



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:	3992/1
Permit type:	Purpose Permit

1.2. Proponent details

Proponent's name:	Robe River Mining Co Pty Ltd
-------------------	------------------------------

1.3. Property details

Property:	Miscellaneous Licence 47/236 Miscellaneous Licence 47/238
Local Government Area:	Shire of Ashburton
Colloquial name:	Deepdale Railway

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.03		Mechanical Removal	Rail Maintenance and Construction Activities

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
<p>Beard Vegetation Associations have been mapped at a scale of 1:250,000 for the whole of Western Australia. Two Beard Vegetation Associations are located within the application area (Shepherd, 2007):</p> <p>Beard Vegetation Association 587: Hummock grasslands, open low tree-steppe; snappy gum over <i>Triodia wiseana</i>; Hummock grasslands, shrub-steppe; kanji over <i>Triodia pungens</i></p> <p>Beard Vegetation Association 603: Hummock grasslands, sparse shrub steppe; <i>Acacia bivenosa</i> over hard spinifex</p> <p>Pilbara Flora (2008) have conducted a flora survey including the areas under application and identified the following vegetation types within the application area.</p>	<p>Robe River Mining Company Pty Ltd proposes to clear up to 1.03 hectares of native vegetation for Railway Maintenance and Construction. The proposed clearing sites are located approximately 50km apart on Miscellaneous Licences 47/236 and 47/238 adjacent to the Deepdale Railway. The vegetation on L47/236 was mapped as including 0.64 ha of vegetation type 4 and 0.08 ha of vegetation type 7. Vegetation on L47/238 was mapped as including 0.33 ha of vegetation type 4.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate.</p> <p>to</p> <p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).</p>	<p>The vegetation condition rating is derived from information provided by Pilbara Flora (2008) which reports that the vegetation survey areas have been extensively disturbed by previous railway construction activities. The vegetation types within the application area are reported to be in poor to good condition with occasional small areas of disturbance and <i>Cenchrus ciliaris</i> (Pilbara Flora, 2008).</p>

Vegetation Type 7 - MASDL - Mixed Acacia shrubland in drainage lines: Mixed *Acacia bivenosa*, *A. colei* var. *colei*, *A. inaequilatera* and *A. ancistrocarpa* shrubland over *Cenchrus ciliaris*, *Chrysopogon fallax* and *Triodia wiseana*.

Vegetation Type 4 - LWMGDL - Low woodland over mixed grasslands in drainage lines: Low woodland of *Eucalyptus camaldulensis* var. *Obtusa* with occasional *Corymbia hamersleyana* over *Acacia coriacea* subsp. *pendens* and *Acacia inaequilatera* over *Triodia angusta*.

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 application area occurs within the Chichester (PIL1) sub-region of the Pilbara Bioregion of the Interim
----------	--

Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This sub-region is characterised by plains supporting shrub steppe of *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002). The vegetation described within the application area is typical of the bioregion (Pilbara Flora, 2008).

Pilbara Flora (2008) have identified 4 priority fauna species of conservation significance which have a significant likelihood of occurring within the habitats of the survey area, which encompassed the entire Deepdale to Cape Lambert Railway, however the vegetation and habitats present are well represented on a regional scale and it is unlikely that the 1.03 ha applied to be cleared represents significant fauna habitat in a regional context.

A vegetation survey of the local area and surrounding vegetation identified 200 native flora species belonging to 101 genera from 37 families (Pilbara Flora, 2008). The dominant family recorded during the vegetation survey was *Poaceae*, with 38 taxa from 25 genera recorded. The floristic diversity recorded is consistent with other similar sized vegetation surveys undertaken in the Pilbara region and is thus considered to be representative of typical central Pilbara biodiversity (Pilbara Flora, 2008).

The vegetation survey areas have been extensively disturbed by previous railway construction activities. Vegetation type 4 is in poor to good condition with small areas of disturbance and *Cenchrus ciliaris*. Vegetation type 7 is recorded as having poor to good condition with *Cenchrus ciliaris* in some areas (Pilbara Flora, 2008). No Priority or Declared Rare Flora or Threatened Ecological Communities have been recorded within the clearing permit area and it is therefore not likely that the area to be cleared comprises a high level of biological diversity in a regional context.

Eight weed species were recorded within the vegetation survey area (Pilbara Flora, 2008) however weed management will reduce the risk of the spread or introduction of weed species to non-infested areas.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology CALM (2002)
Pilbara Flora (2008)
GIS Database:
- Interim Biogeographic Regionalisation of Australia

(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

Pilbara Flora (2008) have conducted a desktop assessment of the likelihood of threatened fauna species occurring within the vegetation survey areas. Four Priority taxa were considered as possibly occurring within the habitats of the survey area:

- The Blind snake (*Ramphotyphlops ganeii*) – Priority 1 on the DEC Priority Fauna List;
- Australian Bustard (*Ardeotis australis*) - Priority 4 on the DEC Priority Fauna list;
- Western Pebble-mound Mouse (*Pseudomys chapmani*) - Priority 4 on the DEC Priority Fauna list;
- Flock Bronzewing (*Phaps histrionica*) - Priority 4 on the DEC Priority Fauna list.

There were no landscape features observed within the vegetation survey areas that were considered as representing significant faunal habitats. The vegetation survey areas were either flat tussock grassland plains or more commonly low rolling Spinifex devoid of significant faunal habitats such as rocky shelters, caves, waterholes, gorges, closed forests, trees with hollows, sand dunes and mesa formations (Pilbara Flora, 2008).

