Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4424/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Crushing Services International Pty Ltd**

1.3. Property details

Property: Miscellaneous Licence 15/319
Miscellaneous Licence 15/320
Local Government Area: Shire of Coolgardie
Colloquial name: East Jaurdi Aerodrom Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
60		Mechanical Removal	Aerodrome and Associated Infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 July 2011

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 is located within the application area (GIS Database):

Beard vegetation association 435: shrublands; *Acacia neurophylla*, *Acacia beauverdiana* and *Acacia resinimarginea* thicket.

A level 2 flora and vegetation survey of the application area was conducted by Mattiske Consulting Pty Ltd (Mattiske Consulting) in April 2011. This survey identified the following six vegetation communities within the survey area (Mattiske Consulting, 2011):

SHRUBLANDS

Vegetation Community 1 – S17
Open low scrub of *Allocasuarina corniculata*, *Acacia ?sibina*, *Gyrostemon racemiger* and *Eucalyptus leptopoda* subsp. *subluta* and mixed shrubs over *Triodia scariosa* and *Triodia desertorum* species on yellow sandy soils on gently undulating plains.

Vegetation Community 2 – S32
Scrub of *Acacia resinimarginea* with occasional *Callitris preissii* and occasional emergent *Eucalyptus leptopoda* subsp. *subluta* over *Leptospermum fastigiatum*, *Melaleuca hamata*, *Phebalium canaliculatum*, *Phebalium filifolium* and mixed shrubs on lateritic yellow sandy soils on flats and lower slopes.

Vegetation Community 3 – S34
Tall shrubland of *Acacia resinimarginea* and mixed *Allocasuarina* spp. over *Leptospermum fastigiatum*, *Beyeria brevifolia*, mixed *Phebalium* spp., *Malleostemon peltiger*, *Malleostemon roseus*, *Baeckea* ?sp. Mt Clara (R.J. Cranfield 11693) and other mixed low shrubs and grasses with emergent *Eucalyptus leptopoda* subsp. *subluta* and *Callitris preissii* on yellow to orange sand plains.

Vegetation Community 4 – S35
Open tall shrubland of *Acacia resinimarginea* over *Leptospermum fastigiatum*, *Baeckea* ?sp. Mt Clara (R.J. Cranfield 11693) and other low mixed shrubs and grasses with emergent *Eucalyptus leptopoda* subsp. *subluta* on yellow to orange sand plains.

Vegetation Community 5 – S36
Open low shrubland of mixed emergent *Myrtaceous* shrubs over *Triodia rigidissima* on light orange-brown sands on flats.

WOODLAND

Vegetation Community 6 – W46
Open woodland of *Eucalyptus oleosa* subsp. *oleosa* over *Acacia resinimarginea* and A*llocasuarina* spp. over

Phebalium spp. and other mixed shrubs and grasses with emergent *Callitris preissii* on orange-brown sandy loam flats.

Clearing Description

Crushing Services International (CSI) proposes to clear up to 60 hectares of native vegetation. The application area is located approximately 75 kilometres east of Koolyanobbing (GIS Database).

The purpose of the proposed clearing is to construct an aerodrome and associated infrastructure (CSI, 2011). Clearing will be conducted with a bulldozer (CSI, 2011).

Vegetation Condition

Pristine: No obvious signs of disturbance (Keighery, 1994).

Comment

The vegetation condition rating is derived from a level 2 flora and vegetation survey conducted by Mattiske Consulting in April 2011. Mattiske Consulting (2011) states that the area is undisturbed in terms of human intervention with no weed species recorded and no evidence of fire.

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 is located within the Southern Cross subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). CALM (2002) reports that high species and ecosystem diversity in this subregion is focussed around banded ironstone ranges, ephemeral flora communities of Tertiary sandplain scrubs and valley floor woodlands. This subregion is itself a Biogeographic interzone between the South West and Eremaean Botanical Provinces (CALM, 2002).

A level 2 flora and vegetation survey was conducted over the application area in April 2011 (Mattiske Consulting, 2011). This survey identified a total of 45 vascular plant taxa representing 28 genera and 14 plant families within the survey area (Mattiske Consulting, 2011). The most common families were *Myrtaceae* and *Proteaceae* (Mattiske Consulting, 2011).

No weed species were recorded within the application area during the flora and vegetation survey (Mattiske Consulting, 2011). The presence of weed species would lower the biodiversity value of the area. It is important to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The vegetation and landforms present within the application area are well represented within the region (Mattiske Consulting, 2011). No Declared Rare Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within the application area (Mattiske Consulting, 2011).

A search of DEC's NatureMap database indicates that the proposed clearing area is potentially high in bird diversity (DEC, 2011). Given that the vegetation communities are well represented within the area and generally in excellent to pristine condition, the clearing of 60 hectares is unlikely to impact fauna diversity within the area.

