



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5636/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Exploration Pty Ltd

1.3. Property details

Property: Exploration Licence 47/584
Exploration Licence 47/631
Exploration Licence 47/1943
Local Government Area: Shire of Ashburton
Colloquial name: Juna Downs

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
43		Mechanised clearing.	Mineral exploration.

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 16 January 2014

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

- S1: Low open woodland to scattered low trees of *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* and *Corymbia deserticola* subsp. *deserticola* over tall open shrubland / mallee of *Acacia atkinsiana* and *Eucalyptus gamophylla* over open tussock grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with *Amphipogon sericeus*;
- S2: Scattered low trees of *Corymbia deserticola* subsp. *deserticola* over scattered shrubs of *Acacia atkinsiana*, *Acacia ancistrocarpa* and *Senna artemisioides* subsp. *helmsii* over open tussock grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with *Amphipogon sericeus* and *Triodia epactia*;
- S3: Tall mallee shrubland of *Eucalyptus gamophylla* over scattered mixed shrubs over open tussock grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with *Triodia epactia*, *Paraneurachne muelleri* and *Themeda triandra*;
- P1: Tall shrubland to tall open shrubland of *Acacia aneura*, *Acacia ayersiana*, *Acacia pruinoarpa*, *Acacia aptaneura* and *Acacia incurvaneura* over scattered shrubs of *Eremophila forrestii* subsp. *forrestii* and *Senna artemisioides* subsp. *helmsii* over open hummock grassland of *Triodia melvillei* with *Triodia epactia*;
- P2: Low open woodland of *Acacia aptaneura* with *Acacia aneura* over scattered bunched grasses of *Sporobolus australasicus*, *Enneapogon caeruleus*, *Aristida contorta* and *Enneapogon polyphyllus*;
- P3: Low open woodland to tall shrubland of *Acacia aneura* and *Acacia aptaneura* with *Corymbia hamersleyana* over open tussock grassland of *Triodia epactia*;
- P4: Low open shrubland of *Senna artemisioides* subsp. *oligophylla* with *Sida fibulifera* over scattered tussock grasses of *Chloris pectinata* and *Sporobolus australasicus*;
- D1: Low open forest to low woodland of *Acacia aptaneura* with *Acacia incurvaneura* and *Acacia aneura* over scattered low shrubs of *Ptilotus obovatus* var. *obovatus*, *Eremophila lanceolata* and *Bidens bipinnata* over scattered bunch and tussock grasses of *Aristida contorta*, *Sporobolus australasicus* and *Eulalia aurea*;
- D2: Low woodland to low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over tall shrubland to shrubland of *Acacia atkinsiana*, *Gossypium robinsonii*, *Acacia tenuissima*, *Acacia ancistrocarpa*, *Acacia bivenosa*, *Acacia maitlandii* and *Senna glutinosa* subsp. *glutinosa* over tussock grassland to open tussock grassland of *Themeda triandra* and *Triodia epactia* with *Eriachne mucronata*; and
- D3: Scattered tall shrubs of *Acacia aptaneura* over tall open shrubland of *Vachellia farnesiana* over scattered shrubs of *Senna artemisioides* subsp. *oligophylla* and *Senna sericea* over very open herbland of *Malvastrum americanum* over very open bunch grassland of *Eragrostis xerophila* and *Chloris pectinata* with *Panicum laevinode* and *Eragrostis eriopoda*.

Clearing Description

Juna Downs.
Hamersley Exploration Pty Ltd proposes to increase the clearing permit boundary of CPS 5636/1 from

approximately 778 hectares to approximately 857 hectares. Within the revised permit area, approximately 43 hectares of vegetation will be cleared to facilitate mineral exploration activities. The project area is located approximately 73 kilometres east south-east of Tom Price, in the Shire of Ashburton.

Vegetation Condition

Pristine (Pristine or nearly so, no obvious signs of disturbance):

to

Good (Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or the ability to regenerate it).

Comment

Vegetation condition appears to have been recorded using the scale created by Trudgen (1988). These vegetation condition ratings have been converted to the scale implemented by Keighery (1994).

3. Assessment of application against clearing principles

Comments

Hamersley Exploration Pty Ltd has applied to increase the clearing permit boundary of CPS 5636/1 from approximately 778 hectares to approximately 857 hectares (Rio Tinto, 2013a). The proposed increase to the permit boundary is accompanied by a proposed increase in clearing of 8 hectares, thereby increasing the amount of clearing authorised under this permit from 35 to 43 hectares. Within the proposed amended permit area, vegetation clearing will be undertaken to facilitate mineral exploration activities.

