Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 489/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Mount Magnet Gold N. L.**

1.3. Property details

Property: M58/47
M58/236
M58/195
M58/235
M58/146
P58/1128
Local Government Area: Shire Of Mount Magnet
Colloquial name: Rock of Ages

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
60		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 313: Succulent steppe with open scrub; scattered Acacia sclerosperma and A. victoriae (Hopkins et al 2001, Shepherd et al 2001).	The area under application consists of a relatively flat landscape with scattered Acacia aneura (Mulga) low woodlands on rises with denser stands in drainage lines. Understorey here is very scattered and predominantly that of Halophytes with Ptilotus obovatus, Maireana georgei, M. triptera, Maireana pyramidata and M. convexa dominating. These halophytes define a more or less treeless plain in lower lying areas where Green Samphire (Sclerostegia disarticulata) shrublands also form near monocultures in lower lying sites subject to some waterlogging (Cockerton 2005).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Evidence of vegetation condition: the Mt Magnet area has historically been used for pastoral and mining purposes (Mt Magnet Gold, 1997) and significant populations of goats have been noted throughout surveyed areas (Cockerton, 1999). Evidence provided suggests that the previous use of land (through human activity and feral grazing) has significantly reduced species richness and density.

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 Murchison Bioregion; a region not recognised for its biodiversity. The Mt Magnet area has historically been used for pastoral and mining purposes (Mt Magnet Gold, 1997) and significant populations of goats have been noted throughout surveyed areas (Cockerton, 1999). Evidence provided suggests that the previous use of land (through human activity and feral 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.
Cockerton (Landcare Services Pty Ltd), 1999.
Mt Magnet Gold, 1997

(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 at variance to this Principle**
A fauna survey conducted within Mt Magnet Gold leases by Murcox Biological Services (Mt Magnet Gold, 1997) during 1993-1994 identified 128 vertebrate species. These included 84 birds species, 23 reptile species, 4 amphibian species and 11 native and 6 introduced mammalian species. Of the species recorded, none have been declared rare or priority under the Wildlife Conservation Act.

Methodology 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)].
Mt Magnet Gold, 1997.

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

Comments **Proposal is not likely to be at variance to this Principle**
Flora recorded in the Mt Magnet area includes 42 families and 297 species: Aizoaceae [3], Amaranthaceae [13], Apocynaceae [1], Asclepiadaceae [2], Asteraceae [23], Brassicaceae [5], Caesalpiniaceae [10], Casuarinaceae [1], Chenopodiaceae [43], Chloanthaceae [2], Convulvulaceae [3], Cupressaceae [1], Epacridaceae [1], Euphorbiaceae [4], Frankeniaceae [3], Geraniaceae [1], Goodeniaceae [6], Gyrostemonaceae [1], Lamiaceae [5], Lobeliaceae [1], Loranthaceae [2], Malvaceae [11], Mimosaceae [31], Myoporaceae [29], Myrtaceae [18], Papilionaceae [3], Phormiaceae [1], Pittosporaceae [1], Poaceae [21], Polygonaceae [2], Portulaceae [2], Proteaceae [15], Rubiaceae [3], Rutaceae [1], Santalaceae [4], Sapindaceae [7], Solanaceae [6], Sterculiaceae [3], Stylidaceae [1], Thymeliaceae [1], Violaceae [1] and Zygophyllaceae [5] (Mt Magnet Gold, 1997).

No priority or Declared Rare Flora species where noted within the application area. However one undescribed species, Acacia sp. Mt Magnet pn (T. Mckenzie 5) is known to occur in the area. Several individuals are present in the central-western portion of the prospect, within around 50m of the Haul Road (Cockerton, 2005). The proposed clearing is not likely to affect the continued in situ existence of this species therefore this proposal is not likely to be at variance to this Principle.

Methodology GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03
Cockerton 2005
Mt Magnet Gold, 1997
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)].

(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) database did not include the mining tenements 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 Murchison Bioregion and Beard vegetation association 313 both have greater that 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 - Murchison	28,206,195	28,206,195	100.0	Least concern	Not available
Shire - Mt Magnet	Not available	Not available	Not available	Not available	Not available
Beard Veg type 313	77,838	77,838	100	Least Concerm	0

* (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 contains a number of non-perennial watercourses. None of these represents 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

(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**
The soils of the area are clayey gritty sands with an extensive ironstone and quartz rock and gravel mantle. Minor out outcropping of weathered basalt is evident as shale in limited areas, particularly in the western portion near the existing Haul Road. Drainage lines are poorly defined and ephemeral, meandering from east to west (Cockerton 2005). The area does not fall within a salinity risk or acid sulfate soil area and does not appear to be at risk from waterlogging. The vegetation is already highly degraded through grazing and human activities (Mt Magnet Gold 1997, Cockerton 1999). It is unlikely that clearing of vegetation will lead to an increase land degradation in the area, therefore this proposal is not likely to be at variance to this Principle.

Methodology GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00 , Soils, Statewide - DAWA 11/99
Cockerton 2005
Cockerton 1999
Mt Magnet 1997

(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 tenements affected by this application do not fall within, provide a buffer for, or contribute 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 likely to be at variance to this Principle**
The area under application falls within the YarraMonger and Murchison River hydrographic catchments. Although the area to be cleared is quite large it is unlikely that it will 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 Mediterranean-Desert climate with a highly variable mean annual rainfall of 300mm. Evaporation (2597mm/year) exceeds rainfall by a factor of 10 (Rokich, 2003). The proposed clearing will not lead to an incremental increase in peak flood height or duration.

Methodology Rokich, 2003.
GIS Databases - Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Shire Mount Magnet 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	60	**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

Cockerton, G., 1999. Correspondence to Mount Magnet Gold regarding Alyxia tetanifolia. Landcare Services Pty Ltd. York, Western Australia.

Cockerton, G., 2005. Assessments of the Flora and Vegetation at Several Prospects for Mt Magnet Gold and Monitoring of Seepage at TSF 3. Mt Magnet, 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.

Mount Magnet Gold Operations, 1997. Mount Magnet Gold NL Connor Deposit Notice of intent. Mount Magnet, 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.