



1. Application details

1.1. Permit application details

Permit application No.: 719/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Mincor Resources NL

1.3. Property details

Property: M15/89

Local Government Area: Shire Of Coolgardie

Colloquial name: Tenement M15/89

1.4. Application

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

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 type 9: Medium Woodland; Coral Gum (<i>Eucalyptus torquata</i>) & Goldfields Blackbutt (<i>E. lesoueffii</i>).	The vegetation is to be cleared to allow for the final profiling of the rock walls of the waste rock dump. The area was mined for gold from 1897 and has experienced active exploration and mining for nickel since the 1960's (Frances Mills pers comm.)	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The vegetation condition was classed as good to degraded in accordance with Keighery (1994). That assessment was provided by Frances Mills, Environmental Officer with Mincor Operations Pty Ltd.

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 Wannaway Nickel Mine area is situated within the Coolgardie 3 (COO3) Eastern Goldfields Interim Biogeographic Regionalisation for Australia subregion (GIS database 2000). Cowan (2001) describes the subregion biodiversity values in relation to landscape, ecosystem, species and genetic values. Features of significant biodiversity values at a regional scale listed include the high diversity of *Eucalyptus* species within the *Eucalyptus* woodlands of the subregion, a high diversity of *Acacia* species, the ephemeral flora communities of tertiary sandplain shrublands and of valley floor woodlands.

The vegetation proposed to be cleared is classified as Beard Vegetation Association 9 by Shepherd (2001) and is described as: medium woodland; Coral Gum (*Eucalyptus Torquata*) & Goldfields Blackbutt (*E. lesoueffii*). There is no indication from the flora survey conducted at the Wannaway Mine site (Richmond 1994) that the vegetation types proposed to be cleared are of a higher diversity than other areas in the region. The area has been the subject of disturbance due to gold mining since 1897 and nickel exploration and mining since the 1960's (Frances Mills, pers comm.).

Methodology Cowan (2001).
GIS database-IBRA Subregions-EA (18/10/2000).
Richmond (1994).

(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

There are three records of Priority 4 (P4) bird species listed within approximately 7.5 Kilometres from the proposed clearing (GIS Database CALM 2005). No fauna survey has been conducted specifically for this mining operation (Frances Mill pers comm.).

The three records of P4 listed birds mentioned above are all for the southern Crested Bellbird, *Oreica gutturalis gutturalis*, there is one further record approximately 19km to the south-east of the application area (CALM advice 7/12/2005). This sedentary and solitary species inhabits the drier mallee woodlands and heaths of the southern parts of the State and may, if suitable habitat exists, utilise the area under application. Like many arid-zone bird taxon this species appears to be particularly susceptible to fragmentation and clearance of habitat at the periphery of its range. However the clearing of 4.5ha on land historically impacted by mining activities is unlikely to significantly impact on the conservation status of this taxon, considering the known distribution of this species in the south-west land division and the occurrence of suitable habitat on a regional scale (CALM advice 7/12/2005).

Methodology CALM advice (7/12/2005).
GIS Database-CALM Threatened Fauna- CALM (30/09/2005).

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is not likely to be at variance to this Principle

There are no records of Declared Rare Flora (DRF) within 20 kilometres from the proposed clearing (GIS database 2005). There are 12 records of the Priority 3 listed plant *Pytyrodia Sp Yilgarn* within a 20 kilometre radius of the proposal with the closest one located approximately 6.5 kilometres from the proposed clearing (GIS database 2005). A flora survey was carried out within the Mincor Wannaway Mine Site in 1994 (Richmond 1994) and no DRF or Priority flora species were found at the site at that time.

CALM has previously advised the proponent of the management requirements and measures for avoidance of the *Pityrodia sp Yilgarn* on the mining tenements held by the company. It should be noted that although this species is currently listed as Priority 3 there will most likely be a review of this taxa and its conservation code in future and it is advisable to treat this species as though it were DRF given its limited distribution and low population numbers. Provided the known populations of this species are avoided this proposal is unlikely to be at variance with this principle (CALM advice 7/12/2005).

Methodology CALM advice (7/12/2005).
GIS database-Declared Rare and Priority Flora List-CALM (1/07/2005).
Richmond (1994).

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments Proposal is not likely to be at variance to this Principle

There are no known Threatened Ecological Communities (TEC) within 20 kilometres from this proposal (GIS database 2005). The closest non endorsed TEC is located approximately 85 kilometres from the proposed clearing area (GIS database 2005). None of the Ecosystems listed as at risk in Cowan (2001) occur in the area proposed to be cleared.

Methodology Cowan (2001).
GIS database-Threatened Ecological Communities-CALM (12/04/2005).

(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 permit areas are situated within the Eastern Goldfields IBRA subregion. Approximately 100% of the native vegetation cover remains within this subregion (Shepherd et al. 2001). The vegetation association present within the proposed clearing areas is classified as Beard's Vegetation Association 9 (GIS database 2001), of which about 100 % remains of its pre European extent (Shepherd et al. 2001).