During the flora and vegetation survey of the additional area proposed to be incorporated into the permit boundary (hereafter known as the study area), ten vegetation associations were identified (Rio Tinto, 2013a). None of these vegetation associations were considered to be Threatened Ecological Communities or Priority Ecological Communities and all of the vegetation associations identified within the study area are considered to be widely distributed throughout the Hamersley subregion (Rio Tinto, 2013a). Vegetation condition within the study area ranged from Pristine to Good (Rio Tinto, 2013a).

A total of 205 flora taxa from 100 genera, belonging to 35 families were recorded from the study area (Rio Tinto, 2013a). No threatened flora taxa were recorded in the study area (Rio Tinto, 2013a). The three threatened flora taxa known to occur in the Pilbara region; *Thryptomene wittweri*, *Lepidium catapycnon* and *Aluta quadrata* are unlikely to occur in the study area due to the absence of suitable habitat for these species in the study area (Rio Tinto, 2013a; Western Australian Herbarium, 2013).

One Priority listed flora taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (Priority 3) was recorded from the study area (Rio Tinto, 2013a). During the assessment of CPS 5636/1, Rio Tinto provided evidence demonstrating that *Triodia* sp. Mt Ella (M.E. Trudgen 12739) has been recorded 285 times between the south eastern corner of Karijini National Park and 30 kilometres east of Newman, a range of approximately 160 kilometres (Rio Tinto, 2013b). Whilst not all of the recorded populations of *Triodia* sp. Mt Ella (M.E. Trudgen 12739) included the size of the population in terms of the number of individuals, the average recorded population size was approximately 46 individuals (Rio Tinto, 2013b). As these recordings suggest that this species enjoys a widespread distribution throughout the Pilbara region, the clearing activities are not expected to adversely impact this species conservation status or distribution.

The desktop search undertaken by the proponent determined that 43 Priority listed flora species have been recorded within a 40 kilometre radius of the study area (Rio Tinto, 2013a). Of these, eight Priority listed flora species (*Aristida jerichoensis* var. *subspinulifera* (Priority 1), *Brachyscome* sp. Wanna Munna Flats (S. van Leeuwen 4662) (Priority 1), *Brunonia* sp. Long hairs (D.E. Symon 2440) (Priority 1), *Rhodanthe ascendens* (Priority 1), *Vittadinia* sp. Coondewanna Flats (Priority 1), *Aristida lazaridis* (Priority 2), *Rostellularia ascendens* var. *latifolia* (Priority 3) and *Goodenia nuda* (Priority 4)) may occur on the habitat types found within the study area (Rio Tinto, 2013a).

Aristida jerichoensis var. *subspinulifera*, *Brunonia* sp. Long hairs (D.E. Symon 2440), *Brachyscome* sp. Wanna Munna Flats (S. van Leeuwen 4662), *Rostellularia ascendens* var. *latifolia* and *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) have been recorded up to 4.5 kilometres from the study area (Rio Tinto, 2013a). *Rhodanthe ascendens*, *Goodenia nuda* and *Aristida lazaridis* were recorded approximately 20 kilometres, 32 kilometres and 28 kilometres to the south east of the study area respectively (Rio Tinto, 2013a). When the small area of proposed additional clearing is considered alongside the knowledge that no occurrences of these species were recorded within the study area, it is considered unlikely the proposed activities will adversely impact the conservation status or distribution of these species.

Seven weed species were recorded during the current survey; *Bidens bipinnata*, *Cenchrus ciliaris*, *Citrullus lanatus*, *Cucumis myriocarpus*, *Malvastrum americanum*, *Portulaca oleracea* and *Vachellia farnesiana* (Rio Tinto, 2013a). None of these weeds are listed as Declared Pests under Section 22 of the *Biosecurity and Agriculture Management Act 2007* (Department of Agriculture and Food, 2013). However, *Bidens bipinnata*, *Cenchrus ciliaris*, *Malvastrum americanum* and *Vachellia farnesiana* are considered by Department of Parks and Wildlife to be environmental weeds with a ranking of 'high' in the Pilbara region (Rio Tinto, 2013a). A weed management condition has been placed on the permit to reduce the likelihood clearing activities will adversely impact the regions biodiversity.

Two broad fauna habitats exist in the application area; rocky lower and undulating slopes and mulga plains (Rio Tinto, 2013a). Both habitats are widely represented in the surrounding region (Rio Tinto, 2013a). No significant fauna habitats such as caves, waterholes, significant drainage features, large tree hollows or termite mounds were observed within the study area (Rio Tinto, 2013a).

