



1. Application details

1.1. Permit application details

Permit application No.: 720/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Mincor Resources NL

1.3. Property details

Property: M15/93
Local Government Area: Shire Of Coolgardie
Colloquial name: Miitel Nickel Mine - Tenement M15/93

1.4. Application

| | | | |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 8.5 | | 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 936: Medium Woodland; Salmon Gum (Shepherd et al., 2001). | The proposed clearing of 8.5 ha of vegetation is to allow for the expansion of the existing waste rock dump and minesite infrastructure. Historically the area has been disturbed by pastoral and mining activities (Mincor, 2006). | 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 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 Miitel Nickel Mine site is situated within the Coolgardie 3 (COO3) Eastern Goldfields Interim Biogeographic Regionalisation for Australia (IBRA) subregion (GIS database). Features of significant biodiversity values at a regional scale listed in Cowan (2001) include the high diversity of Eucalyptus species within Eucalyptus woodlands of the subregion, a high diversity of Acacia species, and 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 936 by Shepherd (2001) and is described as: medium woodland; Salmon Gum (*Eucalyptus salmonophloia*). The proposal to clear native vegetation for the purpose of expanding the existing waste rock dump and minesite infrastructure is unlikely to have a significant biodiversity impact considering the area has been subject to disturbance from previous pastoral and mining activities.

Methodology Cowan (2001).
GIS database:
-IBRA Subregions-EA (18/10/2000).
-Pre-European Vegetation-DA 01/01.
Shepherd et al. (2001).

(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

A CALM search report of the Threatened Fauna Database for the Mittel mine area (2004) revealed one record one species listed under Schedule 4 of the *Wildlife Conservation Act 1950*, and three records of a species listed by CALM as Priority 4 (P4). The Schedule 4 species Peregrine Falcon, *Falco peregrinus*, has been observed approximately 9 km north-west of the project area (CALM, 2004; GIS database). The Peregrine Falcon is an uncommon species and prefers areas with rocky ledges, cliffs, watercourses, open woodland or margins with cleared land (CALM, 2004). The Peregrine Falcon is a highly mobile and a wide-ranging species therefore it is unlikely the small scale of clearing proposed will affect this species.

Three records of P4 bird species southern Crested Bellbird, *Oreoica gutturalis gutturalis*, were listed within 5 km west of the proposed clearing (CALM, 2004; GIS database). 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 (CALM, 2004). The Crested Bellbird has been eliminated from much of its former range by clearing and seems particularly sensitive to subsequent fragmentation, with areas of apparently suitable habitat as large as 5,000 ha now unoccupied (DEH, 2000). However the clearing of 8.5ha on land historically impacted by pastoral and 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, 2005). The proposal is unlikely to be at variance to this principle.

Methodology CALM advice (2005).
CALM desktop survey (2004).
DEH (2000).
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 known records of Declared Rare Flora (DRF) within 20 km from the proposed clearing (GIS database). There are 14 records of the priority 3 listed plant *Pityroidia* sp. Yilgarn within a 20 km radius of the proposal with similar landform and vegetation type. The closest known record of *Pityroidia* sp. Yilgarn is located approximately 2.4 km north of the proposed clearing (GIS database).

CALM has previously advised the proponent of the management requirements and measures for avoidance of the *Pityroidia* 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 the 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, 2005).

Methodology CALM advice (2005).
GIS database:
-Declared Rare and Priority Flora List- CALM (1/07/2005).

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

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

There are no known Threatened Ecological Communities (TEC's) in the vicinity of the proposed clearing (GIS database). Therefore it is unlikely that the proposed clearing is at variance with this principle.

Methodology 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 98% 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 936 (GIS database), of which ~906,000 hectares (~89.2%) of the pre-European extent remain (Shepherd et al., 2001).

The benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for Beard vegetation association 936, with only 2.3% protected in reserves. However, based on the National

Objective Targets for Biodiversity Conservation 2001-2005 (Department of Natural Resources and Environment, 2002), the extent of Beard Vegetation Association 936 left within the Eastern Goldfields IBRA subregion is classified as of least concern (more than 50% of the pre-European natural vegetation type remains). This proposal is not considered at variance with this principle.

| | Pre-European area (ha) | Current extent (ha) | Remaining %* | Conservation Status** | % in reserves/CALM-managed land |
|---|--------------------------|---------------------|--------------|-----------------------|---------------------------------|
| IBRA Bioregion - Coolgardie Shire of Coolgardie Beard vegetation associations - 936 | 12,917,718* | 12,719,084* | 98.5% | Least concern | |
| | No information available | | | | |
| | 1,016,210 | 906,826 | ~89.2% | Least concern | 2.3% |

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

Methodology Department of Natural Resources and Environment (2002).
GIS database:
-Pre European Vegetation- DA 01/01.
JANIS Forests Criteria (1997).
Shepherd et al. (2001).

(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

There are no wetlands or significant watercourses located within or associated with the proposed clearing area (GIS database). A minor, non-perennial salt lake (Lake Zot) is situated less than 1km west of the areas under application. There is no riparian vegetation present within the area proposed to clear, which primarily contains high salt tolerant plant species (Mincor, 2006). With the existence of adjacent mining operations combined with relatively low topographical relief and high groundwater salinity levels within the area (>35,000mg/L), it is unlikely the clearing will further degrade the environmental values of Lake Zot. Therefore, the proposal is considered not to be at variance to this principle.

Methodology GIS database:
-Groundwater Salinity, Statewide- 22/02/00.
-Linear hydrography (hierarchy)- DoE (13/4/2005).
Mincor (2006).

