



## 1. Application details

### 1.1. Permit application details

Permit application No.: 5342/2

Permit type: Purpose

### 1.2. Proponent details

Proponent's name: Process Minerals International Pty Ltd

### 1.3. Property details

Property: Miscellaneous Licence 47/560

Local Government Area: Shire of East Pilbara

Colloquial name: Phil's Creek Haul Road

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
18		Mechanical	Haul Road and Associated Infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 4 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. The following Beard vegetation association is located within the application area (Government of Western Australia, 2013; GIS Database):

82: Hummock grasslands, low tree steppe; snappygum over *Triodia wiseana*.

The application area was surveyed as part of a larger Level 2 flora and vegetation survey of the proposed haul road. The survey was conducted by Rapallo on 20 to 24 November 2011 (Rapallo, 2012a). The following four vegetation types were identified within the application area:

#### Ridgetops and Slopes

A. Very open or open woodland dominated by eucalypts such as *Corymbia hamersleyana*, *Eucalyptus gamophylla*, and *E. leucophloia* subsp. *leucophloia*, or tall shrubs such as *Acacia inaequilatera*, *A. bivenosa*, *Senna glutinosa* subsp. *glutinosa*, *Hakea lorea* subsp. *lorea* or *Grevillea wickhamii*, over mixed shrubs such as *Eremophila fraseri* subsp. *parva* and *Sida cardiophylla*, and hummock grasses such as *Aristida holathera* var. *holathera*, *Triodia lanigera*, *T. epactia*, *T. pungens* and *T wiseana*. On sand, sandy loam or clay loam.

#### Floodplains and Drainage Lines

B. Open low *Corymbia hamersleyana* woodland, or mixed open shrubland dominated by *Gossypium robinsonii*, *G. australe*, *Acacia hilliana*, *A. inaequilatera*, *A. pyriformis*, *A. maitlandii*, *A. adoxa* var. *subglabra*, *Eremophila fraseri* subsp. *parva*, *Senna artemisioides* subsp. *oligophylla* or *Grevillea wickhamii* with emergent eucalypts *Corymbia hamersleyana* or *Eucalyptus leucophloia* subsp. *leucophloia*, over dense mixed shrubs, and dense hummock grasses such as *Eriachne mucronata*, *\*Cenchrus ciliaris*, *Themeda triandra*, *Aristida holathera* var. *holathera*, *Triodia epactia*, *Triodia wiseana* and *T. lanigera*. On clay-loam or sandy loam with BIF shales.

C. Open low mixed woodland of *Eucalyptus gamophylla*, *E. ?victrix*, *E. xerothermica* and *Corymbia hamersleyana*, or tall mixed shrubland dominated by *Acacia inaequilatera*, *Gossypium robinsonii*, *Grevillea wickhamii* or *Petalostylis labicheoides* with scattered eucalypts as listed, over open to dense small shrubs, and mixed hummock grasses such as *Themeda triandra*, *Triodia lanigera* and *T. pungens*, *T. wiseana*. On sandy or loamy clay with ironstone gravels.

#### Drainage Lines

D. Open mixed woodland dominated by eucalypts such as *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia*, over mixed shrubs, or mixed shrubland dominated by *Grevillea wickhamii*, *Gossypium robinsonii*, *Acacia inaequilatera*, *A. pyriformis* and *A. tumida* var. *pilbarensis* with emergent eucalypts as listed, over mixed small shrubs such as *Tephrosia densa* or *Corchorus lasiocarpus* subsp. *parvus*, and dense hummock grasses such as *Aristida holathera* var. *holathera*, *Triodia epactia* and *Themeda triandra*. On loam or gravel with BIF shales or cherts.