One conservation significant fauna species was recorded in the study area; the Western Pebble-mound Mouse (*Pseudomys chapmani*) (Priority 4) (Rio Tinto, 2013a). Thirty eight Western Pebble-mound Mouse mounds were recorded within the study area. A review of the Nature Map database determined that this species is not confined to the disturbance area as occurrences of this species have been recorded from large expanses of the Pilbara region (Department of Environment and Conservation, 2007). The proposed activities are unlikely to result in adverse impacts to the conservation status or distribution of this species due to its apparent widespread occurrence in the Pilbara region and the small area of proposed additional clearing. In addition, the fauna habitats found in the project area are widespread in nature and therefore it is unlikely this area constitutes significant habitat for this species. Furthermore, the proponent has stated that environmental restriction zones will be placed around mounds considered active, possibly active and recently active and that all efforts will be made to avoid these locations (Rio Tinto, 2013b).

A desktop search conducted by the proponent determined that 16 conservation significant fauna species may occur within the study area: Northern Quoll (*Dasyurus hallucatus*) (Schedule 1, Endangered), Northern Marsupial Mole (*Notoryctes caurinus*) (Schedule 1, Endangered), Night Parrot (*Pezoporus occidentalis*) (Schedule 1, Endangered), Greater Bilby (*Macrotis lagotis*) (Schedule 1, Vulnerable), Pilbara Olive Python (*Liasis olivaceus barroni*) (Schedule 1, Vulnerable), Pilbara Orange Leaf-nosed Bat (*Rhinonicteris aurantia*) (Schedule 1, Vulnerable), Australian Bustard (*Ardeotis australis*) (Priority 4), Bush Stone-curlew (*Burhinus grallarius*) (Priority 4), Grey Falcon (*Falco hypoleucos*) (Schedule 1, Vulnerable), Short-tailed Mouse (*Leggadina lakedownensis*) (Priority 4), Ghost Bat (*Macroderma gigas*) (Priority 4), Fork-tailed Swift (*Apus pacificus*) (Schedule 3, Migratory), Great Egret (*Ardea alba*) (Migratory), Cattle Egret (*Ardea ibis*) (Schedule 3, Migratory), Rainbow Bee-eater (*Merops ornatus*) (Schedule 3, Migratory) and Oriental Plover (*Charadrius veredus*) (Schedule 3, Migratory) (Rio Tinto, 2013a).

The habitats of the study area do not constitute suitable habitat for the Northern Quoll, Northern Marsupial Mole, Greater Bilby, Pilbara Orange Leaf-nosed Bat and Ghost Bat (Rio Tinto, 2013a). While species of conservation significant fauna could utilise the habitats of the study area, the fauna habitats in the study area are widespread in nature (Rio Tinto, 2013a) and are unlikely to constitute significant habitat for conservation significant fauna species. In addition, the conservation significant fauna species listed above have been recorded from locations outside of the study area and therefore none of the above conservation significant fauna species are confined to this area (Department of Environment and Conservation, 2007). Consequently, the proposed activities are unlikely to result in adverse impacts to the conservation status and distribution of any conservation significant fauna species.

There are no permanent watercourses or wetlands or Public Drinking Water Source Areas (PDWSA) within the study area. Therefore, no additional impacts to surface water flows or surface water and groundwater quality beyond those evaluated during the assessment of CPS 5636/1 are expected to result from the clearing activities.

Neither the proposed incorporation of additional area into the permit boundary or the 8 hectare increase to the permits clearing limit are expected to cause environmental impacts beyond those evaluated during the assessment of CPS 5636/1. Based on current environmental information, the assessment of the clearing principles is consistent with the assessment in the clearing permit decision report for CPS 5636/1.

Methodology Department of Environment and Conservation (2007)
Department of Agriculture and Food (2013)
Rio Tinto (2013a)
Rio Tinto (2013b)
Western Australian Herbarium (2013)

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 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 registered sites of Aboriginal heritage significance in the vicinity of the application area. 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 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 amendment application was advertised on 18 November 2013 by DMP inviting submissions from interested parties. No submissions have been received regarding this application.

Methodology

GIS Database

-Aboriginal Sites of Significance

-Native Title Claims – Registered with the NNTT

4. References

Department of Agriculture and Food (2013) Declared Pest (s22). Prepared by the Western Australian Department of Agriculture and Food.

Department of Environment and Conservation (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed December 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.

Rio Tinto (2013a) Flora and Vegetation Survey at Juna Downs South Detritals: Native Vegetation Clearing Permit Supporting Report. Prepared by Rio Tinto Iron Ore.

Rio Tinto (2013b) Additional application information provided by the proponent. Received 17 July 2013.

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.

Western Australian Herbarium (2013) Florabase - The Western Australian Flora. Department of Parks and Wildlife. <<http://florabase.dpaw.wa.gov.au/>> Accessed December 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.