



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3742/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Hammersley Iron Pty Ltd**

### 1.3. Property details

Property: *Iron Ore (Hammersley Range) Agreement Act 1963,*  
Mineral Lease 4SA (AML (70/4))  
Local Government Area: Shire of Ashburton  
Colloquial name: Tom Price 220kv Substation Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	220kv Substation and Associated Activities

## 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; Shepherd, 2007).	Hammersley Iron Pty Ltd has applied to clear up to 5 hectares of native vegetation within an area of approximately 15.5 hectares for the purpose of constructing a 220kv substation and associated activities. The application area is located at the Tom Price mine site, approximately 4.5 kilometres south of Tom Price.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).  To	Vegetation descriptions were derived from descriptions by Biota Environmental Sciences (Biota, 2008).
567: Hummock grasslands, low tree steppe; mulga & kanji over soft spinifex & <i>Triodia Basedowii</i> .	Clearing will be carried out by a dozer, blade down, and vegetation will be stockpiled and used in rehabilitation.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	

The application area was surveyed by Biota Environmental Sciences in September 2008 (Biota, 2008). Three vegetation types have been identified as occurring within the application area (Biota, 2008). These are:

**Vegetation of Stony Undulating Plains:** *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia bivenosa* open shrubland to tall open shrubland over *Triodia wiseana* hummock grassland;

**Vegetation of Broad Drainage Areas:** *Acacia aneura*, *A. pruinocarpa* low open forest over *Rhagodia eremaea* shrubland over *Cenchrus ciliaris* tussock grassland; and

**Disturbed Areas:** mostly cleared of native vegetation.

### **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 is located within the Hamersley sub-region of the Pilbara Interim Biogeographic Regionalisation of Australia bioregion (GIS Database). The Hamersley subregion is described by Kendrick (2001) as being rich in *Acacia*, *Triodia*, *Ptilotus* and *Sida* species.

Numerous weed species have been identified within the application area (Biota, 2008). The presence of introduced weed species lowers the biodiversity value of the proposed clearing area (CALM, 1999). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. The risk of spreading weed species can be mitigated by imposing a condition for the purpose of weed management.

A flora and vegetation survey of the application area was undertaken by Biota (2008) Environmental Sciences in September 2008. This survey identified a total of 92 vascular plant taxa from 46 genera, belonging to 26 families (Biota, 2008). The dominant plant groups and the suite of species recorded were typical for stony upper plains and drainage floor habitats located within this area of the Hamersley sub-region (Biota, 2008). The total number of species recorded within the study area is within the expected range for a study area of this size in the locality, and is not considered to represent high species richness (Biota, 2008). No Declared Rare Flora or Priority Flora were identified within the application area (Biota, 2008).

The application area has not been subject to a systematic fauna survey, however fauna habitats were assessed on-site by a botanist with zoological experience and subsequently confirmed with Biota zoologists (Biota, 2008). Databases maintained by the Western Australian Museum and the Department of Environment and Conservation were also searched for records of Schedule and Priority Fauna encompassing an area of a 50 kilometre radius around Tom Price (Biota, 2008). Primary habitats identified within the application area are widespread and abundant in the Tom Price locality (Biota, 2008). While some Schedule or Priority Fauna species may utilise these habitats, neither the landforms nor vegetation types represent 'core habitat' for any of these species of conservation significance (Biota, 2008).

Evidence of historical disturbance is present within the study area, as witnessed by the assessing officer on a site visit on 3 December 2010. This disturbance is most likely a result of the proximity of the application area to Tom Price mine site and the man-made dam located just outside the application area.

The landforms, vegetation and habitat types occurring within the application area are all well represented within the Hamersley subregion (Biota, 2008). The clearing of up to 5 hectares of native vegetation, within an area that has been disturbed by historical and current mining activities, is unlikely to have a significant impact upon biodiversity within the region.

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

##### **Methodology**

Biota (2008)  
CALM (1999)  
Kendrick (2001)  
GIS Database:  
-IBRA WA (Regions - Sub-Regions)

#### **(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**

The application area has not been subject to a systematic fauna survey, however fauna habitats were assessed on-site by a botanist with zoological experience and subsequently confirmed with Biota zoologists (Biota, 2008). Two habitat types have been identified within the application area by Biota (2008). These are:

- Eucalypt low woodland over tall open shrubland to open shrubland of mixed *Acacia* spp. over *Triodia wiseana* hummock grassland;
- *Acacia aneura*, *A. pruinocarpa* low open forest over *Rhagodia eremaea* open shrubland.

