



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4137/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

1.3. Property details

Property: *Iron Ore (Hamersley Iron) Agreement Act 1963*, Special Lease for Mining Operations 3116/3469; Document J 761012 EL, Lot 24 on Deposited Plan 241372
Local Government Area: Shire of Roebourne
Colloquial name: Parker Point Land Farm

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Mechanical Removal	Construction of a Land Farm

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 3 February 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database).	Hamersley Iron Pty Ltd has applied to clear up to 2 hectares of native vegetation for the purpose of construction of a land farm. The application area consists of two polygons. The larger polygon will be used as the land farm and the smaller polygon, situated several metres north-west of the larger polygon, will have an associated rock drain constructed on it to direct water run-off away from the works.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994); To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The vegetation condition was assessed by a botanist from Rio Tinto. The vegetation conditions were described using a scale based on Trudgen (1988) and have been converted to the corresponding conditions from the Keighery (1994) scale.
117: Hummock grasslands, grass steppe; soft spinifex.			
Rio Tinto Iron Ore (RTIO) conducted a flora and vegetation survey over the application area on 5 November 2010. Only one vegetation type was identified, with most of the application area mapped as heavily disturbed (RTIO, 2010).	The application area is situated approximately 2 kilometres east of Dampier, in the vicinity of the Rio Tinto Parker Point port facility.		
AbApHIApGpTeTw: <i>Acacia bivenosa</i> , <i>Acacia pyrifolia</i> , <i>Hakea lorea</i> subsp. <i>lorea</i> scattered tall shrubs over <i>Acacia pyrifolia</i> , <i>Grevillea pyramidalis</i> scattered shrubs over <i>Triodia epactia</i> , <i>Triodia wiseana</i> hummock grassland.	Vegetation will be cleared using a dozer with the blade down. The vegetation will be stockpiled and used in rehabilitation.		

3. Assessment of application against clearing principles

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

Comments

Proposal is not likely to be at variance to this Principle

The application area occurs within the Roebourne subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is generally described as quaternary alluvial and older colluvial coastal and sub-coastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, *Sporobolus* and mangal occur on marine alluvial flats and river deltas. Resistant linear ranges of basalts occur across the coastal plains, with minor exposures of granite (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation association 117, which is common within the Pilbara region and has approximately 94% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A flora and vegetation survey conducted in November 2010 recorded 45 native vascular plant taxa from 35 genera belonging to 20 families (RTIO, 2010). Native plant richness within the application area was low and this reflects the heavily disturbed nature of the area as well as the dry conditions leading up to the flora survey (RTIO, 2010). The genera and families that were represented in the survey are considered characteristic of the land system (RTIO, 2010).

No Declared Rare Flora, Priority Flora, Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) have been identified within the application area (RTIO, 2010; GIS Database).

Four introduced flora species were recorded within the application area (RTIO, 2010). Buffel Grass (*Cenchrus ciliaris*), Couch (*Cynodon dactylon*), Coffee Senna (*Senna occidentalis*) and Kapok Bush (*Aerva javanica*) were all found in the heavily disturbed areas, with Buffel Grass also recorded throughout the application area (RTIO, 2010). The application area is currently used as a green waste recycling area so it is likely that other weed species occur in the area that were not detected due to the dry survey conditions (RTIO, 2010). The presence of these weed species lowers the biodiversity value of the application area. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitat within the application area is limited to scattered *Acacia* shrubs over spinifex hummock grassland vegetation along the north western boundary of the site (RTIO, 2010). The fauna habitat present is found in similar or better condition both in the local area and sub-regionally (RTIO, 2010).

The application area has a history of disturbance with most of the area currently being used as a green waste recycling area. The majority of the application area (approximately 79%) has been mapped as heavily disturbed with little to no native vegetation and scattered industrial refuse, old concrete slabs and garden waste stockpiles are found in the area (RTIO, 2010). Considering the large amount of disturbance, the application area is not likely to comprise a greater diversity than similar areas either locally or at a bioregional scale.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology CALM (2002)
RTIO (2010)
Shepherd (2009)
GIS Database:
- Declared Rare and Priority Flora List
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Threatened Ecological Sites Buffered

(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.

Comments **Proposal is not likely to be at variance to this Principle**
No targeted fauna surveys were undertaken within the application area. A desktop search was conducted and general observations of the fauna habitat within the application area were made during the November 2010 field survey (RTIO, 2010).

The fauna habitat within the application area is limited to scattered *Acacia* shrubs over spinifex hummock grassland vegetation along the north western boundary of the site (RTIO, 2010). The majority of the application area, approximately 79%, is described as heavily disturbed with little to no native vegetation cover (RTIO, 2010). The vegetation within the application area would be utilised by a variety of fauna and may provide marginal foraging habitat for several conservation significant fauna species but is unlikely to provide core habitat for any fauna species (RTIO, 2010). The fauna habitat present is found in similar or better condition both in the local area and sub-regionally (RTIO, 2010). No significant habitat features such as caves, waterholes, significant creeklines, gorges, large tree hollows or termite mounds were identified within the application area (RTIO, 2010).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology RTIO (2010)

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

Comments **Proposal is not likely to be at variance to this Principle**
According to available databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database).