Based on the National Objective Targets for Biodiversity Conservation 2001-2005 (Department of Natural Resources and Environment 2002), the extent of Beard Vegetation Association 9 left within the Eastern Goldfields IBRA subregion is classified as of least concern (more than 30% of the pre European natural vegetation type remains).

The proposal is not considered at variance with this principle.

Methodology GIS database-Pre European Vegetation-Department of Agriculture 01/01.

(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

There are no watercourses or wetlands located within or associated with the proposed clearing area (GIS database 2004).

Methodology GIS database-Linear hydrography-DoE (1/2/2004) .

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not likely to be at variance to this Principle

The areas of proposed clearing occur on topography with low gradients (GIS database 2002). The steepest gradient within the proposed clearing area is approximately 2 to 3 degrees (Frances Mills pers. comm.). The soil erosion potential is low due to the protective rock surface mantles that occur over the proposed clearing area (Frances Mills pers. comm.). The region is characterised by low annual rainfall of approximately 280 mm a year (GIS database 2005) and high evaporation of about 2400mm a year (GIS database 1998). Due to the relatively flat topography, the protective rock mantle, low rainfall and the small amount of clearing proposed it is unlikely that the clearing will cause appreciable land degradation.

Methodology GIS database-Evaporation isopleths-BoM (09/1998).
GIS database-Topographic contours statewide-DOLA (12/09/2002) .
GIS database-Mean Annual Rainfall Surface (1975-2003)-DoE (09/2005).

(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 likely to be at variance to this Principle

The closest conservation area to the proposed clearing area is the Binaronca C class Nature Reserve (GIS database 2005). This nature reserve is situated approximately 20 kilometres to the south west of the proposed clearing. Considering the distance and the size of the area proposed to be cleared, the proposal is unlikely to be at variance to this principle.

Methodology GIS database-CALM managed land and waters-CALM (1/7/2005).

(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 likely to be at variance to this Principle

Because of its small scale the proposed clearing is unlikely to increase land salinisation in the area. With high annual evaporation rates and low annual rainfall there is little recharge into regional groundwater. The proposed clearing is unlikely to have an impact on regional groundwater considering the magnitude of the Yilgarn-Goldfields Groundwater Province (~300,000 sq km) and the extent of native vegetation remaining in the Eastern Goldfields COO3 IBRA subregion (~100%, Shepherd et al. 2001).

Methodology Shepherd et al. (2001).

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

Comments Proposal is not likely to be at variance to this Principle

With an average annual rainfall of 280mm and an annual evaporation rate of 2,400mm (GIS databases 2005 & 1998) there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is a likelihood of very temporary flooding which occurs within the broad valleys and lake systems of the region.

Given the small size of the areas being cleared and the local climate, which is characterised by high evaporation and low rainfall (GIS databases 1998 & 2005), the proposed clearing will not exacerbate flooding in the local area.

Methodology GIS database-Evaporation isopleths- BoM (09/1998).
GIS database-Mean Annual Rainfall Surface (1975-2003)- DoE (09/2005).

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

Comments

There is a Native Title Claim over the area under application by Ngadju (GIS database 2005). However, the

mining tenements have been granted, and the clearing is for a purpose consistent with the tenement type, therefore the granting of a clearing permit is not a future act under the Native Title Act 1993.

There is no current Environmental Protection Act 1986 licence or works approval for this property (DoE 2005).

There is a groundwater licence for this property for the purposes of dust suppression. However, the licence will not need to be amended to take into account the clearing application (DoE 26/10/2005).

The proposed clearing is not situated within a Public Drinking Water Source Area (GIS database 2005) or RIWI act area (GIS database 2002).

Methodology DoE (2005) Advice received from DoE Goldfields region on 26/10/2005.
GIS database-RIWI Act area- WRC (05/04/2002).
GIS database-Public Drinking Water Source Area-DoE (09/08/2005).
GIS database-Native Title Claims-DLI (7/11/2005).

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Mineral Production	Mechanical Removal	4.5	Grant	The proposal is judged not at variance to principles e and f and not likely to be at variance to principles a,b,c,d,g,h,i,j.

5. References

- CALM (7/12/2005) Email advice provided by CALM on principles b and c in relation to clearing permit 719/1.
- Cowan M (2001) Subregional description and biodiversity values Coolgardie 3 (COO3-Eastern Goldfields subregion). In: A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.
- 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.
- Richmond G.S (1994) Vegetation Transects Wannaway Project. Unpublished report prepared for Western Mining Corporation Limited (Kambalda Nickel Mines), July 1994.
- 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.

6. Acronyms & Definitions

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAWA	Department of Agriculture, Western Australia.
DA	Department of Agriculture, Western Australia.
DEP	Department of Environment Protection (now DoE), Western Australia.
DLI	Department of Land Information, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
EP Act	Environment Protection Act 1986, Western Australia.
GIS	Geographical Information System.
IBRA	Interim Biogeographic Regionalisation for Australia.
RIWI	Rights in Water and Irrigation Act 1914, Western Australia.
TECs	Threatened Ecological Communities.

Definitions:

{Atkins, Ken (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations

which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa** (= *Threatened Flora = Endangered + Vulnerable*): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.