



1. Application details

1.1. Permit application details

Permit application No.: 4984/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Atlas Iron Limited

1.3. Property details

Property: Mining Lease 45/1179
Miscellaneous Licence 45/204
Miscellaneous Licence 45/207
Local Government Area: Shire of East Pilbara
Colloquial name: Abydos Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 6 December 2012

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. One Beard vegetation association has been mapped within the application area (GIS Database):

82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and

A Level 2 flora survey was conducted by Woodman Environmental Consulting (Woodman) over the larger Abydos area during 26-30 May 2011, 7-11 July 2008, 24 May-2 June 2011, 28 July-4 August 2011, 16-23 August 2011 and 22 September 2011. There were seven floristic community types recorded within the application area (Woodman, 2012):

FCT 1: Low isolated trees of *Corymbia hamersleyana* over tall sparse shrubland of mixed species including *Acacia tumida* var. *pilbarensis*, *Acacia pyrifolia* var. *pyrifolia* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Corchorus laniflorus* and *Bonamia rosea* over low grassland dominated by *Triodia epactia* and/or *Chrysopogon fallax* on red-brown sandy and clay loam on floodplains and in broad drainage lines;

FCT 2a: Tall open shrubland of mixed species dominated by *Grevillea wickhamii* subsp. *hispidula*, *Acacia tumida* var. *pilbarensis* and *Acacia orthocarpa* over low sparse shrubland of mixed species including *Dampiera candidans*, *Goodenia stobbsiana* and *Corchorus laniflorus* over low hummock grassland dominated by *Triodia epactia* or *Triodia bitextura* on red-brown silty loams over ironstone on hill crest and slopes;

FCT 4: Low isolated trees of *Corymbia hamersleyana* or *Eucalyptus leucophloia* subsp. *leucophloia* over tall sparse shrubland of mixed species including *Acacia inaequilatera*, *Acacia acradenia* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Acacia ptychophylla*, *Acacia spondylophylla*, *Acacia hilliana* and *Dampiera candidans* over low hummock grassland of mixed *Triodia* species dominated by a combination of *Triodia wiseana*, *Triodia brizoides* and *Triodia lanigera* on brown sandy clay loams over ironstone, calcrete or sandstone on hill crests and slopes, and occasionally on undulating plains and low rises;

FCT 5: Low isolated trees of *Corymbia hamersleyana* over tall sparse shrubland of mixed species dominated by *Acacia inaequilatera* and *Acacia acradenia* over low isolated shrubs of mixed species including *Corchorus parviflorus* and *Ptilotus astrolasius* var. *astrolasius* over low hummock grassland of mixed *Triodia* species dominated by *Triodia* aff. *basedowii* and *Triodia wiseana* on brown sandy clay loams over calcrete or ironstone on undulating plains, low rises and low hills;

FCT 6: Low isolated trees of *Eucalyptus leucophloia* subsp. *leucophloia* over tall sparse shrubland of mixed *Acacia* species including *Acacia tumida* var. *pilbarensis* over low sparse shrubland of mixed species including *Acacia ptychophylla* over low hummock grassland dominated by *Triodia brizoides* with *Eriachne mucronata* also common on red to red-brown sandy and clay loams over ironstone on hill slopes, crests and in gorges;

FCT 7: Tall sparse shrubland of mixed species dominated by *Grevillea wickhamii* subsp. *hispidula*, *Acacia*

ancistrocarpa and/or *Acacia acradenia* over low low isolated shrubs of mixed species over low hummock grassland dominated by *Triodia lanigera* or occasionally *Triodia epactia* on red-brown sandy and clay loams, occasionally with ironstone or quartz pebbles, on undulating plains and flats; and

FCT 10: Mid woodland of *Eucalyptus camaldulensis* subsp. *obtusa*, *Eucalyptus vitrix* and *Melaleuca argentea* over tall shrubland of mixed species including *Acacia ampliceps*, *Acacia trachycarpa*, *Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*, *Atalaya hemiglauca*, *Melaleuca glomerata* and *Melaleuca linopylla* over low open grassland and sedgeland of mixed species including *Triodia epactia*, *Triodia longiceps*, *Cenchrus ciliaris* and *Cyperus vaginatus* on red and brown sands, loams and silts in river and major creek channels and gorges.

Clearing Description Atlas Iron Ltd (Atlas Iron) has applied to clear up to 282 hectares of native vegetation within an application area of approximately 480 hectares for the purposes of mineral production (GIS Database). The application area is located approximately 65 kilometres west of Marble Bar (GIS Database).

This project will include two open pits, waste dump, camp, explosive magazine, ROM areas and access roads (Coffey Environments, 2012).

Vegetation Condition Pristine: No obvious signs of disturbance (Keighery, 1994);

to

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

Comment The vegetation condition was assessed by botanists from Woodman (2012).

