



1. Application details

1.1. Permit application details

Permit application No.: 319/1
Permit type: Area Permit

1.2. Proponent details

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

1.3. Property details

Property: M52/233
M52/183

1.4. Application

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

2. Existing Environment

2.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations - 18: Low woodland; mulga (Acacia aneura). - 111: Hummock grasslands; shrub steppe; Eucalyptus gamophylla over hard spinifex - (Shepherd et al 2001, Hopkins et al. 2001)	Vegetation under notice includes; Triodia basedowii, Micromyrtus racemosa var. mucronata, mixed Acacia over lateritic hill slopes, mixed Acacia above Calytrix praecipua over lateritic hills, Mulga on ironstone/quartz plains, Mulga on stony ironstone hills, Mulga on stony quartz plains, Mulga above Triodia basedowii and Mulga occurring in groves on hardpan plains and along drainage lines (Onshore Environmental Consultants, 2003).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The photographs of the site supplied by the proponent (Trim Ref: GD224) are evidence of the already degraded nature of the vegetation under application. The site is part of Marymia Station that has historically been used for mining and pastoral purposes.

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 likely to be at variance to this Principle

The area under application has historically been used for pastoral and mining purposes. Photographs of the site (Trim Ref: GD 224), provided by the proponent indicate that the area does not represent significant biodiversity compared to others in the region.

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

- Museum Records indicate that the K2 project area may support 8 amphibians, 98 reptiles, 7 marsupials (Macropus robustus, M. rufus and Canis familiaris were noted during the 2003 vegetation survey) and 36 birds. Dasyercus cristicauda (a Priority 1 species), Diplodactylus kenneallyi (a Priority 2 species) and Pseudomys chapmani (a Priority 4 species) have been collected or recorded in the region (Onshore Environmental Consultants, 2003).

'The proposed expansion of the K2 project area overlaps part of the Dasyercus cristicauda habitat. If any land-clearing is to be conducted within the identified Mulgara habitat, a survey of the area will be conducted by a zoologist to verify if any Mulgara activity exist. If Mulgara activity exists, a Management Plan will be submitted to CALM regarding the project. If approved by CALM, a trapping and relocation program will be conducted in

conjunction with the land clearing. Clearing will be kept to that which is necessary. An intensive trapping program will be conducted by an experienced zoologist prior to the disturbance. Any Mulgara captured during the trapping program will be fitted with radio transmitters and monitored in the subsequent week. All captured Mulgara will be held until the clearing has been completed. Once it is established that no Mulgara are re-entering the area to be cleared, clearing shall then commence. All clearing is to be conducted under supervision of the Environmental Officer. The following night after clearing, any Mulgara held will be released into surrounding undisturbed habitat. The zoologist will monitor the Mulgara fitted with transmitters for two weeks after relocation. Due to the nocturnal behaviour of the Mulgara all clearing and site works (during land clearing) will be conducted during daylight hours. A fire management plan will be in place to control any fire potential. A stringent dust suppression regime will be adhered to during all works. Education for site personnel working in the area will be conducted. All Mulgara habitat adjacent to the cleared land will be sign posted 'Mulgara Habitat Exclusion Zone.' A feral animal control program will be conducted during mining of the area. Monitoring of the local Mulgara population will be conducted twice a year (Barrick Gold, 2004)'.

The previous use of the land applicable to this application for mining and pastoral purposes suggests that the presence of significant fauna other than *D. cristicauda* is unlikely. If *D. cristicauda* is encountered, appropriate action will be taken to minimise the impact on this species. The proposed clearing is therefore unlikely to be at variance to this Principle.

Methodology Barrick Gold, 2004.
Onshore Environmental Consultants, 2003.
CALM, 2005.

(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**

Onshore Environmental Consultants conducted a flora survey over the site on 14 and 15 May 2003. 'A total of 93 vascular plant taxa were recorded over the K2 study area, representing 39 genera and 21 families. Plant families best represented by numbers of species were Poaceae [14], Chenopodiaceae [14], Myoporaceae [12], Mimosaceae [12], Amaranthaceae [7], Myrtaceae [6], Caesalpiniaceae [6] and Proteaceae [5]. Four of the 93 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 [Atkins 2002]; *Eucalyptus semota* ms [P1], *Micromyrtus racemosa* var. *mucronata* [P1], *Calytrix praecipua* [P3] and *Maireana prosthocochaeta* [P3] (Onshore Environmental Consultants, 2003).'

The proposed expansion of the K2 project area has been designed to exclude all significant flora and is therefore not at variance to this Principle.

Methodology GIS Databases: Declared Rare and Priority Flora list; CALM 13/08/03.
Onshore Environmental Consultants, 2003.
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**

No threatened ecological communities are known to occur in this area.

Methodology Threatened Ecological Communities; CALM 15/07/03
CALM, 2005.

(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 111. There is greater than 50% of pre-European vegetation remaining in both associations and the Gascoyne Bioregion, therefore the proposed clearing lies in an area that has not been extensively cleared (Shepherd et al, 2001).

Pre-European	Current Area (ha)	Remaining extent (ha)	Conservation %*	Reserves/CALM-status**	managed land, %
IBRA Bioregion - Gascoyne Shire; Meekatharra	18,169,908	18,169,908	100	Least concern	0
Beard veg type - 18	24,675,970	24,659,110	99.9	Least concern	4.8
Beard veg type - 111	814,103	814,103	100	Least concern	6.4

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 proposed to be cleared contains a number of indefinite watercourses that would not represent ecosystems of significant environmental value.

Methodology 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 Department of Agriculture advised that the proposal posed no appreciable on or off site land degradation issues providing soil erosion is appropriately managed.

Methodology DAWA, 2005.

(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 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
CALM, 2005.

(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**

Proposed clearing is not expected to impact on groundwater tables. Area is not in a water catchment area.

Methodology GIS Databases; Current WIN data sets, PWDSA data sets and Public Drinking Water Source Areas (PWDSAs); DoE 01/06/04

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

Comments **Proposal is unlikely to be at variance to this Principle**

Rainfall in the region drives highly seasonal flood regimes. It is unlikely that the clearing will increase flooding in the area.

Methodology

Planning instrument or other matter.

Comments **Proposal is not at variance to this Principle**

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	333	Grant	<p>The assessable criteria have been addressed and no objections were raised, provided the following conditions are met:</p> <p>If any land-clearing is to be conducted within the identified Mulgara habitat, a survey of the area will be conducted by a zoologist to verify if any Mulgara activity exist. If Mulgara activity exists, a Management Plan will be submitted to CALM regarding the project. If approved by CALM, a trapping and relocation program will be conducted prior to the clearing.</p>

5. References

- CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref GD268.
- DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref GD290
- 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.
- EPA (2002) Terrestrial Biological Surveys as an element of biodiversity protection. Position Statement No. 3. March 2002. 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.
- 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.