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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5680/1
Permit type: Purpose

1.2. Proponent details

Proponent's name: **Hamersley Iron Pty Ltd**

1.3. Property details

Property: Exploration Licence 47/1490
Local Government Area: Shire of Ashburton
Colloquial name: Kalamina Construction Camp

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Clearing	Geotechnical and hydrogeological investigations, mineral exploration and access tracks.

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 August 2013

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 over the whole of Western Australia and are useful to look at vegetation in a regional context. Two Beard vegetation associations have been mapped within the application area (GIS Database):

29: Sparse low woodland; mulga, discontinuous in scattered groups; and

111: Hummock grasslands, shrub steppe; *Eucalyptus gamophylla* over hard spinifex.

A Level 1 flora and vegetation survey was conducted over the application area by Astron Environmental Services in April 2013. This survey identified three vegetation associations within the application area (Astron Environmental Services, 2013):

Plains

1. *Hakea lorea* subsp. *lorea, Acacia pyrifolia* var. *pyrifolia, Grevillea wickhamii* var. *hispidula* tall open shrubland over *Triodia pungens* hummock grassland;

Drainage tracts and minor creeks

2. *Grevillea wickhamii* subsp. *hispidula, Acacia pyrifolia* var. *pyrifolia* tall shrubland over *Indigofera monophylla, Gossypium australe, Bonamia erecta* low open shrubland over *Eulalia aurea, Cenchrus ciliaris, Chrysopogon fallax* open tussock grassland with *Triodia pungens* very open tussock grassland;

Depressions

3. *Acacia pyrifolia* var. *pyrifolia, Grevillea wickhamii* subsp. *wickhamii, Hakea lorea* subsp. *lorea* tall open shrubland over *Bonamia erecta, Indigofera monophylla* low open shrubland over *Eulalia aurea* very open tussock grassland.

Clearing Description

Hamersley Iron Pty Ltd has applied to clear up to 5 hectares of native vegetation within an application area of approximately 59.65 hectares (GIS Database). The application area is located approximately 11 kilometres southeast of Wittenoom (GIS Database). The proposed clearing is for geotechnical investigations associated within the Kalamina construction camp.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

to

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment

The vegetation condition was assessed by botanists from Astron Environmental Services. The vegetation

condition was described using a scale based on Trudgen (1988) and has been converted to the corresponding condition from the Keighery (1994) scale.

3. Assessment of application against clearing principles

Comments

The proposal to clear 5 hectares of native vegetation within an application area of 59.65 hectares for the purpose of geotechnical investigations is not likely to have any significant environmental impacts. The vegetation mapped within the application area is considered to be common and widespread within the region (Astron Environmental Services, 2013). Approximately 1,450 hectares of analogous vegetation has been mapped by a survey adjacent to the application area (Astron Environmental Services, 2013). The vegetation within the application area was not identified as being a Threatened or Priority Ecological Community (Astron Environmental Services, 2013; GIS Database).

No Threatened or Priority Flora species were recorded within the application area (Astron Environmental Services, 2013; GIS Database). The majority of the Threatened and Priority Flora species previously recorded in the local region are found in habitats that are not present within the application area (Astron Environmental Services, 2013). There were two weed species recorded within the application area; Buffel Grass (*Cenchrus cilliaris*) and Birdwood Grass (*Cenchrus setiger*) (Astron Environmental Services, 2013). Potential impacts to biodiversity may be minimised by the implementation of a weed management condition.

The application area was identified as being covered entirely by Spinifex Plain fauna habitat (Astron Environmental Services, 2013). This habitat is considered to be common throughout the Pilbara and is not likely to support a greater level of faunal diversity than the surrounding area (Astron Environmental Services, 2013). Several drainage tracts occur within the Spinifex Plain habitat but they do not provide any significantly different micro niches for fauna species to exploit (Astron Environmental Services, 2013). The application area does not contain other significant fauna habitat such as caves, breakaways or major drainage lines (Astron Environmental Services, 2013). A number of conservation significant fauna species may utilise the application area for foraging activities, however, it is not likely to be significant for conservation significant species.

There are no permanent watercourses within the application area, however, there are several ephemeral drainage lines (GIS Database). The flora and vegetation survey identified one vegetation association growing in association with drainage tracts and minor creeks (Astron Environmental Services, 2013). The proposed clearing of 5 hectares for geotechnical investigations is not likely to have a significant impact on local drainage systems.

At its closest point the application area is located 100 metres from Karijini National Park (GIS Database). The application area is not part of an ecological linkage to the National Park. Care should be taken to ensure that the proposed clearing activities do not increase the spread of weeds into the National Park. Potential impacts from weeds may be minimised by the implementation of a weed management condition.

The application area is comprised of the Boolgeeda land system (GIS Database). This land system is generally not prone to erosion (Van Vreeswyk et al., 2004). Given the relatively small amount of clearing and the low risk of erosion, the proposed clearing is not likely to cause any appreciable land degradation. The proposed clearing is not likely to cause a deterioration in the quality of surface or groundwater or increase the incidence or intensity of flooding (GIS Database).

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), 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).

Methodology

Astron Environmental Services (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- Rangeland Land System Mapping
- Rainfall, Mean Annual
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered
- Wittenoom 50cm Orthomosaic

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

Comments

There is one native title claim (WC2011/06) over the application area (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant groups (GIS Database). 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*.

According to available databases, 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 Regulation (formerly 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 15 July 2013 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

Astron Environmental Services (2013) Kalamina Camp Level 1 Vegetation, Flora and Fauna Survey. Unpublished Report prepared for Rio Tinto Iron Ore Ltd, dated April 2013.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Trudgen M.E. (1988) A Report on the Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.

Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin - An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, 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.

Principles for clearing native vegetation:

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

(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.

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

(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.

(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.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(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.

(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.

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