Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 257/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Barrick Gold of Australia**
Postal address: P.M.B. 46 Meekatharra WA 6642
Contacts: Phone:
Fax: 9981 0101
E-mail:

1.3. Property details

Property: M52/228
M52/229
Local Government Area:
Colloquial name: Budgie Project Area

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
312		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 18: Low woodland; mulga (Acacia aneura) Beard 29: Sparse low woodland; mulga, discontinuous in scattered groups. Hopkins et al. 2001, Sghepherd et al. 2001)	Vegetation under application (312ha) is located in minning tenements M52/229 and M52/228 that are located in Kumarina, 180km north of Meekatharra in the Meekatharra Shire (TRIM REF IN18357). The site is on a low lying area of red sandplain (Australian Groundwater Consultants, 1989). Vascular flora found in the Budgie Project Area includes : Triodia basedowii, Acacia anuera, A. linophylla, A. pruinocarpa, A. sclerosperma, A. tetragonaphylla, Acacia sp., Eremophila forrestii, Eragrostis eriopoda, Monochather paradoxa (Ecologia, 2004).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Photgraphs of the area provided by the proponent demonstrate the intensive grazing that has taken place to date (Ecologia, 2004). 'Plutonic is located on Three Rivers station, which is owned by Plutonic Gold and leases back to the previous owners. The station originally ran sheep and cattle from around the 1920's until 1974 at which time sheep numbers were destocked until 1984 where they were completely removed. During 1990 the cattle numbers were also reduced due to grazing pressures and the continued drought conditions. Currently the area on which the minining activities exist are fenced off excluding all cattle activity (Withers, pers. comm., 2004)'.

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 site has been extensively grazed and is degraded. Given this history, the site does not represent an area of signficant biodiversity.

Methodology Australian Groundwater Consultants, 1989.
Ecologia, 2004.

(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 may be at variance to this Principle

Barrick Gold commissioned Ecologia consultants to survey the area for fauna, and in particular the Mulgara, Dasycercus cristicauda, that are known to occur in the area. Dasycercus cristicauda is listed under Schedule 1 in (Specially Protected Fauna) under the Wildlife Conservation Act 1950 and Vulnerable under Schedule 1 of the Environment Protection and Biodiversity Conservation Act 1999. They found that, '...no clear evidence of recent D. cristicauda activity was detected. However, an area of suitable D. cristicauda habitat, supporting previously used burrow complexes was identified. Given the conservation status of the D. cristicauda and the obligation to maintain suitable habitat for this species it is proposed that the habitat become part of an 'exclusion zone' (Ecologia, 2004). ' No other fauna taxa identified from the study area are currently assigned special conservation status under the Wildlife Protection Act (1950) and the Environmental Protection and Biodiversity Conservation Act (1999)'. (Barrick/Plutonic, 2004)

Methodology

Barrick Gold/Plutonic, 2004
Ecologia, 2004.

(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

DRF have been found in the vicinity of the Budgie Project Area. Eucalyptus semota has been identified at four separate sites, including locations approximately 2.2km and 4km west and approximately 2.8km and 3.9km north east of the Budgie Project Area. Micromyrtus racemosa var. mucronata has been identified approximately 5.5km north east of the area under application. Extensive surveys were carried out over the entire Budgie Project Area (Ecologia, 2004) and none of the plant taxa identified in the area under application were assigned special conservation status.

Methodology

GIS databases: Declared Rare and Priority Flora List-CALM 13/08/03, Threatened Ecological Communities-CALM 15/07/03, Environmentally Sensitive Areas-DOE 22/10/04.
Ecologia, 2004.

(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

No significant ecological communities occur within the Budgie Project Area (Ecologia, 2004).

Methodology

GIS databases: Environmentally Sensitive Areas-DOE 22/10/04 (Data pertaining to outlying mining tenements is limited and does not necessarily constitute a comprehensive listing of significant ecological communities of the area in question).
Ecologia, 2004).

(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 vegetation under application is part of Beard vegetation associations 18 and 29 and lie in the Meekatharra Shire in the Gascoyne Bioregion. There is greater than 50% of the associations 18 and 29 remaining in Western Australia making them of least concern by Bioregional Conservation Status standards. The Gascoyne Bioregion also has a vegetation extent greater than 50%, therefore this area is not considered to be extensively cleared (Shepherd et al, 2000).

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	Reserves/CALM-managed land, %
IBRA Bioregion - Gascoyne	18,169,908	18,169,908	100	Least concern	0
Shire - Meekatharra	No information available				
Beard veg type - 18	24,675,970	24,659,110	99.9	Least concern	4.8
Beard veg type - 29	7,782,264	7,782,264	100	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, Local Government Authorities-DLI 08/07/04, Pre-European Vegetation-DA 01/01, EPA Position Paper No 2 Agriculture Region-DEP 12/00.
Shepherd et al, 2001. [This reference is not up to date. The probability of the extent of clearing being greater than stated is high].

