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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3238/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Iron Ore Holdings Ltd**

1.3. Property details

Property: *Iron Ore (Mount Bruce) Agreement Act 1972*, Mineral Lease 252SA (AML 70/252)
Local Government Area: Shire of Ashburton
Colloquial name: Koodaideri South Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3		Mechanical Removal	Access track construction

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 Associations have been mapped at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. One Beard Vegetation Association is located within the application area (GIS Database): Beard Vegetation Association 82 - Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* (Shepherd, 2007).	Iron Ore Holdings Ltd are seeking a Purpose Permit to clear up to 3 hectares of native vegetation within an application area of approximately 167 hectares (GIS Database). The proposed clearing will allow the proponent to construct a heavy vehicle access track (2.5 kilometres in length and 3 metres in width) from an existing access track on mining tenure (AML 70/252) south to Exploration Licence 47/1539. Vegetation clearing will be undertaken via mechanical means, using a bulldozer with a raised blade.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994); to Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The vegetation condition rating is based on photographs provided by the proponent, analysis of aerial photography and imagery.

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 proposed clearing area is located approximately 115 kilometres north-west of Newman in the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Hamersley subregion is extensive, covering approximately 6.25 million hectares. The subregion is well reserved, with approximately 14.1% of the total land area in conservation reserves (Shepherd, 2007). At a broad scale, vegetation of the Hamersley subregion can be described as Mulga low woodlands over bunch grasses on fine textured soils in valley floors and Eucalyptus leucophloia over Triodia brizoides on skeletal soils of the ranges (CALM, 2002).

Based on broad scale Beard Vegetation Association mapping, the proposed clearing area is characterised by hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* - a common and widespread vegetation association both locally and regionally (Shepherd, 2007; GIS Database). There are no known records of Declared Rare Flora (DRF), Priority Flora or Threatened Ecological Communities (TEC's) in the application area or surrounding area (GIS Database). The proposed clearing area does not contain any conservation category wetlands, nor is it located within or adjacent to any areas managed for the conservation of biological diversity (GIS Database).

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

Methodology CALM (2002).
Shepherd (2007).
GIS Database:
- CALM Managed Lands and Waters.
- Declared Rare and Priority Flora list.
- Environmentally Sensitive Areas.
- Interim Biogeographic Regionalisation for Australia (subregions).
- Pre European Vegetation.
- Threatened Ecological Communities.

(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**
Analysis of aerial photography and imagery indicates that the proposed clearing area is located in a broad drainage valley in an uncleared landscape characterised by ridges, valleys and plains (GIS Database). Fauna habitat in the local area is largely undisturbed, apart from various existing tracks which support mineral exploration activities.

The scale and nature of the clearing proposal render it highly unlikely to result in a loss of significant habitat for fauna indigenous to Western Australia.

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

Methodology GIS Database:
- Weeli Wolli 50cm Orthomosaic.

(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**
According to available GIS databases there are no known records of Declared Rare Flora (DRF) or Priority Flora within the proposed clearing area (GIS Database).

Iron Ore Holdings Ltd commissioned URS Australia Pty Ltd to request a search of the following databases to determine the likelihood of Rare or Priority Flora occurring within the proposed clearing area:

1. The Department of Environment and Conservation's (DEC's) Declared Rare and Priority Flora database;
2. DEC's Threatened (Declared Rare) Flora list;
3. The West Australian Herbarium Specimen database search of Priority Flora; and
4. The Department of Environment, Water, Heritage and the Arts (DEWHA) *Environment Protection and Biodiversity Conservation Act* (1999) Protected Matters Report.

According to the above database searches, there are no known records of DRF or Priority Flora within the proposed clearing area or surrounding vicinity (DEC, 2009a; DEWHA, 2009).

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

Methodology DEC (2009a).
DEWHA (2009).
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**
According to available GIS databases, there are no known Threatened Ecological Communities (TEC's) within the proposed clearing area (GIS Database).

URS Australia Pty Ltd was commissioned by Iron Ore Holdings Ltd to request a TEC database search from the Department of Environment and Conservation (DEC). Coordinates of the corner points of the proposed clearing area were provided to DEC as the requested search area. No TEC's or Priority Ecological Communities (PEC's) were identified within the search area, or within a 50 kilometre radius (DEC, 2009b).

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

Methodology DEC (2009b).
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 at variance to this Principle

The area applied to clear is within the Interim Biogeographic Regionalisation of Australia (IBRA) Pilbara bioregion (GIS Database). According to Shepherd (2007) there is approximately 99.9% of the pre-European vegetation remaining in the Pilbara bioregion. The vegetation of the application area is classified as Beard Vegetation Association 82: Hummock grasslands, low tree steppe; Snappy Gum over *Triodia wiseana* (GIS Database). There is approximately 100% of the pre-European vegetation remaining of Beard Vegetation Association 82 in the Pilbara bioregion (Shepherd, 2007).

