



1. Application details

1.1. Permit application details

Permit application No.: 345/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Troy Resources NL

1.3. Property details

Property: M57/88
L57/22
Local Government Area: Shire Of Sandstone
Colloquial name:

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 166.7 | | 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 Association 2121 - Mosaic: Open low woodland; mulga / Succulent steppe; saltbush & bluebush on greenstone (Hopkins et al. 2001, Shepherd et al. 2001) | Typical of the Austin botanical district (from Beard, 1990), open mulga. (Jims Seeds, Weeds and Trees, 2004) | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) | The vegetation of the area has been degraded through grazing and exploratory drilling. (Jims Seeds, Weeds and Trees, 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 likely to be at variance to this Principle**
The area under application contains the Beard vegetation association 2121 (Hopkins et al., 2001). There is an estimated 141,528ha left of this association which is approximately 100% of the Pre-European extent (Shepherd et al., 2001). The area in the clearing proposal has been degraded by resource definition drilling and grazing (Jims Seeds, Weeds and Trees, 2004). Therefore it is unlikely that the clearing as proposed will be at variance with this Principle.

Methodology Hopkins et al. (2001)
Shepherd et al. (2001)
Jims Seeds, Weeds and Trees (2004) TRIM ref: IN19192
GIS databases:
Pre-European Vegetation - DA 01/01

(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**
The mallee fowl (*Leipoa ocellata*) is known to occur in the local area (within 50km radius) but there has been no record of it within the proposed area of clearing (CALM, 2005). CALM advises that there is a low probability of the proposed clearing being at variance with this Principle.

The degraded nature of the area also means that it is unlikely to be a significant impact to this and other species.

Methodology CALM advice 2005 - TRIM ref. HD19282

(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

There are no known Declared Rare Flora within 20km of the proposed area of clearing. There are three Priority 1 and one Priority 3 species occurring within a 50km radius of the proposed clearing. These are Pityrodia canaliculata (Priority 1), Stenanthemum mediale (Priority 1), Labichea eremaea (Priority 1) and Grevillea inconspicua (Priority 3). There was no evidence of any of these species within the area of clearing applied for during a recent vegetation and flora survey (Jims Seeds, Weeds and Trees, 2004).

Methodology CALM advice (2005) - TRIM ref. HD19282
Jims Seeds, Weeds & Trees (2004) - TRIM ref.IN19192

GIS database:-
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 likely to be at variance to this Principle

The proposed area of clearing is 60km from three Stygofauna sites listed as Threatened Ecological Communities, but there are no records of any Stygofauna within the proposed area itself.

CALM has advised that the proposed clearing is unlikely to have a significant impact on the Stygofauna Community. They do, however, recommend that the proponent implement strategies to preserve groundwater quality.

Methodology CALM advice (2005) - TRIM ref.IN19282

GIS database:
Threatened Ecological Communities - CALM 15/7/03

(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 State Government is committed to the National Objectives Targets for Biodiversity Conservation 2001-2005 (AGPS 2001) which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Department of Natural Resources and Environment 2002; EPA 2000). Beyond this value, species extinction is believed to occur at an exponential rate and any further clearing may have irreversible consequences for the conservation of biodiversity and is, therefore, not supported.

The vegetation at the site is a component of Beard Vegetation Association 2121 (Hopkins et al. 2001) of which there is approximately 100% of the pre-European extent remaining (Shepherd et al. 2001). Therefore this proposal is not at variance to this Principle.

| | Pre-European area (ha) | Current extent (ha) | Remaining %* | Conservation Status** | % in reserves/CALM-managed land |
|--|------------------------|---------------------|--------------|-----------------------|---------------------------------|
| IBRA Bioregion - Murchison Shire - Sandstone | 28,203,195 | 28,206,195 | ~100 | Least concern | |
| Beard vegetation association: 2121 | 141,528 | 141,528 | ~100 | Least concern | 0.0 |

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

Methodology Shepherd et al. (2001)
Hopkins et al. (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)

GIS databases:-
Pre-European Vegetation - DA 01/01
Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 average annual rainfall for the area under application is 200-250mm whilst the annual average evaporation is 3400mm. There would be little surface flow from a normal rainfall event with this being mainly sheet flow with many creek lines in the area. Although there is a well defined drainage line within the area under application the vegetation is not considered to be riparian.

The drainage is to part of a small sub-catchment/flood plain of 212,984ha, to the north of Lake Noondie. This Lake is approximately 52,900ha in size and between 30-40km to the south and is unlikely to be affected by the small area of clearing (relative to the size of the sub-catchment) involved in this application.

Methodology Jims Seeds, Weeds and Trees (2004) - TRIM ref. IN19192
GIS databases:-
Evaporation Isopleths - BOM 09/98
Isohyets - BOM 09/98
Hydrographic Catchments - Subcatchments - DOE 23/3/05
Rivers 250K - GA
Lakes, 1M - GA 01/06/00
Topographic Contours, Statewide - DOLA 12/09/02

(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 average annual rainfall is between 200-250mm and the average annual evaporation rate is between 3400-3600mm for the area of the proposed clearing. There is little surface flow during normal seasonal rains making water erosion and water logging unlikely.

Methodology GIS databases:
Evaporation Isopleths - BOM 09/98
Isohyets - BOM 09/98

(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 nearest CALM managed reserves are the ex-stations of Black Range and Lake Mason. These are greater than 25km away and unlikely to be affected by clearing in the area proposed.

Methodology CALM advice (2005)

GIS database:-
CALM Managed Lands and Waters - CALM 1/06/04
Environmentally Sensitive Areas - DoE

(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 proposed for clearing is not in a Public Drinking Water Source Area and is only 0.0783% of the surface water catchment area of 212,984ha. The low rainfall (average annual rainfall 200-250mm) and high evaporation rate (average annual rate 3400mm) makes it unlikely that the small area of clearing would affect the groundwater basin.

There is a small Crown Reserve, for which the purpose is waterways, along one side of the proposed clearing but as there are no known water conservation values attached to the area this is unlikely to be at variance to the Principle.

Methodology GIS databases:-
Cadastre - DLI 1/09/04
WRC Estate - DOE 9/04
Hydrographic Catchments - Subcatchments - DOE 23/3/05
Isohyets - BOM 09/98
Evaporation Isopleths - BOM 09/98
Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04

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

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

Given the small area of the proposed clearing compared to the catchment area size, and the low average annual rainfall and the high annual evaporation rate, it is unlikely that the clearing would lead to a significant rise in flood height or duration.

Methodology GIS databases:-
Hydrographic Catchments - Subcatchments - DOE 23/3/05
Isohyets - BOM 09/98
Evaporation Isopleths - BOM 09/98

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

Comments

The Shire of Sandstone has no objection to the clearing as proposed.

There is a Native Title Claim over the area under application by the Wutha peoples. However, mining tenements for purposes consistent with the clearing have been granted so therefore the granting of a clearing permit is not a future act under the Native Title Act.

Methodology Direct interest submission - Shire of Sandstone (Trim Ref ND584)

4. Assessor's recommendations

| Purpose | Method Applied | area (ha)/ trees | Decision | Comment / recommendation |
|---------|--------------------|------------------|----------|---|
| Mining | Mechanical Removal | 166.7 | Grant | The clearing Principles have been addressed and the proposed clearing of native vegetation is not at variance to them. The assessing officer recommends that the permit should be granted. |

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 HD19282.

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.

Jims, Seeds, Weeds and Trees, October 2004, Priority flora assessment for Troy Resources, Ladybird ML57/88 and Misc 57/22, TRIM Ref. IN19192

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.