Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 426/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Outback Ecology Services**

1.3. Property details

Property: M52/132
Local Government Area: Shire Of Meekatharra
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
111.04		Mechanical Removal	Mining

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 29: Sparse low woodland; mulga, discontinuous in scattered groups (Hopkins et al. 2001, Shepherd et al. 2001).	Yarlaweelor Pit and waste landform extension: the low patchy vegetation remaining has been heavily disturbed by mining and grazing activities. The proposal to clear 47.1 hectares of vegetation includes Acacia aneura, Acacia tetragonophylla and Eremophila fraseri.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Evidence of vegetation condition: the Fortnum Gold Mine is located on the Milgun pastoral lease and has been grazed by cattle for the past 88 years and used for mining purposes since 1989 (Outback Ecology, 2004). The proponent has also provided photographs of representative vegetation (TRIM Ref:IN19935). Evidence provided suggests that the previous use of land (through human activity and cattle grazing) has significantly reduced species richness and density.
	Toms Pit (North and South): the remnant vegetation remaining (heavily disturbed by mining and grazing activities) includes 39.8 hectares of Acacia aneura, Acacia spp. and Eremophila spp.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	
	Callies North Pit: the heavily disturbed vegetation under application includes 24.14 hectares of Acacia aneura, Acacia spp., Eremophila spp. and Santalum spicatum.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	

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 at variance to this Principle

The area under application falls within the Gascoyne Bioregion; a region not recognised for its biodiversity. The Fortnum Gold Mine area has historically been used for pastoral and mining purposes (Outback Ecology, 2004) and photographs provided by the proponent (TRIM Ref: IN19935) illustrate the degraded condition of the remaining vegetation. Evidence provided suggests that the previous use of land (through human activity and cattle grazing) has significantly reduced species richness and density, therefore the application is not at variance to this Principle.

Methodology GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.

Outback Ecology, 2004.
Dames and Moore, 1988.

(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

Dames and Moore visited the Fortnum Gold leases in 1988 to compile a list of fauna species found in the area. Data base searches and a subsequent field visit revealed 33 birds species, 13 reptile species and 4 native and 4 introduced mammalian species. The wide ranging species, Falco peregrinus (Priority 1), Falco hypoleucos (Priority 4) and Cacatua leadbeateri (Priority 1) occur within the vast wattle and mulga zone but none were recorded within the Fortnum leases. One Ardeotis australis (Priority 4 gazetted under the Wildlife Conservation Act) was reported within the Fortnum mining leases. It has also been suggested (Dames and Moore, 1988) that rocky scree slopes are the preferred habitat of Sminthopsis longicaudata (Priority 4), and as they are very hard to catch, they may have gone previously undetected in the hills of the Fortnum area. Discussion with the proponent confirmed that the original surveying done by Dames and Moore covered a much larger area than that currently under application. The vegetation proposed to be cleared falls within a topographically flat area with some degraded vegetation remaining. This vegetation is unlikely to provide habitat for specially protected fauna species.

Methodology

GIS Databases: Topographic Contours, Statewide - DOLA 12/09/02.
CALM's Threatened and Priority Fauna Database [The comprehensiveness of the database is dependent on the amount of survey carried out in the area and does not necessarily represent a comprehensive listing (CALM, 2005)].
Dames and Moore, 1988.

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

Comments

Proposal is not at variance to this Principle

Flora surveys conducted (Dames and Moore, 1988) identified 59 species including Acacia, Acanthocarpus, Atriplex, Calytrix, Canthium, Cassia, Damasonium, Dodonaea, Eragrostis, Eremophila, Eriachne, Eucalyptus, Exocarpus, Grevillea, Hakea, Halgania, Halosarcia, Leichhardtia, Lepidium, Maireana, Mirbelia, Pityrodia, Ptilotus, Rhagodia, Santalum, Sarcostemma, Sclerolaena, Solanum, Thryptomene, Tribulus and Triodia. None of these plant taxa are currently assigned special conservation status under the Wildlife Conservation [Rare Flora] Notice [2002] and Declared Rare and Priority Flora List for Western Australia, therefore the proposal is not at variance to this Principle.

Methodology

GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03.
Dames and Moore, 1988.
Outback Ecology, 2004.
CALM's Threatened and Priority Flora Database [The comprehensiveness of the database is dependent on the amount of survey carried out in the area and does not necessarily represent a comprehensive listing (CALM, 2005)].