The primary fauna habitats present within the application area are widespread and abundant in the Tom Price locality. While some Schedule of Priority Fauna species may utilise these habitats, neither the landforms nor vegetation types represent core habitat for any conservation significant species (Biota, 2008).

The assessing officer conducted a site visit on 3 June 2010 and noted the degraded nature of the application area, as well as the lack of suitable fauna habitats present within the application area.

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

**Methodology** Biota (2008)

**(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 GIS databases there are no known records of Declared Rare Flora (DRF) or Priority Flora within the application area (GIS database). One population of *Lepidium catapycnon* has been recorded approximately 2 kilometres south of the application area (GIS Database).

Numerous vegetation surveys have been undertaken within the study area, and it has been noted that suitable habitat for *Lepidium catapycnon* (stony plains and hills) occurs within the application area (Biota, 2008). However, as *L. catapycnon* is a relatively robust low shrub which is distinctive (even when dead) from the robust "zigzag" stems, it is likely that the survey botanists would have observed this species had it been present (Biota, 2008).

No Priority Flora were identified within the application area (Biota, 2008). Suitable habitat for *Rostellularia ascendens* var. *latifolia* (Priority 3) has been identified within the application area, but is considered unlikely to occur by Biota (2008).

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

**Methodology** Biota (2008)

GIS Database:

-Declared Rare and Priority 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.**

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

A search of available databases reveals that there are no known Threatened Ecological Communities (TEC's) or Priority Ecological Communities (PEC's) within the application area (GIS Database). The nearest known PEC is located approximately 50 kilometres east of the application area (GIS Database).

None of the vegetation types identified by Biota (2008) are TEC's or ecological communities at risk.

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

**Methodology** Biota (2008)

GIS Database:

-Threatened Ecological Sites

**(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 application area falls within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2007) reports that approximately 100% of the pre-European vegetation still exists within this bioregion (see table below). The vegetation within the application area is recorded as the following Beard Vegetation Association (Shepherd, 2007):

- **Beard Vegetation Association 567:** hummock grasslands, shrub steppe; mulga and kanji over soft spinifex and *Triodia basedowii*.

According to Shepherd (2007) approximately 100% of this vegetation association remains within the state and bioregion (see table below).

Therefore, the vegetation within the application areas is not a significant remnant of native vegetation within an area that has been already cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,188	17,794,647	~100	Least Concern	~6.3
Beard vegetation associations - State					
567	777,507	777,507	~100	Least Concern	~22.3
Beard vegetation associations - Bioregion					
567	776,824	776,824	~100	Least Concern	~22.4

\* Shepherd (2007)

\*\* 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 (2007)  
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 may be at variance to this Principle**

According to available databases there are two ephemeral watercourses within the application area (GIS Database). Based on vegetation descriptions provided by Biota (2008), as well as observations made by the assessing officer during a site visit on 3 June 2010, the ephemeral watercourses within the application area appear to have been highly degraded and modified. The drainage landforms within the application area are substantially degraded through infestations of Buffel Grass (*Cenchrus ciliaris*) (Biota, 2010).

Based on the above, the proposed clearing may be at variance to this Principle.

Based on the degraded and modified nature of the ephemeral watercourses within the application area, the further clearing of 5 hectares of native vegetation is unlikely to have a significant impact on any watercourse or wetland.

**Methodology** Biota (2008)  
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**

The application area has been mapped as occurring within the Platform Land System (GIS Database).

The Platform Land System is described by Van Vreeswyk et al. (2004) as consisting of dissected slopes and raised plains supporting hard spinifex. Van Vreeswyk et al. (2004) report that this land system is not susceptible to erosion.

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

**Methodology** 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 any conservation areas (GIS Database). The nearest Department

of Environment and Conservation managed land is the Karijini National Park located approximately 12 kilometres east of the application area (GIS Database).

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

**Methodology** GIS Database:  
-DEC Tenure

**(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 there are two ephemeral drainage lines within the application area (GIS Database). Vegetation descriptions provided by Biota (2008) and observations made by the assessing officer on a site visit on 3 June 2010, indicate that these drainage lines are highly modified. Based on the degraded vegetation and modified nature of drainage within the application areas, the further clearing of 5 hectares of native vegetation is unlikely to have any further impacts on surface or groundwater quality or groundwater quantity.