A flora and vegetation survey of the application area was conducted by a Rio Tinto botanist on 5 November 2010. No DRF species were recorded within the application area (RTIO, 2010).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology RTIO (2010)
GIS Database:
- Declared Rare and Priority Flora List

(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.

Comments Proposal is not likely to be at variance to this Principle

A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC, *Themeda* grasslands on cracking clays, is located 180 kilometres south-east of the application area (GIS Database).

No TECs were identified during the flora and vegetation survey by the Rio Tinto botanist (RTIO, 2010).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology RTIO (2010)
GIS Database:
- Threatened Ecological Sites Buffered

(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.

Comments Proposal is not at variance to this Principle

The clearing application area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.9% of the pre-European vegetation remains (see table) (Shepherd, 2009; GIS Database). This gives it a conservation status of "Least Concern" according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been mapped as Beard vegetation association 117 "Hummock grasslands, grass steppe; soft spinifex" (GIS Database). According to Shepherd (2009) approximately 94.8% of Beard vegetation association 117 remains at the state level and approximately 81.7% remains at a bioregion level. This vegetation association would be given a conservation status of "Least Concern" at both a state and bioregional level (Department of Natural Resources and Environment, 2002).

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

	Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Pilbara	17,804,193	17,785,000	~99.9	Least Concern	6.3
Beard Veg Assoc. – State					
117	919,161	871,011	~94.8	Least Concern	12.9
Beard Veg Assoc. – Bioregion					
117	74,557	60,912	~81.7	Least Concern	12.0

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

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

Comments Proposal is not likely to be at variance to this Principle

There are no permanent or ephemeral watercourses, wetlands, creeklines, claypans, rockpiles or saline flats within the application area (RTIO, 2010; GIS Database). The nearest watercourses are minor non-perennial watercourses approximately 120 m from the application area (GIS Database). Non-perennial creeklines are common in the Pilbara region and the proposed clearing is unlikely to have a significant impact on any watercourse or wetland.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology RTIO (2010)
GIS Database:
- Hydrography, Linear

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

Comments Proposal is not likely to be at variance to this Principle

According to available datasets the application area is within the Granitic Land System (GIS Database). The Granitic Land System is characterised by rugged granitic hills supporting shrubby hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). The land system comprises of five land units and the application area is part of the "lower slopes" land unit (RTIO, 2010). The very gently to gently inclined rocky slopes of this land unit are abundant with pebbles, cobbles, stones and outcrops of granitic rocks (Van Vreeswyk et al., 2004). The land system is not susceptible to erosion (Van Vreeswyk et al., 2004).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology RTIO (2010)
Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

(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.

Comments Proposal is not likely to be at variance to this Principle

The proposed clearing is not located within a conservation reserve (GIS Database). The nearest known conservation areas are on islands off the Western Australian coast (GIS Database) and the application area is unlikely to provide any ecological linkage to these. The nearest mainland conservation area is Millstream Chichester National Park, located approximately 65 kilometres south-east of the application area (GIS Database). At this distance the proposed clearing is unlikely to impact on the environmental values of the National Park.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC Tenure
- Register of National Estate (Status)

(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.

Comments Proposal is not likely to be at variance to this Principle

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA). The nearest PDWSA is Roebourne Water Reserve, which is approximately 45 kilometres east-south-east of the application area (GIS Database). The small area of the proposed clearing is unlikely to cause deterioration in the quality of underground water.

The groundwater salinity within the application area is approximately 1,000 - 3,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database). Given the size of the area to be cleared (2 hectares) compared to the size of the Pilbara Groundwater Province (5,557,665 hectares) (GIS Database), the proposed clearing is not likely to cause salinity levels to alter significantly.

There are no creeklines, wetlands or watercourses within the application area (GIS Database). There are ephemeral drainage lines surrounding the application area but these would only flow for short periods following heavy rainfall. The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Groundwater Provinces
- Groundwater Salinity, Statewide
- Hydrography, Linear
- Public Drinking Water Source Areas

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

Comments **Proposal is not likely to be at variance to this Principle**

The application area experiences variable annual rainfall with most precipitation occurring during the summer cyclone season (CALM, 2002). The average annual rainfall is 248.2 mm, recorded from the weather station at nearby Dampier Salt (BOM, 2011). Local flooding occurs after large seasonal rainfall events, however, clearing within the application area is not likely to exacerbate or increase the incidence or intensity of flooding (RTIO, 2010).

The application area is located within the Coastal catchment area of the Port Hedland Coast basin (GIS Database). Given the size of the area to be cleared (2 hectares) in relation to the size of the catchment area (744,301 hectares), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology BOM (2011)
CALM (2002)
RTIO (2010)
GIS Database:
- Hydrographic Catchments - Catchments

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

Comments

There is one Native Title Claim (WC99/14) 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 numerous registered Aboriginal Sites of Significance in the vicinity of 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 clearing permit application was advertised on 3 January 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Determined

4. References

- BOM (2011) Bureau of Meteorology Website - Climate Statistics for Australian Locations, Summary Statistics DAMPIER SALT. <http://www.bom.gov.au/> (Accessed 5 January 2011).
- Department of Conservation and Land Management (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- RTIO (2010) Botanical Survey of the Proposed Parker Point Land Farm Construction, Native Vegetation Clearing Permit Supporting Report. Unpublished Report Prepared by Rio Tinto Iron Ore, December 2010.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- 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.

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.