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

Comments

Proposal is not at variance to this Principle

The Threatened Ecological Community (TEC) data base did not include the mining tenement affected by this application.

Methodology

GIS Databases: Threatened Ecological Communities - CALM 15/07/03

(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 at variance to this Principle

The Gascoyne Bioregion and Beard vegetation association 29 both have greater than 50% of the native vegetation remaining, making them of least concern by conservation status standards. The proposed clearing is therefore not at variance to this Principle.

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	Reserves/CALM-managed land, %
IBRA Bioregion - Gascoyne	18,169,908	18,169,908	100.0	Least concern	Not available
Shire - Meekatharra	Not available	Not available	Not available	Not available	Not available
Beard veg type - 29	7,782,264	7,782,264	100.0	Least concern	2.7

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Methodology GIS Databases: Interim Biogeographic Regionalisation of Australia - EA 18/10/00, Pre-European Vegetation - DA 01/01, Local Government Authorities - DLI 08/07/04.
Shepherd et al, 2001.
Department of Natural Resources and Environment, 2002

(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**
The area under application falls within the Gascoyne River basin within the Gascoyne River catchment. A minor drain in the vicinity of the proposed clearing carries any rainfall in a south westerly direction to the Yarlaweelor Creek. A channel diverts the creek around the Yarlaweelor landform and pit (Outback Ecology, 2004). This drain does not represent a habitat of environmental significance. The proposed clearing is therefore, not at variance to this Principle.

Methodology GIS Databases: Hydrography, linear - DoE 01/02/04, Hydrographic Catchments (Basins and Catchments) - DoE 03/04/03.
Outback Ecology, 2004.

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

Comments **Proposal is not at variance to this Principle**
The soil in the area under application is predominantly hard, alkaline and red. The area contains partially dissected pediments with some low stony hills on fine-grained sedimentary rocks and basic dykes. Shallow stony soils occur on the steeper slopes, and soils with red-brown hardpan occur on the lower slopes and on small areas of valley plains. The vegetation proposed to be cleared is already highly degraded (Outback Ecology, 2004), experiences low rainfall, does not fall within the salinity risk or acid sulfate soil area. This proposal is therefore unlikely to cause appreciable land degradation issues on or off site.

Methodology Outback Ecology, 2004.
GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00, Soils, Statewide - DAWA 11/99.

(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 at variance to this Principle**
The mining tenement affected by this application does not fall within, provide a buffer for, or contribute to an ecological linkage to a conservation area.

Methodology GIS Databases - CALM Regional Parks - CALM 12/04/02, WRC Estate - WRC 05/99, CALM Managed Lands & Waters - CALM 01/06/04, Proposed National Parks FMP-CALM 19/03/03, Register of National Estate - EA 28/01/03

(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 at variance to this Principle**
The area under application falls does not fall within a Public Drinking Water Source Area (PDWSA) or Protection Zone. The vegetation under application is sparse and already degraded therefore the proposal is not likely to cause deterioration in the quality of surface or underground water (Midwest Gascoyne Hydro Unit, 2005).

Methodology GIS Databases - Current WIN data sets, PDWSA Protection Zones - DOE 07/01/04, Public Drinking Water Sources (PDWSAs) - DOE 29/11/04, Hydrographic Catchments - Catchments - DOE 03/04/03.
Midwest Gascoyne Hydro Unit, 2005.

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

Comments **Proposal is not at variance to this Principle**
The area under application is characterised by a Semi Arid climate with a low average rainfall of 237mm. Average temperatures range from 38 (summer) to 19 (winter) degrees Celsius. The proposed clearing falls within a desert area not subject to flooding, therefore the proposal is not at variance to this Principle.

Methodology Outback Ecology, 2004.
GIS Databases - Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Shire of Meekatharra has not indicated that there are any planning requirements/approvals that would affect the clearing.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mining	Mechanical Removal	111.04	**Grant**	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted.

5. References

Dames and Moore, 1988. Flora and fauna survey Fortnum project for Homestake Australia Limited. Perth, Western Australia.

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.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

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

Outback Ecology, 2004. Fortnum gold mine application for permit to clear native vegetation. Jolimont, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.