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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3793/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Kimberley Metals Group Pty Ltd**

1.3. Property details

Property: Mining Lease 80/599
Mining Lease 80/600
Miscellaneous Licence 80/55
Local Government Area: Shire of Wyndham-East Kimberley
Colloquial name: Ridges Iron Ore Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 25 July 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 for 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):

818: Hummock grasslands, low tree steppe; snappy gum over *Triodia inutilis*; and
820: Grasslands, high grass savanna sparse low tree; snappy gum (*Eucalyptus brevifolia*) over upland tall grass & curly spinifex on granite (GIS Database).

The application area was surveyed by Animal Plant Mineral Pty Ltd on 10 to 12 August 2009 and 2 to 7 February 2010 (APM, 2010). The following vegetation types were identified within the application area:

Infrastructure Area
W1: Woodland, low woodland and low forest of *Eucalyptus brevifolia*, *Corymbia grandifolia* and *Corymbia collina* over open scrub of *Terminalia canescens, Grevillea pyramidalis* subsp. *leucadendron* and *Carissa lanceolata* over grassland of *Chrysopogon fallax, Triodia bitextura* and *Eriachne mucronata*;

W2: Woodland and low woodland of *Eucalyptus brevifolia* and *Corymbia collina* over open scrub of *Terminalia canescens* and *Grevillea pyramidalis* subsp. *leucadendron* over grassland of *Chrysopogon fallax* and *Triodia bitextura* with *Euphorbia coghlanii* and *Corchorus sidoides* subsp. *sidoides;*

W3: Low woodland and low forest of *Eucalyptus brevifolia, Corymbia collina* and *Erythrophleum chlorostachys* over open scrub of *Cochlospermum fraseri* over bunch grassland of *Alloteropsis semialata, Chrysopogon fallax* and *Sehima nervosum* with *Galactia tenuiflora* complex;

F1: Low forest of *Lophostemon grandiflorus subsp. riparius, Adansonia gregorii, Flueggea virosa* subsp. *melanthesoides* and *Bauhinia cunninghamii* over bunch grassland of *Arundinella nepalensis* and *Heteropogon contortus;*

F2: Low forest of *Ziziphus quadrilocularis, Exocarpos latifolius* and *Clerodendrum tomentosum* var. *tomentosum* over scrub of *Ficus atricha, Ficus platypoda* and *Pittosporum spinescens* over open bunch grassland of *Pseudochaetochloa australiensis* and *Cymbopogon procerus* with *Tinospora smilacina;* and

F3: Low forest of *Corymbia collina* and *Eucalyptus jensenii* over closed bunch grassland of *Chrysopogon fallax, Alloteropsis semialata* and *Heteropogon contortus* with *Indigofera* sp. A Kimberley Flora.

Mining Area
G1: Low woodland of sparse *Melaleuca nervosa* over dense grassland dominated by *Alloteropsis semialata, Vigna lanceolata, Fimbristylis* sp., *Chrysopogon fallax, Chamaecrista absus, Murdannia graminea, Ipomoea gracilis, Haemodorum ensifolium, Themeda* sp., *Setaria apiculata, Ptilotus fusiformis*, over *Drosera ordensis, Merremia* sp. and *Goodenia sepalosa;*

W4: Woodland and low woodland dominated by *Eucalyptus brevifolia* with *Corymbia dichromophloia, Corymbia cadophora* subsp. *polychroma* (on lower slopes), with scattered *Erythrophleum chlorostachys, Erythroxylum ellipticum, Callitris intratropica, Gardenia* sp., *Cochlospermum fraseri, Brachychiton diversifolius, Terminalia canescens* and occasional *Eucalyptus jensenii* over open scrub of *Petalostigma quadriloculare, Indigofera* sp. A Kimberley Flora, *Grevillea pyramidalis, Grevillea dryandri, Wrightia saligna, Clerodendrum floribundum, Acacia orthocarpa,* over grassland of *Alloteropsis semialata, Triodia bitextura, Cymbopogon* sp., with herbs and vines, *Ipomoea gracilis, Jasminum didymum, Hybanthus enneaspermus, Zornia muriculata, Evolvulus alsinoides, Phyllanthus exilis, Acacia lycopodiifolia, Polygala longifolia, Jacquemontia sp., Uraria lagopodioides and Goodenia odonnellii;*

W5: Woodland and low woodland dominated by *Corymbia dichromophloia* and *Corymbia collina* with scattered *Erythrophleum chlorostachys, Grevillea pyramidalis, Grevillea heliosperma, Owenia vernicosa, Terminalia canescens,* occasional *Callitris intratropica,* scattered *Buchanania oblongifolia, Cochlospermum fraseri, Persoonia falcata, Santalum lanceolatum,* over open scrub of *Petalostigma quadriloculare, Indigofera sp.* A Kimberley Flora*, Grevillea dryandri, Calytrix achaeta, Haemodorum ensifolium, Clerodendrum floribundum, Sida sp.* A Kimberley Flora*, Marsdenia angustata, Stenocarpus acacioides, Chamaecrista mimosoides, Gompholobium subulatum, Mirbelia spinosa, Calytrix exstipulata* over grassland of *Triodia bitextura, Chrysopogon fallax, Eriachne sp.,* with herbs and vines *Evolvulus alsinoides, Hybanthus enneaspermus, Phyllanthus exilis, Zornia muriculata, Tinospora smilacina, Cheilanthes caudata, Cheilanthes brownii, epiphyte Cymbidium canaliculatum (sparse)* and mistletoe *Amyema eburna.*