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

Methodology

CALM (2002)
DEC (2011)
Mattiske Consulting (2011)
GIS Database:
- IBRA WA (Regions - Subregions)

(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

Mattiske Consulting (2011) conducted a level 2 flora and vegetation survey of the application area in April 2011. There were no significant fauna habitats recorded within the application area (Mattiske Consulting, 2011).

CSI (2011) has recorded three inactive Malleefowl nest sites. Two of these mounds will be impacted by the proposed clearing, with one of the mounds being removed. The third mound occurs outside of the application area. Although it is likely that Malleefowl would be present within a 10 kilometre zone of the application area, given that these mounds are inactive it is unlikely that the proposed clearing will impact upon the conservation status of this species.

The fauna habitats present within the application area are well represented within the region. Given the amount of excellent to pristine vegetation available throughout the surrounding area, the clearing of 60 hectares is unlikely to have a significant impact on habitat for any fauna species.

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

Methodology Mattiske Consulting (2011)

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

Comments

Proposal is not likely to be at variance to this Principle

Mattiske Consulting (2011) conducted a flora and vegetation survey over the application area in April 2011.

No Declared Rare Flora were recorded within the application area during the flora and vegetation assessment (Mattiske Consulting, 2011).

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

Methodology Mattiske Consulting (2011)

(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 known Threatened Ecological Communities (TECs) within the area applied to clear (GIS Database). There are no known TECs within 200 kilometres of the application area (GIS Database).

Mattiske Consulting (2011) reports that no TECs were identified within the survey area during the flora and vegetation survey.

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

Methodology Mattiske Consulting (2011)
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 is not likely to be at variance to this Principle

The application area falls within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 98.4% of the pre-European vegetation still exists within the Coolgardie bioregion (see table below). The vegetation within the application area is recorded as the following Beard vegetation association:

Beard vegetation association 435: shrublands; *Acacia neurophylla*, *Acacia beauverdiana* and *Acacia resinimarginea* thicket.

According to Shepherd (2009) approximately 98.9% of this vegetation association still exists within the Coolgardie bioregion (see table below). Furthermore, this vegetation association is quite well represented in conservation reserves.

The vegetation within the application area is not a remnant of vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Coolgardie	12,912,204	12,707,873	~98.4	Least Concern	~10.9
Beard vegetation associations - State					
435	994,575	759,385	~76.4	Least Concern	~13.5
Beard vegetation associations - Bioregion					
435	738,211	730,227	~98.9	Least Concern	~17.6

* Shepherd (2009)
** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment

Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)

(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 watercourses or wetlands within the proposed clearing area (GIS Database).

The vegetation associations mapped by Mattiske Consulting (2011) are not associated with watercourses or wetlands.

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

Methodology

Mattiske Consulting (2011)
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 may be at variance to this Principle
The application area is located within a sandplain area (Mattiske Consulting, 2011) that could be susceptible to localised erosion following removal of vegetation. Potential land degradation as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology

Mattiske Consulting (2011)

(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 any conservation area (GIS Database). The nearest Department of Environment and Conservation managed land is the Jaurdi DEC managed ex-pastoral lease located approximately 3.5 kilometres west of the application area (GIS Database).

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
There are no permanent or ephemeral watercourses or waterbodies within the application area (GIS Database).

The application area is located within an elevated area of sandplain and exploration drilling to granite bedrock at approximately 30 metres depth did not locate groundwater (CSI, 2011; Mattiske Consulting, 2011). Given this, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water.

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

Methodology

CSI (2011)
Mattiske Consulting (2011)
GIS Database:
- Hydrography, linear

(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
According to available databases there are no wetlands or watercourses within the proposed clearing area (GIS Database).

The application area is located within an elevated area of sandplain (Mattiske Consulting, 2011). This area therefore has good drainage and water pooling is not likely to occur (Mattiske Consulting, 2011). Given this, the proposed clearing of 60 hectares of native vegetation is unlikely to 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 Mattiske Consulting (2011)
GIS Database:
- Hydrography, linear

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

Comments

There are no Native Title claims within the application area (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*.

According to available databases there are no registered Aboriginal Sites 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 noted that the proposed clearing may impact on a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the *EPBC Act*). The proponent may be required to refer the project to the (Federal) Department of the Environment, Water, Heritage and the Arts (DEWHA) for environmental impact assessment under the *EPBC Act*. The proponent is advised to contact the DEWHA for further information regarding notification and referral responsibilities under the *EPBC Act*.

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 was advertised by the Department of Mines and Petroleum on 4 July 2011, inviting submissions from the public. No submissions were received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims

4. References

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

CSI (2011) Clearing Permit Application Supporting Documentation. Crushing Services International Pty Ltd.

DEC (2011) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au/.

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.

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 Consulting (2011) Flora and Vegetation Survey for the Proposed East Jaurdi Aerodrome. Tenements L15/319 and L15/320. Draft Unpublished Report. Mattiske Consulting Pty Ltd, Western Australia.

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.