



1. Application details

1.1. Permit application details

Permit application No.: 434/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Mt Magnet Gold NL

1.3. Property details

Property: E21/109
E58/264
E58/268
E58/275
M58/222
P58/1212
P58/1213
P58/1214
Local Government Area: Shire Of Cue & Shire Of Mount Magnet
Colloquial name: Gold Blackmans Tenements

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
17		Mechanical Removal	Mineral exploration

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 1127: Mosaic Saltbush and bluebush/samphire	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), Wanderrrie 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). Evidence provided suggests that the previous use of land (through human activity and feral grazing) has significantly reduced species richness and density.
Beard vegetation association 18: Low woodland; mulga (Acacia aueura)			
Beard vegetation association 240: Succulent steppe with open scrub; scattered Acacia sclerosperma and bowgada over saltbush and bluebush			
Beard vegetation association 313: Succulent steppe with open scrub; scattered Acacia sclerosperma and A. victoriae over bluebush.			
Beard vegetation association 395: Hummock grasslands, mixed sandplain, bowgada, mallee, heath and spinifex (Hopkins et al. 2001, Shepherd et al. 2001).			

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 Murco 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], Convolvulaceae [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], Portulacaceae [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) 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 associations 18, 1127, 240, 313 and 395 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 Reserves/CALM-area (ha)	Current extent (ha)	Remaining %*	Conservation status**	managed land,
%					
IBRA Bioregion - Murchison	28,206,195	28,206,195	100.0	Least concern	Not available
Shire - Cue	Not available	Not available	Not available	Not available	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 - 1127	78,286	78,286	100.0	Least concern	0
Beard veg type - 240	134,601	132,867	98.7	Least concern	32.7
Beard veg type - 313	77,838	77,838	100.0	Least concern	0.0
Beard veg type - 395	116,400	116,400	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 exist within the area under application. In addition the area under application also covers a small area of non-perennial lake. However, 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 at variance to this Principle

The vegetation proposed to be cleared is a relatively small area (17 hectares) that experiences average rainfall (Rokich, 2003) and does not fall within the salinity risk area. The low impact nature of exploration drilling (Rokich et al, 2004) and the relatively small area proposed to be cleared are 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 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 within the Murchison hydrographic catchment and covers the Mt Magnet

(Lennonville) water reserve. The proposed exploration drilling is a relatively low impact mining activity and the area of vegetation 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 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, Native Title, Previous EPA decision or other matter.

Comments

The Shires of Cue and Mount Magnet have 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
Mineral exploration	Mechanical Removal	17	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.

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., 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.