Clearing permit CPS 4984/1 was granted on 30 August 2012 and was valid from 22 September 2012 to 22 September 2017. Atlas Iron Ltd requested an amendment to the permit on 11 October 2012 to increase the permit boundary from 292 hectares to 480 hectares. This is due to an error in the shape file provided with the original application resulting in a permit area that was highly constrained. The amount of vegetation authorised to clear will remain the same.

3. Assessment of application against clearing principles

Comments

Atlas Iron Ltd has applied to increase the clearing permit boundary from 282 hectares to 480 hectares. The amount of vegetation authorised to clear will remain at 292 hectares.

There is one less floristic community type (FCT) mapped within the amended permit boundary than the previously granted area. This is due to part of the application area that intersected Chinnamon Creek being removed from the permit boundary. FCT 2b is no longer being impacted by the proposed clearing (Coffey Environments, 2012). FCT 10 was considered to be of moderate local significance as it occurs on landforms that are locally uncommon (Woodman, 2012). There has been no increase in impacts to this FCT above those previously assessed in the decision report for CPS 4984/1.

There is one location of the Priority 1 flora species *Pityrodia* sp. Marble Bar located within the amended permit boundary (Woodman, 2012). There were six individuals recorded at this location. This species was recorded from a further 12 locations outside the application area (Woodman, 2012). If this one location was to be impacted by the proposed clearing, the level of impact at a local and regional level would be ranked as low (Woodman, 2012).

There is one less fauna habitat present in the amended permit boundary. In the original permit the Riverine habitat was only present in the western most polygon that was associated with the Chinnamon Creek. This polygon has not been included in the amended permit boundary. There is only a small increase in percentage of the significant ironstone and sandstone gorges and major drainage lines habitats present. The amount of the ironstone and sandstone gorges habitat within the clearing permit boundary has increased from four to ten hectares (Coffey Environments, 2012). There was 119 hectares mapped over the survey area. The amount of major drainage lines habitat has increased from four to eight hectares (Coffey Environments, 2012). There was 110 hectares mapped over the survey area. The amended permit boundary does not include any additional gorges that were recorded during the fauna survey (Bamford Consulting Ecologists, 2009). There is one rock hole present within the amended permit boundary. Rock holes contain a permanent water source and are an important resource to local fauna populations (Bamford Consulting Ecologists, 2009). No significant caves were recorded within the amended permit boundary.

As there is an additional four hectares of ironstone and sandstone gorges habitat within the amended permit boundary, there is potential for increased impacts to Northern Quoll (*Dasyurus hallucatus* - Schedule 1; Endangered) and Pilbara Olive Python (*Liasis olivaceus barroni* - Schedule 1; Vulnerable). This project was assessed as a 'controlled action' by the Department of Sustainability, Environment, Water, Population and Communities under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Approval for the project was given on 19 September 2012. The approval was subject to the implementation of Significant Species Management Plan. Further conditions required the donation of a total of \$450,000 to the Department of Environment and Conservation for weed management, survey work and research projects to contribute to the better protection and long term conservation of EPBC Act listed threatened fauna species in the Pilbara. The implementation of these conditions will minimise and mitigate potential impacts of the clearing on EPBC Act listed threatened fauna species. The proposed amendment is still at variance to Principle (b).

The most significant watercourse within the original permit boundary was Chinnamon Creek. The part of the permit that intersected Chinnamon Creek has been removed from the amended permit area (GIS Database). FCT 2b which was also mapped in this area is no longer within the permit boundary. The proposed clearing is still at variance to Principle (f) and impacts to watercourses may still be managed by the previous watercourse management condition.

Current environmental information has been reviewed and the assessment of the clearing principles is consistent with that in decision report CPS 4984/1.

Methodology Bamford Consulting Ecologists (2009)
Coffey Environments (2012)
Woodman (2012)
GIS Database:
- DEC Tenure
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Public Drinking Water Source Areas (PDWSAs)
- Rainfall, mean Annual
- Rangeland Land System Mapping
- Rivers
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora

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

Comments

There are three native title claims over the area under application (GIS Database). These claims (WC00/5, WC96/61 and WC99/8) have been registered with the Native Title Tribunal on behalf of the claimant group (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 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 project was referred to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) by the applicant on 13 April 2012. On 11 May 2012 the DSEWPaC determined that project was a controlled action under the *EPBC Act 1999* and would be assessed on preliminary information.

The amendment was advertised on 22 October 2012 by the Department of Mines and Petroleum inviting submissions from the public. There was one submission received stating that they did not support the proposed clearing.

Methodology

4. References

- Bamford Consulting Ecologists (2009) Fauna Assessment of the Abydos DSO Project. Unpublished report for Atlas Iron Ltd, dated 2 September 2009.
- Coffey Environments (2012) Native Vegetation Clearing Permit Application: Supporting Information Abydos DSO Project. Unpublished report for Atlas Iron Ltd, dated March 2012.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Woodman (2012) Atlas Iron Limited Abydos Direct Shipping Ore Project Flora and Vegetation Studies. Unpublished report for Atlas Iron Ltd, dated March 2012.

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.