(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 lies within both the Salt Lake Basin in the Basin Salt Lake catchment and the Gascoyne River Basin in the Gascoyne River catchment (DoE 2003). There are three water courses described as 'indefinite' in the approximate vicinity of the clearing. 'Floodways or culverts will be installed at low points to facilitate the natural movement of surface water following major rainfall events, and to minimise the potential for drainage shadow effects (Budgie/Plutonic, 2004)'. The historical land use of the site would suggest that these minor watercourses would not represent an ecosystem of significant environmental value. Therefore, the proposed clearing is not likey to be at variance to this principle.

Methodology

GIS databases: Hydrographic Catchments-Catchments DoE 03/04/03,, Hydrography linear DoE 01/02/04.
Budgie/Plutonic, 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

Given the extensive grazing history of the land, the proposed clearing is not likely to increase land degradation of this site. The proponent intends to rehabilitate in accorance with Plutonic Goldmine rehabilitation procedures which are also in accordance with Department of Industry Resources guidelines. Rehabilitation will commence as soon as practical and site specific topsoil and seed will be removed and stored for the purpose of rehabilitation of the site. (Plutonic/Budgie, 2004). The proposed clearing does not fall within a salinity acid sulfate soils risk area and is in a low rainfall zone (300mm per year).

Methodology

Plutonic Gold, 2004
GIS Databases: Salinity Risk LM 25-DOLA 00, Acid Sulfate Soil Risk Map SC-DOE 01/02/04, Soils Statewide-DA 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

No conservation areas have been identified near the proposal.

Methodology

GIS Databases: CALM Regional Parks-CALM 12/04/02, WRC Estate-WRC 5/99, 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 lies within both the Salt Lake Basin in the Basin Salt Lake catchment and the Gascoyne River Basin in the Gascoyne River catchment. There are 5 bores within a 5km distance North West of the Budgie area. These 5 bores are licensed to the proponent. There are no proclaimed, gazetted or declared areas or catchments that this proposal may impact upon.

'The groundwater quality is typically in the range 1000-2000mg/L, although local anomalies are expected...Impacts on water quality will likely be neglible, as pumping will take place from a calcrete aquifer which is periodically recharged via rainfall and surface stream flow (Australian Groundwater Consultants, 1989).'

Methodology

GIS Databases: Current WIN data sets (sites-all custodians, surface water sites-other-DEWCP and non-DEWCP, surface water sites-stream guaging-DEWCP and non-DEWCP, telemetry sites-DEWCP, uncatalogued sites-DEWCP and non-DEWCP), PWDSA data sets (priority areas-gazetted-WRC 24/05/02, priority areas-policy-WRC 01/11/02, protection zones-WRC 01/11/02, gazetted-WRC 01/11/02 and policy-WRC 01/11/02) and Public Drinking Water Source Areas (PWDSAs)-DOE 01/06/04.
Australian Groundwater Consultants, 1989.

(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

Plutonic's proposed Budgie Project fall in an area that is generally well drained and part of the semi arid region of Western Australia. Rainfall is erratic and generally only comes from intense depressions. Average temperatures range from 20.8 to 39.4 degress celcius with daily evaporation rates of 135 to 500mm. Wind speeds range from 6 to 20 knots (Australian Groundwater Consultants, 1989).

Given the relatively small area of vegetation to be cleared, the land's history of pastoral grazing and the current lease holder's revegetation management plan, the proposed clearing is unlikely to increase the risks associated

with flooding.

Methodology GIS Databases: FMD ARI Extent of Flooding & Floodway Limit-DOE 02/03, FMD Floodplain Map Index-DOE 02/03, Rainfall Mean Annual-BOM 30/09/01.
Australian Groundwater Consultants, 1989.

Planning instrument or other matter.

Comments The Meekatharra Shire Council 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
Mining	Mechanical Removal	312	**Grant**	The assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted. The Department provides the following advice: - The Permit Holder shall erect a bund clearly demarcating a 'Mulgara Exclusion Zone' as described in Ecologia Environment, Plutonic Gold Mine, 'Budgie Development Mulgara Assessment' August 2004 - The Permit Holder shall not enter or disturb the 'Mulgara Exclusion Zone' as described in Ecologia Environment, Plutonic Gold Mine, 'Budgie Development Mulgara Assessment' August 2004 - All sites affected by mining should be returned to a stable, non-erodible, and safe condition. - All sites should be restored to biologically sustainable ecosystems requiring minimum long-term management. - Rehabilitation should commence as soon as possible. - All topsoil of insignificant auriferous grade should be removed from the areas affected by mining and stored on temporary dumps. - Stockpiled topsoil should be re-spread over disturbed areas at the completion of mining. - The area should then be contoured, ripped and revegetated with species native to the area or appropriate to the prevailing conditions. - Rehabilitation progress should be monitored annually through Ecosystem Function Analysis techniques to determine revegetation success and remedial work undertaken as required.

5. References

Australian Groundwater Consultants Pty Ltd (1989) Plutonic Gold Project. Notice of Intent. August 1989.

Barrick Plutonic (2004) Land clearing principles for Budgie Project area. 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.

Ecologia Environment (2004) Budgie Development Mulgara Assessment. Western Australia.

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.

EPA (2002) Terrestrial Biological Surveys as an element of biodiversity protection. Position Statement No. 3. March 2002. 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.

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