Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3543/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Red River Resources Ltd**

1.3. Property details

Property: Exploraiton Licence 70/2435
Local Government Area: Shire of Donnybrook - Balingup
Colloquial name: N/A

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description
Beard vegetation associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard vegetation association is located within the application area (GIS Database):

3: Medium forest; jarrah-marri, (Shepherd, 2007).

The assessing officer conducted a site visit of the application area on 10 February 2010. The vegetation of the application area appeared to reflect Beard vegetation association 3: medium forest; jarrah-marri. Much of the larger trees within the application area had been removed resulting in large areas of young regrowth.

Clearing Description
Red River Resources have applied to clear up to 0.7 hectares of native vegetation for the purpose of mineral exploration. Clearing is proposed to be undertaken mechanically.

Vegetation Condition
Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

To

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment
The assessing officer conducted a site visit on 10 February 2010. Based on observations from this site visit the vegetation condition has been derived.

Clearing permit CPS 3543/1 was granted by the Department of Mines and Petroleum on 4 March 2010 and was valid from 3 April 2010 to 3 April 2011. The clearing permit authorised the clearing of 2.6 hectares of native vegetation. An application for an amendment to clearing permit CPS 3543/1 was submitted by Red River Resources Ltd on 25 February 2011. The proponent has requested an extension to the duration of the permit to 3 April 2012 and a reduction in area to clear to 0.7 hectares. This reduction is to avoid areas that have been since identified as being of environmental significance. The clearing permit boundary that was approved to clear under CPS 3543/1 will remain unchanged.

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 is located within the Southern Jarrah Forest sub-region of the Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Jarrah Forest IBRA bioregion is dominated by a duricrusted plateau of the Yilgarn craton, and characterised by jarrah-marri forest on laterite gravels and, in the eastern part, by marri-wandoo woodlands on clayey soils (CALM, 2002).

The vegetation of the application area has been recorded as Beard vegetation association 3: medium forest; jarrah-marri. Approximately 62 percent of this vegetation type still exists within the subregion, with approximately 18 percent in International Union for Conservation of Nature (IUCN) reserves. In a audit of Western Australias 53 biogeographical subregions, Beard vegetation association 3 has a "Low" priority for reservation in the Southern Jarrah Forest sub-region (CALM, 2002).

A site visit was conducted by the assessing officer on 10 February 2010. During this site visit it was noted that many of the larger, older jarrah-marri trees had been removed. Much of the canopy vegetation was composed

of young eucalypts filling the voids left when the older trees were removed. The lack of larger older trees reduces habitat potential for many types of biota, therefore negatively impacting on biodiverstiy. It was also noted that the application area follows an existing cleared track and therefore much of the proposed clearing would be widening and reclearing the existing track. Due to these obvious signs of disturbance it is unlikely that the application area represents an area of high biodiversity.

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

Methodology CALM (2002)
GIS Database
- IBRA WA (Regions – Subregions)

(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 assessing officer conducted a search of the Department and Environment and Conservations Nature Map Database within a 10 kilometre radius of the following coordinates 115°56"16' E and 33°42"50' S within the application area. The following conservation significant fauna species were identified as potentially occurring within the application area (DEC, 2007 –2010). These fauna species are all listed as Schedule 1 'Fauna that is rare or is likely to become extinct' under the *Wildlife Conservation (Specially Protected Fauna) Notice 2008(2)*:

- Western Quoll, Chuditich (*Dasyurus geoffroii*);
- Brush-tailed Phascogale (*Phascogale tapoatafa subsp. ssp.* (WAM M434)) ;
- Western Ringtailed Possum (*Pseudocheirus occidentalis*); and
- Quokka (*Setonix brachyurus*).

Although it is possible that some or all of these fauna species could potentially occur within the application area, it is unlikely that the vegetation would constitute significant habitat for these species. The application area follows an existing cleared track, therefore much of the proposed clearing would be clearing regrowth of previously disturbed vegetation. Furthermore, during a site visit to the application area by the assessing officer on 10 February 2010 it was noted that most of the larger habitat trees had been felled and much of the understory was very open, reducing the quality of habitat for indigenous fauna.

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

Methodology DEC (2007 – 2010)

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

Comments **Proposal may be at variance to this Principle**

No supporting documentation regarding flora and vegetation of the application area was submitted with this clearing permit application. According to available databases one record of Declared Rare Flora (*Goodenia arthroticha*) occurs approximately seven kilometres to the west of the application area (GIS Database). Due to the lack of survey work within the application area, it is difficult to assess whether the vegetation of the application area is necessary for the continued existence of rare flora. To accurately assess the potential impacts of the proposed clearing on rare flora, a search of all areas proposed to be cleared should be undertaken during an appropriate season by an adequately qualified person.

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

Methodology GIS Database:
- Declared Rare and Priority Flora List

(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 application area (GIS Database). The nearest known TEC is located approximately 30 kilometres west of the application area (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(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 is located within the Southern Jarrah Forest sub-region of the Jarrah Forest Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database).

Shepherd (2009) reports that approximately 54.2% of the pre-European vegetation still exists in the Jarrah Forest Bioregion. The vegetation of the application area is broadly mapped as Beard vegetation association 3: medium forest; jarrah-marri (GIS Database, Shepherd, 2009). The table below outlines the pre-European and current extent of vegetation within these regions.