W5a: As above with insufficient soil to support tree species; and

C1: Sandstone cliff community, tussock grassland of *Triodia sp.* on cliff faces with sparse low woodland or *Eucalyptus sp.* in patches at base and top of cliffs, with *Corymbia aspera, Brachychiton viscidulus, Ficus atricha, Ficus brachypoda,* over tussock grassland of *Triodia racemigera, Triodia bitextura, Triodia sp.,* with sub shrubs/herbs/vines *Jacquemontia sp*. Keep River and *Olearia arguta* var. glabrous narrow leaves.

Clearing Description

Kimberley Metals Group Pty Ltd (KMG) is proposing to clear up to 259.1 hectares of native vegetation for the mining of iron ore and infrastructure for the processing and accommodation at the Ridges Iron Ore Project (KMG, 2013).

Vegetation will be cleared using a dozer.

Vegetation Condition

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).

Comment

The application area is located in the East Kimberley region of Western Australia and is situated approximately 105 kilometres south-west of Kununurra, adjacent to the Great Northern Highway (GIS Database).

Clearing permit CPS 3793/1 was granted by the Department of Mines and Petroleum on 5 August 2010. On 4 June 2013, KMG applied to amend CPS 3793/1 for the purpose increasing the area authorised to clear from 125.1 hectares to 259.1 hectares and increasing the permit boundary from 130.09 hectares to 460.5 hectares. KMG also applied to extend the permit duration from 2016 to 2021.

3. Assessment of application against Clearing Principles

Comments

KMG has applied to increase the area permitted to clear from 125.1 hectares to 259.1 hectares. The permit boundary increased from 130.09 hectares 460.5 hectares.

A review of the proposed increase boundary identified additional impacts to three additional Priority Flora species; *Heliotropium cupressinum* (Priority 1), *Triodia barbata* (Priority 1) and *Olearia arguta* var. glabrous narrow leaves (Priority 3) (KMG, 2013). One individual of *Heliotropium cupressinum* and *Triodia barbata* was identified in the southern extremity of the application area. The species *Triodia barbata* is able to be protected as they are located adjacent to a cliff face and will be buffered from any clearing impacts. The species *Heliotropium cupressinum* falls within the proposed disturbance area of the ore body and KMG are unable to avoid this species (APM, 2013). One individual of *Olearia arguta* var. glabrous narrow leaves was identified within the application area and KMG (KMG, 2013) are unable to avoid this species. The clearing of these Priority Flora species is not expected to impact the conservation significance of these species as they have been recorded outside the application area in the local region and within both the Central Kimberley and Northern Kimberly Interim Biogeographic Regionalisation of Australia bioregions (DEC, 2013).

An additional nine individuals of *Micraira* sp. Purnululu (Priority 1) as described in clearing permit decision report CPS 3793/1 will be impacted by the proposed clearing (KMG, 2013). KMG (APM, 2013) believe that it is not operationally feasible to exclude these species from the clearing envelope. DEC (2013) shows that the species is geographically restricted, however has been recorded in three other locations in the regional area, and also interstate although endemic to Western Australia. The clearing of nine individuals is not expected to impact the conservation significance of this species.

None of these vegetation communities are considered to be of higher diversity than those assessed within

clearing permit decision report CPS 3793/1 and the vegetation types are not considered to be a remnant locally or regionally. No vegetation communities recorded are considered to be Threatened or Priority Ecological Communities and no Threatened Flora were recorded within the additional area (KMG, 2013). Therefore, the proposed clearing is not likely to be at variance to Principles (a), (c) and (d) and is not at variance to Principle (e).

The fauna habitats present within the application area are consistent with those described in clearing permit decision report CPS 3793/1. Therefore, the proposed clearing is not likely to be at variance to Principle (b).

Current environmental information has been reviewed and the assessment of clearing principles (e), (f), (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision report CPS 3793/1.

Methodology

APM (2013)
DEC (2013)
KMG (2013)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Rangeland Land System Mapping
- Rainfall, Mean Annual
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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 area under application. This claim has been registered with the National Native Title Tribunal on 29 October 2010. 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 seven 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 amendment was advertised on 1 July 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the application.

Methodology

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

4. References

Animal Plant Mineral Pty Ltd (APM) (2010) Kimberley Metals Group Pty Ltd Ridges Iron Ore Project: Flora and Vegetation Survey of Proposed Mine and Infrastructure Impact Areas. Unpublished report prepared for Kimberley Metals Group.

Animal Plant Mineral Pty Ltd (APM) (2013) Additional information for assessment CPS 3793/2. Internal email, July 2013.

DEC (2013) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation, viewed 15 July 2013, <http://naturemap.dec.wa.gov.au>.

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

Kimberley Metals Group (KMG) (2013) Vegetation Clearing Permit CPS 3893/1 Amendment, Ridges Iron Ore Project. Internal report, May 2013.

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.