Wildlife Conservation Act 1950</i>, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice. Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.</p>
S	<p>Other specially protected fauna: Specially protected under the <i>Wildlife Conservation Act 1950</i>, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
P1	<p>Priority One - Poorly-known species: Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main</p>

Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

- P2 Priority Two - Poorly-known species:**
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3 Priority Three - Poorly-known species:**
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities 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 localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- 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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5 Priority Five - Conservation Dependent species:**
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

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.