The application area falls within the Shire of Donnybrook - Balingup. The Shire of Donnybrook – Balingup is within the Intensive Land Use Zone of the south-west of Western Australia which has been extensively cleared for agriculture. However, 61.8% of its pre-European vegetation extent remains within the Shire (Shepherd, 2007). This places the Shire at 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes' (Department of Natural Resources and Environment, 2002).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion - Jarrah Forest	4,506,655	2,440,940	~54.2	Least concern	13.8 (24.9)
IBRA Subregion - Southern Jarrah Forest	2,609,913	1,330,925	~51	Least concern	16.9 (32.4)
Local Government Authority – Donnybrook - Balingup	156,029	91,178	~58.4	Least concern	4.96 (8.45)
Beard vegetation association - State					
3	2,661,405	1,863,719	~70.0	Least concern	18 (25.6)
Beard vegetation association - Jarrah Forest Bioregion					
3	2,390,590	1,657,275	~69.3	Least concern	15.81 (22.7)
Beard vegetation association - Southern Jarrah Forest subregion					
3	1,484,240	917,735	~61.8	Least concern	18.7 (30.1)

* Shepherd (2009)
** Department of Natural Resources and Environment (2002)

Locally, some of the surrounding areas have been cleared for agriculture and associated infrastructure. However, the application area is not considered to be a significant remnant of native vegetation within an extensively cleared area.

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

Methodology

Shepherd (2009)
Department of Natural Resources and Environment (2002)
GIS Database:
- IBRA WA (Regions – Subregions)
- Pre-European Vegetation

(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

The application area crosses and follows an ephemeral drainage line (GIS Database). Some vegetation associated with this drainage line could be cleared under this proposal.

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

During a site visit conducted by the assessing officer on 10 February 2010, it was noted that the vegetation did

not change substantially from within the drainage line to areas surrounding the drainage line. The vegetation was primarily jarrah-marri forest species. Therefore, impacts of the proposed clearing on the drainage line are likely to be minimal.

Methodology 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 proposed clearing is not likely to cause appreciable land degradation for the following reasons:

- the application area overlaps an existing cleared track.
- drill pads are proposed to be intermittently spaced
- much of the proposed clearing is temporary in nature
- the total area proposed to be cleared is relatively small.

During a site visit conducted by the assessing officer on 10 February 2010, no appreciable land degradation was noted within the application area.

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

Methodology

(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 application area occurs within the Wilga State Forest (GIS Database). Given that the application area follows an existing cleared track it is unlikely there will be an impact on the environmental values of the State forest. However, if Declared Rare Flora (DRF) are encountered, the clearing of these plants may result in an impact on the environmental values of this State forest. Since no flora survey has been conducted over the application area, searching for DRF at an adequate time prior to clearing would result in this impact being mitigated.

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

Methodology GIS Database:
- DEC Tenure

(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 proposed clearing is not likely to cause deterioration in the quality of surface or underground water for the following reasons:

- the application area is not within a Public Drinking Water Source Area (GIS Database);
- there are no permanent watercourses or wetlands within the application area; and
- low potential for ground water recharge due to the narrow and linear nature (approximately 4 metres wide by 5 kilometres long) of the proposed clearing.

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

Methodology GIS Database:
- Public Drinking Water Source Areas (PDWSAs)

(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 within the Wilga State Forest (GIS Database). The high cover of vegetation surrounding the application area will assist in reducing the impacts the proposed clearing will have on flooding.

The application area falls within the Leschenault Estuary – Preston River sub-catchment area totalling approximately 110,283 hectares (GIS Database). Based on the large size of the sub-catchment in relation to the relatively small area (0.7 hectares) of proposed clearing it is unlikely the proposed clearing will have a measurable impact on flooding.

Furthermore, the small area and linear nature of the proposed clearing will further reduce potential negative impacts on flooding.

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

Methodology GIS Database:
- Catchment Subregion

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There is one native title claim over the application area. This claim (WC98-058) has been registered with the National Native Title Tribunal on behalf of the 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*.

According to available databases there are no 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 Sites of Aboriginal 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 proposed clearing may be exempt under Regulation 5, Item 25 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. According to available databases there are no Envronmentally Sensitive Areas within the application area. However, as no flora studies have been conducted over the application area, there is the potential for Declared Rare Flora to be present.

The application area occurs within the Wilga State Forest. As a requirement of the tenement conditions Red River Resources Ltd is required to consult with the Department of Environment and Conservation (DEC) about the potential impacts of explartion activities on the Wilga State Forest. Advice to the proponent from the DEC (2010) was that a Declared Rare Flora (DRF) search in an appropriate season should be conducted over any proposed clearing site prior to any disturbance activities. The proponent has agreed and will persue a spring DRF survey of the proposed drilling sites.

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Methodology DEC (2010)
GIS Databases:
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing is at variance to Principle (f), may be at variance to Principle (c) and is not likely to be at variance to Principles (a), (b), (d), (e), (g), (h), (i) and (j).

5. References

CALM (2002). A biodiversity audit of Western Australia's 53 biogeographical subregions in 2002. Department of Conservation and Land Management, Western Australia.

DEC (2007 –2010) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au.

DEC (2010) Advice to Red River Resources from the Department of Envrionment and Conservation, received on 25 January 2010.

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.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
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.
DMP	Department of Mines and Petroleum, Western Australia.
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
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.