<b>Clearing Description</b>	<p>Process Minerals International Pty Ltd (PMI) has applied to clear 18 hectares within an application area of approximately 69.7 hectares (GIS Database). The application area is located approximately 80 kilometres north east of Newman (GIS Database).</p> <p>The purpose of the application is to construct a portion of the proposed haul road linking Phil's Creek Iron Ore Mine to the Munjina Roy Hill Road. This application covers approximately 5.23 kilometres of the proposed haul road within Miscellaneous Licence 47/560 and also includes construction of flood protection structures such as culverts and floodways. The average width of the proposed haul road is 20 metres. Clearing will be by mechanical means.</p>
<b>Vegetation Condition</b>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);</p> <p>To</p> <p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p>
<b>Comment</b>	<p>Vegetation condition was determined by Rapallo (2012a).</p> <p>The flora and vegetation survey was conducted during the dry season and some ephemeral or cryptic taxa may not have been visible at the time of the survey. Some plants were difficult to identify due to being 'browned off' by the heat (Rapallo, 2012a).</p> <p>Clearing permit CPS 5342/1 was granted by the Department of Mines and Petroleum on 20 December 2012 and allowed for the clearing of 9.9 hectares of native vegetation. An application to amend this permit was received by DMP on 22 May 2013. The application requests an increase in the area authorised to be cleared and permit boundary.</p>

### 3. Assessment of application against clearing principles

#### Comments

PMI has applied to increase the area authorised to be cleared from 9.9 hectares to 18 hectares and increase the permit boundary from 9.9 hectares to approximately 69.7 hectares to reflect the recently defined footprint of the Phil's Creek Haul Road and to provide greater flexibility in the location of borrow pits and stockpile areas.

Rapallo has conducted a Level 2 flora and vegetation survey (Rapallo, 2012a) and Level 1 fauna survey (Rapallo, 2012b) over Miscellaneous Licence 47/560. The vegetation types and fauna habitats present within the increased permit boundary are the same as those described in Clearing Permit Decision Report 5342/2.

The Northern Quoll was detected at two separate locations adjacent to the haul road alignment (Rapallo, 2012b). Rapallo states that the preferred habitat for the Northern Quoll is not present within the application area, however suitable denning habitat does exist in adjacent areas and that clearing should be avoided within 50 metres of rocky outcrops, overhangs and caves (Rapallo, 2012b). PMI has advised that this amendment will bring some areas of the permit boundary to within 50 metres of potential denning habitat; however no clearing will be undertaken in these areas (pers. comm Process Minerals International, 2013).

Four other conservation significant fauna species; Western Pebble-mound Mouse (P4), Australian Bustard (P4), Bush Stone-curlew (P4) and Rainbow Bee-eater (Migratory) has a high likelihood of occurring along the haul road alignment (Rapallo, 2012b). Based on the level of mobility and availability of habitat outside of the application area these species are unlikely to be significantly impacted by the clearing of an additional 8.1 hectares.

There were no Threatened or Priority flora species or Ecological Communities recorded in the amended application area (Rapallo, 2012a, GIS Database).

There are several ephemeral drainage lines that intersect with the application area (GIS Database). PMI has outlined a number of management strategies to minimise the impacts to stream flow and riparian vegetation (Rapallo, 2012c). Potential impacts to riparian vegetation can be minimised by the vegetation management condition that was placed on CPS 5342/1. Based on this the proposed amendment is not likely to significantly impact riparian vegetation.

Current environmental information has been reviewed and the assessment of the clearing principles is consistent with the assessment contained in Clearing Permit Decision Report CPS 5342/2

<b>Methodology</b>	<p>Rapallo (2012a)          Rapallo (2012b)          Rapallo (2012c)          GIS Database:          - Hydrography, linear          - IBRA WA (Regions - Sub Regions)          - Pre-European Vegetation          - Public Drinking Water Source Areas PDWSAs          - Rangeland Land System Mapping          - Threatened and Priority Flora</p>
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## Planning instrument, Native Title, Previous EPA decision or other matter.

### Comments

There is one Native Title Claim (WC2011/006) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

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

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

The amendment was advertised on 3 June 2013 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

- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Rapallo (2012a) Level 2 Flora and Vegetation Survey of Phil's Creek Haul Road for Process Minerals International. Unpublished report for Process Minerals International Pty Ltd dated February 2012.
- Rapallo (2012b) Level 1 Phil's Creek Vertebrate Fauna Survey for Process Minerals International. Unpublished report for Process Minerals International Pty Ltd dated February 2012.
- Rapallo (2012c) Phil's Creek Iron Ore Project Supporting Information for a Native Vegetation Clearing Permit Application Area Permit

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental Protection Act 1986, Western Australia
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI Act</b>	Rights in Water and Irrigation Act 1914, Western Australia
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia
<b>TEC</b>	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.

