Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 431/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Mt Magnet Gold NL**

1.3. Property details

Property:

M58/4
M58/47
M58/236
M58/5
M58/8
M58/30
M58/60
M58/64
M58/78
M58/79
M58/81
M58/120
M58/121
M58/130
M58/136
M58/143
M58/157
M58/163
M58/172
M58/173
M58/174
M58/179
M58/181
M58/185
M58/186
M58/187
M58/191
M58/192
M58/198
M58/202
M58/205
M58/208
M58/209
M58/210
M58/231
M58/232
M58/234
M58/241
M58/304
P58/825
P58/912
P58/940
P58/941
P58/1042
P58/1116
M58/195

	M58/235
	L58/16
	M58/193
	M58/194
	P58/1155
	P58/1154
	P58/1152
	M58/11
	P58/1153
	M58/98
	M58/146
	M58/189
	M58/201
	P58/924
	P58/927
	P58/928
	P58/967
	P58/993
	M58/323
	P58/1128
	M58/43
	G58/3
	L58/20
Local Government Area:	Shire Of Mount Magnet
Colloquial name:	Mt Magnet Ancillary Clearing

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
50		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 18: Low woodland; mulga (Acacia aneura). Beard vegetation association 202: Shrublands; mulga and Acacia quadrimarginea scrub. Beard vegetation association 312: Succulent steppe with very open shrubs; very sparse mulga and Acacia sclerosperma over saltbush and bluebush. Beard vegetation association 313: Succulent steppe with open scrub; scattered Acacia sclerosperma and A. victoriae over bluebush (Hopkins et al. 2001, Shepherd et al. 2001).	The Mt Magnet area consists of Granite Outcrops and Granite Breakaway Country (Acacia aneura, A. quadrimarginea, A. synchronicia, A. Eremophila sp., Atriplex condoncarpia, A. holocarpa., A. semillunaris and Maireana sp.), Mulga Woodlands and Washplains (Acacia aneura, A. ramulosa, A. craspedocarpa, A. eremaea, Cassia desolata, C. helmsii and Arista contorta), Wanderrie Sandplains (Acacia linophylla, A. murrayana, A. synchronicia, Eucalyptus leptopoda and E. kingsmillii) and Ironstone and Laterite Hills (Acacia aneura, Cassia sp. Eremophila sp. Thryptomene sp. and Ptilotus).	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). The proponent has also provided photographs of representative vegetation (TRIM Ref: GD 321). 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). In addition, the proponent has provided photographs of representative vegetation (TRIM Ref: GD 321 and 324). 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 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).

Twelve of the 297 plant taxa recorded are currently assigned special conservation status under the Wildlife Conservation [Rare Flora] Notice [2002] and Declared Rare and Priority Flora List for Western Australia. These are Alyxia tetanifolia (Priority 3), Calytrix erosipetala (Priority 3), Dicrastylis linearifolia (Priority 3), Goodenia neogoodenia (Priority 4), Grevillea inconspicua (Priority 4), Homalocalyx inerrabundus (Priority 2), Jacksonia lanicarpa (Priority 1), Lepidobolus deserti (Priority 4), Millotia depauperata (Priority 1), Petrophile pauciflora (Priority 3), Hemigenia tysonii (Priority 3) and Acacia speckii (Priority 3). Exploration drilling is not likely to have a major impact on the continued in situ existence of significant habitat for Priority flora, therefore the proposal is not at variance to this Principle.

Methodology GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03.
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) data base 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 associations 18, 202, 312 and 313 all 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	Current	Remaining	Conservation Reserves/CALM-

	area (ha)	extent (ha)	%*	status**	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 - 18	24,675,970	24,659,110	99.9	Least concern	4.8
Beard veg type - 202	413,191	405,532	98.1	Least concern	2.6
Beard veg type - 312	47,258	47,258	100.0	Least concern	0.0
Beard veg type - 313	77,838	77,838	100.0	Least concern	0.0

* (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**
A number of minor non-perennial watercourses and three earth dams exist within the area under application, however none 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

(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 vegetation proposed to be cleared is already highly degraded, experiences average rainfall (Rokich, 2003) and does not fall within the salinity risk area. The relatively low impact (approximately 10 hectares per year over 5 years) of ancillary activities clearing (Rokich et al, 2004) is unlikely to cause appreciable land degradation issues on or off site.

Methodology Rokich, 2003.
Rokich et al., 2004.
GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00.

(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 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 likely to be at variance to this Principle**
The area under application falls within the Yarramonger and Murchison River catchments and covers the Mt Magnet Water Reserve Public Drinking Water Source Area (PDWSA) Protection Zone, the Mt Magnet (Lennonville), Mt Magnet (Genga Wellfield), Mt Magnet (Genga) water reserves and the Mt Magnet Town Dam Catchment Area. The proposed ancillary clearing is relatively low impact and the area of vegetation to be cleared per year (10 hectares) is relatively small, 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 Mediterranean-Desert climate with a highly variable average rainfall of 237mm. Evaporation (2597mm/year) exceeds rainfall by a factor of 10 (Rokich, 2003). The proposed clearing for each year (10 hectares) is relatively small and 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 or other matter.

Comments

The Shire of 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	50	**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.

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.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

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.

Rokich, P., 2003. Harmony Lone Pine stormwater diversion notice of intent. Mt Magnet, Western Australia.

Rokich, P., 2004. Harmony Ancillary activities required for mining: clearing management plan at Mt Magnet operations. Mt Magnet, Western Australia.

Rokich, P., Sugden, S., 2004. Harmony Exploration drilling: clearing management plan Mt Magnet Gold Boogardie tenements. Mt 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.