Although the highlighted species may possibly occur within the habitats of the broader survey area vegetation types comprising the 1.03 ha within the application areas are well represented and it is unlikely that this vegetation represents a significant fauna habitat in a regional context.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Pilbara Flora (2008)

(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

Pilbara Flora (2008) conducted a flora survey between April and July 2008 of the application areas.

No Declared Rare Flora species have been recorded within the clearing permit area (Pilbara Flora, 2008) and it is therefore not likely that the area to be cleared includes, or is necessary for the continued existence of, rare flora.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Pilbara Flora (2008)

(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 Threatened Ecological Communities (TEC's) which occur within the application area and the closest known TEC is located approximately 90 kilometres southeast of the application area (Pilbara Flora, 2008; GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Pilbara Flora (2008)

GIS Database:
- Threatened Ecological Communities

(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 likely to be at variance to this Principle

The application area falls within the Pilbara IBRA bioregion (GIS Database). Shepherd (2007) reports that approximately 99.95% of the pre-European vegetation still exists in this bioregion.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,188	17,794,647	~99.95	Least Concern	~6.3
Beard vegetation associations - State					
587	585,716	585,716	~100	Least Concern	21
603	388,455	388,455	~100	Least Concern	16
Beard vegetation associations - Bioregion					
587	585,716	585,716	~100	Least Concern	21
603	388,455	388,455	~100	Least Concern	16

* Shepherd (2007)

** Department of Natural Resources and Environment (2002)

Beard vegetation associations 587 and 603 retain approximately 100% of their pre-European extent which is more than the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

Given that the vegetation is well represented locally and regionally the vegetation within the proposed area is not likely to be significant as a remnant in a highly cleared landscape.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)

EPA (2000)
Shepherd (2007)
GIS Database:
- Interim Biogeographic Regionalisation of Australia

(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 at variance to this Principle

There are no permanent watercourses mapped within the areas under application (GIS Database) however there is one minor non perennial water course located on Miscellaneous Licence 47/238 which is within 50 metres of the area under application and another located within the area under application on Miscellaneous Licence 47/236.

Pilbara Flora (2008) has identified that two vegetation types are to be cleared. These are low woodland over mixed grasslands in drainage lines and mixed acacia shrubland in drainage lines. Given that the vegetation types to be cleared are growing in association with drainage lines the vegetation under application is considered to be growing in an environment associated with a watercourse however these ephemeral drainage lines are common throughout the Pilbara landscape and the impact of clearing 1.03 hectares is unlikely to have any significant environmental impacts in a regional context.

Based on the above, the proposed clearing is at variance to this Principle.

Methodology Pilbara Flora (2008)
GIS Database:
- Hydrography, linear

(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 application area is located within the Rocklea Land System (GIS Database). The Rocklea Land System is described as basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands (Van Vreeswyk et al., 2004) which are not susceptible to erosion due to a surface mantle of cobbles and pebbles.

Pilbara Flora (2008) report that the vegetation described by Van Vreeswyk et al (2004) accurately reflects the vegetation types of the survey area and considering the small size of the areas to be cleared (1.03ha) it is not likely that the removal of this vegetation will cause appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Pilbara Flora (2008)
Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

(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 Millstream-Chichester National Park which is located approximately 12 kilometres west of the area applied to be cleared on Miscellaneous Licence 47/236 (GIS Database).

Given the distance to the nearest area of conservation significance and considering the small size of the area to be cleared (1.03ha) it is not likely that the clearing will have a significant impact on the environmental values of the Millstream-Chichester National Park.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC Managed Land and Waters

(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 application is located in a semi-desert-tropical region (Pilbara Flora, 2008). The Pilbara has a summer high rainfall season and a winter dry season with average annual rainfall of 400mm (GIS Database) and an evaporation average of 3600mm (BOM, 2008). Surface water runoff only occurs during and immediately following significant rainfall events and there are no permanent watercourses mapped within the areas under application.

Groundwater within the application area has low salinity levels of between 500 to 1000 milligrams per litre and it is therefore not likely that the removal of 1.03ha of native vegetation will cause deterioration in the quality of surface or underground water.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology BOM (2008)
Pilbara Flora (2008)
GIS Database:

- Mean Annual Rainfall

(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 application area is located in a semi-desert-tropical region where the average annual evaporation rate greatly exceeds the average annual rainfall. There are no permanent watercourses within the application area however there are ephemeral drainage lines within the proposed clearing area (GIS Database).

Natural flood events do occur within the Pilbara region following cyclonic activity however the proposed clearing of 1.03 ha is not expected to increase the incidence or intensity of such events.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Hydrography, linear

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

Comments

There is one Native Title Claim (WC99/12) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. 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*.

There are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 4 October 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received to the proposed clearing.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims

4. References

- BOM (2008) Climate Statistics for Australian Localities. Bureau of Meteorology. Averages for ROEBOURNE. http://www.bom.gov.au/climate/averages/tables/cw_005069.shtml (Accessed 23 September 2008)
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- 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, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pilbara Flora (2008) Flora and Vegetation Survey Supporting Documentation for a Native Vegetation Clearing Permit Application: Deepdale Railway Borrow Pits and Deepdale Railway Stage 3 Development, Rio Tinto Iron Ore. Pilbara Flora, Western Australia
- Shepherd, D.P. (2007) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
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 Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

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.