Beard Vegetation Association 82 is well represented in conservation reserves within the Pilbara bioregion (10.2% of the pre-European vegetation extent), and the area proposed to clear does not represent a significant remnant of vegetation in the wider regional area. The proposed clearing will not reduce the extent of Beard Vegetation Association 82 below the current recognised threshold level of 30% of the pre-clearing extent of the vegetation type (below which species loss accelerates exponentially at an ecosystem level) (EPA, 2000).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion Pilbara	17,804,187	17,794,646	~99.9	Least concern	6.3
Beard veg assoc. – State					
82	2,565,901	2,565,901	~100	Least concern	10.2
Beard veg assoc. Pilbara Bioregion					
82	2,563,583	2,563,583	~100	Least concern	10.2

* Shepherd (2007)
** Department of Natural Resources and Environment (2002)

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

Methodology

Department of Natural Resources and Environment (2002).
EPA (2000).
Shepherd (2007).
GIS Databases:
- Interim Biogeographic Regionalisation of Australia.
- 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

Analysis of aerial photography and topographic contours suggests that the proposed clearing area occurs in a broad drainage valley (GIS Database). Iron Ore Holdings Ltd (2009) corroborate this interpretation, describing the proposed clearing area as a broad drainage valley filled with alluvial material. This area would carry surface water flows following significant rainfall events, most likely associated with cyclonic activity.

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

Iron Ore Holdings Ltd (2009) have advised that there are no permanent waterholes known from the local area. Analysis of GIS databases supports this claim (GIS Database). The drainage channel in which the clearing is proposed is ephemeral and of a stony nature and will generally provide adequate vehicle access. As a consequence, any clearing undertaken is likely to be minor (Iron Ore Holdings Ltd, 2009). The proposed clearing of a 3 metre wide access track over a linear footprint of approximately 2.5 kilometres is unlikely to result in significant impacts to an environment associated with a wetland or watercourse.

Methodology

Iron Ore Holdings Ltd (2009).
GIS Database:
- Hydrography, linear.
- Topographic contours, statewide.
- Weeli Wolli 50cm Orthomosaic.

(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

Land system mapping by the Department of Agriculture Western Australia has mapped a variety of land

systems for the Pilbara bioregion. Land systems are mapped based on biophysical features such as soil and landform type, geology, geomorphology and vegetation type (Van Vreeswyk et al, 2004). The proposed clearing area includes the Newman land system which is characterised by hills and ranges, supporting hard spinifex grasslands. The Newman land system is generally not prone to erosion (Van Vreeswyk et al, 2004).

The proposed clearing will be undertaken using raised blade methods, leaving rootstock intact and minimising the potential for erosion (Iron Ore Holdings Ltd, 2009). The small scale of the proposal is unlikely to result in appreciable land degradation.

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

Methodology Iron Ore Holdings Ltd (2009).
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 proposed clearing is not located within a conservation reserve (GIS Database). The nearest known conservation reserve is the Karijini National Park, located approximately 30 kilometres west (GIS Database).

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

Methodology GIS Database:
- CALM Managed Lands 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**
There are no permanent watercourses or wetlands in the proposed clearing area (GIS Database). The proposed clearing area is located in a broad drainage valley which would carry water following significant rainfall events (GIS Database). Iron Ore Holdings Ltd (2009) have reported that the proposed access route is flat-lying, avoids steep river banks and occurs in an open, stone-filled channel which generally provides vehicle access. Clearing within drainage is therefore likely to be of a minor nature and clearing will be undertaken with a raised blade, keeping rootstock intact. Given the scale and nature of the proposal, the potential for surface water quality to be significantly impacted is deemed low.

The proposed clearing is not located within a Public Drinking Water Source Area (GIS Database). The scale and nature of the proposal render it highly unlikely to impact upon groundwater levels or quality.

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

Methodology Iron Ore Holdings Ltd (2009).
GIS Database:
- Hydrography, linear.
- Public Drinking Water Source Areas.

(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 proposed clearing of an access track 3 metres in width and 2.5 kilometres in length (Iron Ore Holdings Ltd, 2009) is not likely to pose a flooding risk.

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

Methodology Iron Ore Holdings Ltd (2009).

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

Comments

There is one native title claim over the area under application (GIS Database). This claim (WC98/062) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). 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 (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*.

According to available GIS databases, there are no known registered Sites of Aboriginal Significance within the proposed clearing area (GIS Database). However, there is one registered site approximately one kilometre to

the west (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.

No submissions were received from direct interest parties or members of the public when the clearing permit application was advertised for comment.

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

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles, and the proposed clearing is at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i) and (j), and is not at variance to Principle (e).

Should a clearing permit be granted, it is recommended that conditions be imposed for the purposes of weed management, retention of topsoil and vegetative material, record keeping and permit reporting.

The Assessing Officer also considers that the area sought to clear (3 hectares) is inconsistent with the proposed dimensions of the heavy vehicle access track proposed for clearing (2.5 kilometres length x 3 metres width). Should a clearing permit be granted it is recommended that a maximum of 1.5 hectares of clearing be authorised.

5. References

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3(PIL 3 - Hamersley subregion).

DEC (2009a) Request for Rare Flora Information. 20km radial search - 22° 21' - 22° 43' S and 118° 48' - 119° 12'E (GDA94). Search conducted for URS Australia Pty Ltd, c/o Iron Ore Holdings Ltd. 6 July 2009.

DEC (2009b) Threatened Ecological Communities database search. Request area: 706250E 7506950N, 706850E 7506950N, 706850E 7504000N, 706250E 7504325N. 7 July 2009.

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.

DEWHA (2009) EPBC Act Protected Matters Report. -22.53138, 119.0052, -22.53138, 119.0113, - 22.55777, 119.0113, - 22.55527, 119.0052. 8 July 2009.

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.

Iron Ore Holdings Ltd (2009) Application for a clearing permit (Purpose Permit). July 2009.

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.

Van Vreeswyk, A.M, Payne, A.L, Leighton, K.A & Hennig, P (2004) Technical Bulletin No. 92: An inventory and condition survey of the Pilbara region, Western Australia. Department of Agriculture, South Perth, Western Australia.

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.