(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 proposal is located within the Great Western Plateau, consisting of a topographical surface of low relief (GIS database). The region is characterised by low annual rainfall of approximately 270 mm a year and a high evaporation rate of about 2400 mm a year (GIS database). The major soil type associated with the application area is deep calcareous soils comprising sandy loams over sandy clay loams. Other soils in the area are associated with sandy plains, dunes, ironstone gravel, granitic bosses and tors (GIS database). Any clearing is unlikely to increase salinisation, either on-site or off-site, as saline and subsaline soils are common throughout the region. As part of Mincor's rehabilitation plan they have self imposed vegetation buffers between Lake Zot and mining activities to reduce land degradation and provide vegetation corridors for small mammals (Mincor, 2006). The waste dump extension design has included both erosion control structures and drainage management to ensure surrounding vegetation is not adversely impacted (Mincor, 2006).

Based on the surface water hydrology, topography, low rainfall and small amount of clearing proposed, it is unlikely that the clearing will cause appreciable land degradation.

Methodology GIS Database:
-Evaporation Isopleths- BoM (09/1998).
-Soils, Statewide- DA 11/99.
-Topographic Contours Statewide- DOLA (12/09/2002).
-Mean Annual Rainfall Surface (1975-2003)- DOE (09/2005)
Mincor (2006).

(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 is the Binaronca C class Nature Reserve (GIS database), situated approximately

13 km south 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

A minor, non-perennial lake is within 1 km of the area under application, however, the small scale of clearing is unlikely to increase land and/or water salinisation in the area. With high annual evaporation rates and low annual rainfall there is likely to be little surface flow during normal seasonal rains and there would be minimal recharge into regional groundwater. The impact of any clearing activity on the quality of groundwater would be limited as it is already considered poor with salinity levels exceeding 35,000mg/L (GIS database).

The proposed clearing is unlikely to have an impact on regional groundwater considering the size of the area to be cleared, 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 (~98%) (Shepherd et al., 2001).

The proposal raises no water quality issues and is therefore unlikely to be at variance to this principle.

Methodology GIS Database:
-Groundwater Salinity, Statewide - 22/02/00
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

The areas of proposed clearing are not within a natural floodplain and have an average annual rainfall of 270mm and an annual evaporation rate of 2,400mm (GIS database). Therefore the areas are subject to little surface flow during normal seasonal rains and it is only during major rainfall events that there is a likelihood of very temporary flooding within the broad valleys and lake systems of the region.

The relatively small area of the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology GIS database:
-Evaporation isopleths- BOM (09/1998).
-Mean annual rainfall Surface (1975-2003)- DOE 09/05
-Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

There is a native title claim over the area under application; WC99_002. These claims have been registered with the National Native Title Tribunal on behalf of the NGADJU claimant group. However, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

Mincor Operations Miitel Nickel Mine M15/93 has a current operating licence 7875/3 granted in accordance with the *Environmental Protection Act 1986*. The proposed clearing is not at variance to this licence, and no amendment to the licence will be required (DoE, 2006).

Mincor Operations Miitel Nickel Mine M15/93 has a current groundwater licence GWL154213 valid until 31/12/2009 for the purposes of dewatering and dust suppression, granted in accordance with the *Rights in Water and Irrigation Act 1914*. The licence will not need to be amended to take into account the clearing application (DoE, 2006).

Methodology DoE (2006)
GIS Database:
-Aboriginal Sites of Significance- DIA 04/07/02
-Native Title Claims- DLI 19/12/04

4. Assessor's recommendations

| Purpose | Method | Applied area (ha)/ trees | Decision | Comment / recommendation |
|--------------------|--------------------|--------------------------|----------|---|
| Mineral Production | Mechanical Removal | 8.5 | Grant | The clearing principles have been addressed and the proposed clearing is not at variance for clearing principle e and not likely to be at variance for clearing principles a, b, c, d, f, g, h, i and j. The assessing officer therefore recommends that the permit be granted. |

5. References

- CALM (2004) CALM Database; Records of Threatened Fauna in the Widgiemooltha area. CALM, Western Australia.
- CALM (2005) Email advice provided by CALM on principles a, b, c, d and g 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.
- DoE (2006) Licence check and water allocation advice - Department of Environment, 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.
- JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mincor (2006) Information provided by email from the Environmental Advisor for Mincor Operations Pty Ltd in relation to clearing permit 720/1.
- Mincor Operations Pty Ltd (2005) Clearing applications (area permit) - Miitel nickel mine (M15/93) and Wannaway nickel mine (M15/89) - Widgiemooltha. Mincor Operations, Kambalda.
- 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. Glossary

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. |
| DEH | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia |
| DEP | Department of Environment Protection (now DoE), Western Australia. |
| DIA | Department of Indigenous Affairs |
| 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. |
| EPBC Act | Environment Protection and Biodiversity Conservation Act 1999 (Federal Act) |
| GIS | Geographical Information System. |
| IBRA | Interim Biogeographic Regionalisation for Australia. |
| IUCN | International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union |
| RIWI | Rights in Water and Irrigation Act 1914, Western Australia. |
| s.17 | Section 17 of the Environment Protection Act 1986, Western Australia. |
| TECs | Threatened Ecological Communities. |

Definitions:

{Atkins, K (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 Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2 Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3 Schedule 3 – Birds protected under an international agreement:** 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 Schedule 4 – Other specially protected fauna:** 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.

{CALM (2005). Priority Codes for Fauna. Department of Conservation and Land Management, Como, Western Australia} :-

- P1 Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2 Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3 Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4 Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5 Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (Environment Protection and Biodiversity Conservation Act 1999)

- EX Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W) Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in

the immediate future, as determined in accordance with the prescribed criteria.

EN

Endangered: A native species which:

- (a) is not critically endangered; and
- (b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU

Vulnerable: A native species which:

- (a) is not critically endangered or endangered; and
- (b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD

Conservation Dependent: A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.