Department of Environment
Government of Western Australia

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 526/1
**Permit type:** Purpose Permit

### 1.2. Proponent details

**Proponent's name:** **Big Bell Gold Operations**

### 1.3. Property details

**Property:** M21/7
M21/44
**Local Government Area:** Shire Of Cue
**Colloquial name:** Mining Leases M21/7, M21/44

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 20 | | 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 over bluebush (Hopkins et al. 2001, Shepherd et al. 2001). | The Try Again deposit occurs in the Austin Botanical District of the Murchison Region. The wider area primarily consists of low chenopod and mulga shrublands. Two habitat types persist in the proposed area, drainage tract Acacia shrubland/woodland with chenopod understorey and breakaway footslope chenopod low shrubland. The drainage tract Acacia shrubland/woodland with chenopod understorey habitat type consists of up to 50% foliar cover being mainly low shrubs, with the occasional tree and tall shrub. The dominant species is Maireana pyramidata interspersed with Atriplex bunburyana and few Acacia tetragonophylla, Hakea preisii and Eremophila longifolia. The breakaway footslope chenopod low shrubland habitat type consists of up to 20% foliar cover being almost completely low shrubs, with Halosarcia species dominating the system. Other species included in this association are Atriplex vesicaria and Maireana pyramidata. (Pluckhahn, J., Kerr, A., Ward, J., 2002) | Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) | The proposal is within a mining lease area subject to or surrounded by significant disturbance. Observed during site visit, undertaken by Craig Scott and Nanette Schapel (DoE Geraldton Office) in November 2004, confirmed the area has extensive disturbance and contains infrastructure, Try Again Pit open cut pit and waste dump already established. The proponent has also provided photographs of representative vegetation as part of the Flora Survey undertaken for their Notice of Intent (TRIM Ref: IN20574). The evidence provided shows historical disturbance and suggests that the previous use of land (through mining activity and 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 likely to be at variance to this Principle**

The area under application falls within the Murchison Bioregion; a region not recognised for its biodiversity. The proposed area has historically been used for grazing and mining purposes with the Try Again open cut pit and waste dump already established. Observed during site visit, undertaken by Craig Scott and Nanette Schapel (DoE Geraldton Office) in November 2004, confirmed the area has extensive disturbance. Evidence provided suggests that the previous use of land (through mining activity and grazing) has significantly reduced species richness and density. (Harmony, 2002) Therefore the proposal is not likely to be at variance to this Principle.

**Methodology**

Site visit - Craig Scott and Nanette Schapel, DoE Geraldton Office, November 2004
Harmony NOI, 2002, TRIM Ref: GD 243
GIS Databases: Interim Biogeographic Regionalisation of Australia-EA 18/10/00.

### (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 likely to be at variance to this Principle**

Ecologia Environmental Consultants (1994) were commissioned to conduct a fauna survey for the Harmony NOI and confirmed no threatened fauna in the proposed area. They also identified that several animal species exist in the area, evident by the scats that have been deposited. These include kangaroos, emus, rabbits, goats and foxes. Kangaroos were observed around the existing open-cut, whilst emus were observed on the Try Again waste rock dump (Harmony NOI 2002). Due to the relatively small proposed area (20 ha) and the historical land uses of the area (mining activity and grazing) the proposal is not likely to be variance to this Principle.

**Methodology**

Harmony NOI, 2002, TRIM Ref: GD 243
Ecologia, 1994.
GIS Databases: CALM's Threatened and Priority Fauna Database - CALM [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)].

### (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**

A flora desktop study was conducted by CALM's Wildlife Branch in April 1994, for use in Big Bell Gold Operations NOI for Try Again open cut extension, which revealed 10 declared rare and priority flora listed species in the general Cue area. An updated list was completed in 2002 and found only 8 declared rare and priority flora. No declared rare or threatened flora species were located during a flora survey undertaken by Jo Ward, Environmental Officer Harmony Gold, in 2002 within the proposed open-cut area. The survey was conducted utilising foot traverses and a total of 32 species were identified in the subject area. (Harmony, 2002) Due to the relatively small proposed area (20 ha) and the historical land uses of the area (mining activity and grazing) limiting the conservation value of the vegetation, it is therefore not likely the proposal is at variance to this Principle.

**Methodology**

Harmony NOI, 2002, TRIM Ref: GD 243
GIS Databases: Declared Rare and Priority Flora list - CALM 13/08/03.

### (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 highlight any TEC areas within the Project area and therefore the proposal is not at variance to this Principle.

**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 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 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 - Cue | Not available | Not available | Not available | Not available | Not available |
| 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 likely to be at variance to this Principle**

The area under application lies within the Murchison River Catchment (DoE, 2003). There are numerous watercourses described as 'minor, non-perennial' in the area under application (DoE, 2004). The most significant drainage tract is a small creekline located along the western edge of the Try Again open cut pit. This drainage channel combines with a number of others approximately 500m south of the open-cut pit where it flows into Lake Austin. The existing channel will be diverted around the extension prior to any mining so as to maintain natural drainage (Harmony, 2002). Historical dewatering activities of the site would suggest that these minor watercourses would not represent an ecosystem of significant environmental value. Given the 20 ha of proposed clearing and the lack of detrimental effects of historical dewatering, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Harmony NOI, 2002.
GIS Databases: Hydrography, linear - DoE 01/02/04, Hydrographic Catchments - Catchments DoE 03/04/03

### (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 (20 ha) that experiences average rainfall and does not fall within the salinity risk or acid sulphate risk area. The low impact nature of this application raises no potential land degradation issues and therefore is not at variance to this Principle.

**Methodology** Harmony NOI, 2002.
GIS Databases: Rainfall, Mean Annual - BOM 30/09/01, Salinity Risk LM 25m - DOLA 00, Acid Sulphate Soil Risk Map, SCP - DOE 01/02/04.

### (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 within the area of the proposal. There is a WRC Estate approximately 1370m to the North East of the proposed clearing area. Therefore the proposal is not at variance to this Principle.

**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 Murchison River catchment. The proposal does not fall within any Public Drinking Water Source Areas or Protection Zones. The area under proposal is a relatively small area and therefore is not likely to cause deterioration in the quality of surface or groundwater (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 likely to be at variance to this Principle**

The area under application has a mean annual rainfall of 300mm. The proposed area is dominated by earthy, loamy soils with smaller areas of gravel soils. The proposal it is not in a low-lying area or close to a significant water source. The proposed site is not in near proximity to a major population centre and therefore it is unlikely that the proposal will lead to an increase in peak flood height or duration.

**Methodology** GIS Databases - Rainfall, Mean Annual - BOM 30/09/01, Soils - Statewide DA 11/99

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

**Comments**

The Shire of Cue 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 | 20 | **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


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 (1994) List of vertebrates recorded or expected to occur within the landforms present in the Golden Crown Project Area. Ecologia Environmental Consultants, Western Australia. (TRIM Ref: GD252)

Harmony (2002) Big Bell Gold Operations Notice of Intent - Try Again Open-cut Extension Golden Crown Operations. Harmony (Australia) Pty Ltd, Western Australia. (TRIM Ref: GD 243)

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.