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

**Methodology** Biota (2008)  
GIS Database:  
-Hydrography, Linear

**(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**

According to available databases there are two ephemeral drainage lines within the application area (GIS Database). Vegetation descriptions provided by Biota (2008) and observations made by the assessing officer on a site visit on 3 June 2010, indicate that these drainage lines are highly modified.

Natural flood events occur in the Pilbara between December and March, following cyclonic activity (ANRA, 2007). Based on the modified nature of drainage within the application area, the further clearing of 5 hectares of native vegetation is unlikely to increase the incidence or intensity of flood events.

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

**Methodology** ANRA (2007)  
Biota (2008)  
GIS Database:  
-Hydrography, Linear

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

**Comments**

There is one Native Title Claim (WC97/089) 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 tenement 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 areas (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 by the Department of Mines and Petroleum on 24 May 2010 inviting submissions from the public. There were no submissions received.

**Methodology** GIS Database:  
-Aboriginal Sites of Significance  
-Native Title Claims

#### **4. Assessor's comments**

##### **Comment**

The proposal has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and the proposed clearing may be at variance to Principle (f), is not likely to be at variance to Principles (a), (b), (c), (d), (g), (h), (i), and (j), and is not at variance to Principle (e).

#### **5. References**

- ANRA (2007) Australian Natural Resources Atlas: Rangelands Overview; Pilbara. Available online from:  
<http://www.anra.gov.au/topics/rangelands/overview/wa/ibra-pil.html> Last accessed 28 June 2010.
- Biota (2008) Tom Price Infrastructure Development Native Vegetation Clearing Permit Report. Unpublished Report. Biota Environmental Sciences, November 2008.
- CALM (1999) Environmental Weed Strategy for Western Australia. Department of Conservation and Land Management, Perth, Western Australia.
- 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.
- Kendrick, P. (2001) Pilbara (PIL3 - Hamersley subregion). In A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, pp568-580.
- Shepherd, D.P. (2007) 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.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

#### **6. Glossary**

##### **Acronyms:**

<b>BoM</b>	Bureau of Meteorology, Australian Government.
<b>CALM</b>	Department of Conservation and Land Management, Western Australia.
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia.
<b>DA</b>	Department of Agriculture, Western Australia.
<b>DEC</b>	Department of Environment and Conservation
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DoE), 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, Western Australia.
<b>DoIR</b>	Department of Industry and Resources, Western Australia.
<b>DOLA</b>	Department of Land Administration, Western Australia.
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environment 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>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</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>TECs</b>	Threatened Ecological Communities.

##### **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	<b>Priority Two - Poorly Known taxa:</b> 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	<b>Priority Three - Poorly Known taxa:</b> 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	<b>Priority Four – Rare taxa:</b> 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	<b>Declared Rare Flora – Extant taxa</b> (= 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	<b>Declared Rare Flora - Presumed Extinct taxa:</b> 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	<b>Schedule 1 – Fauna that is rare or likely to become extinct:</b> being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
Schedule 2	<b>Schedule 2 – Fauna that is presumed to be extinct:</b> being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
Schedule 3	<b>Schedule 3 – Birds protected under an international agreement:</b> 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	<b>Schedule 4 – Other specially protected fauna:</b> 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	<b>Priority One: Taxa with few, poorly known populations on threatened lands:</b> 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	<b>Priority Two: Taxa with few, poorly known populations on conservation lands:</b> 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	<b>Priority Three: Taxa with several, poorly known populations, some on conservation lands:</b> 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	<b>Priority Four: Taxa in need of monitoring:</b> 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	<b>Priority Five: Taxa in need of monitoring:</b> 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	<b>Extinct:</b> A native species for which there is no reasonable doubt that the last member of the species has died.
EX(W)	<b>Extinct in the wild:</b> A native species which: <ul style="list-style-type: none"> <li>(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or</li> <li>(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.</li> </ul>
CR	<b>Critically Endangered:</b> 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	<b>Endangered:</b> A native species which: <ul style="list-style-type: none"> <li>(a) is not critically endangered; and</li> </ul>

- (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.