



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5697/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

### 1.3. Property details

Property: Iron Ore (Hamersley Range) Agreement Act 1963 – Mineral Lease 4SA (AML/70/4)  
Local Government Area: Shire of Ashburton  
Colloquial name: Caliwingina Creek Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10		Mechanical Removal	Mineral Exploration and Hydrogeological Investigations

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 30 October 2014

## 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 for the entirety of Western Australia. One Beard vegetation association has been mapped within the application area (GIS Database):  82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> .	Caliwingina Creek Project. Hamersley Iron Pty Ltd proposes to clear up to 10 hectares of native vegetation within a boundary of approximately 151 hectares, for the purpose of mineral exploration activities and hydrogeological investigations. The project is located approximately 88 kilometres north northwest of Tom Price, within the Shire of Ashburton.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).  To  Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).	Vegetation condition assessed using aerial photographs of the application area.  Clearing Permit CPS 5697/1 was granted by the Department of Mines and Petroleum (DMP) on 5 September 2013 and authorised the clearing of up to 3.5 hectares within an area of approximately 8.1 hectares.

## 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**

On 8 August 2014, Hamersley Iron Pty Ltd (Hamersley Iron) applied to increase the area permitted to clear on Clearing Permit CPS 5697/1 from 3.5 hectares to 10 hectares. The permit boundary area increased from 8.4 hectares to 151 hectares.

The amended application area is situated within the Hamersley subregion (PIL03) of the Pilbara bioregion as described in the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This subregion is characterised by mountainous areas of Proterozoic sedimentary ranges and plateaux, dissected by gorges (Department of Conservation and Land Management, 2002). Mulga low woodland occurs over bunch grasses on fine textured soils in valley floors, with *Eucalyptus leucophloia* occurring over *Triodia brizoides* on the skeletal soils of the ranges (Department of Conservation and Land Management, 2002).

No targeted fauna surveys have been undertaken for the application area (Rio Tinto, 2010). Rio Tinto completed a desktop review and field survey of the Caliwingina Project Area, an 871.3 hectare exploration prospect which includes the application area, in 2009. This assessment determined that the fauna habitats present within the application area were widespread in nature (Rio Tinto, 2010). Whilst conservation significant fauna species could utilise the application area, it is unlikely the application area supports a high level of faunal diversity due to the widespread nature of the habitat types within the application area.

No Threatened Ecological Communities or Priority Ecological Communities were recorded in the surveyed area (Rio Tinto, 2010). A total of 306 native vascular plant taxa from 142 genera belonging to 50 families were recorded within the survey area (Rio Tinto, 2010). Acacia was the most common genus within the survey area with other species rich genera including *Ptilotus*, *Sida*, *Senna* and *Goodenia* (Rio Tinto, 2010). The suite of flora species recorded within the survey area was considered typical of the Pilbara region (Rio Tinto, 2010). No Threatened flora species were recorded within the survey area (Rio Tinto, 2010). Two Priority listed flora species; *Rhynchosia bungarensis* (Priority 4) and *Goodenia nuda* (Priority 4) were recorded within the survey area (Rio Tinto, 2010). No occurrences of *Rhynchosia bungarensis* and *Goodenia nuda* were recorded within the application area (Rio Tinto, 2010). Both species enjoy widespread distributions within the Pilbara region and it is unlikely the clearing of a 10 hectare area will adversely impact the conservation status or distribution of either species (Western Australian Herbarium, 2014).

Ten species of weed were recorded in the survey area; Ruby Dock (*Acetosa vesicaria*), Mexican Poppy (*Argemone ochroleuca*), Buffel Grass (*Cenchrus ciliaris*), Pie Melon (*Citrullus lanatus*), Couch Grass (*Cynodon dactylon*), Prickly Lettuce (*Lactuca serriola*), Spiked Malvastrum (*Malvastrum americanum*), Stinking Passion Flower (*Passiflora foetida*), Whorled Pigeon Grass (*Setaria verticillata*) and Mimosa Bush (*Vachellia farnesiana*) (Rio Tinto, 2010). No occurrences of weed species were recorded within the application area (Rio Tinto, 2010). Care must be taken to ensure clearing activities do not 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.

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

**Methodology** Department of Conservation and Land Management (2002)  
Rio Tinto (2010)  
Western Australian Herbarium (2014)  
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 following broad fauna habitat types occur in the survey area; Plains of *Corymbia hamersleyana* woodland over Acacia shrublands over Triodia hummock grasslands, Stony slopes of *Eucalyptus leucophloia* over Acacia scrubs over *Triodia wiseana* hummock grasslands and Major, moderate sized and minor flow lines supporting open woodland and scrubland riparian vegetation. The fauna habitats present within the survey area are generally widespread and abundant (Rio Tinto, 2010).

Rio Tinto's (2010) desktop review determined that 18 fauna species of conservation significance could occur in the survey area. While fauna species of conservation significance could utilise the application area, the proposed clearing area is unlikely to constitute significant fauna habitat for any conservation significant fauna species owing to the widespread nature of the identified fauna habitats.

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

**Methodology** Rio Tinto (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**

A review of available databases determined that no occurrences of Threatened flora have been recorded within a 20 kilometre radius of the application area (GIS Database). No occurrences of Threatened flora were recorded in the surveyed area (Rio Tinto, 2010).

Two threatened flora species are known to occur within the Pilbara region; *Lepidium catapycnon* and *Thryptomene wittweri*. *Lepidium catapycnon* occurs in skeletal soils on hillsides and *Thryptomene wittweri* occurs in skeletal red stony soil, breakaways and stony creek beds (Western Australian Herbarium, 2014). A review of the application area using aerial photography and topographic contour mapping found that no suitable habitat for *Lepidium catapycnon* or *Thryptomene wittweri* appeared to exist in the application area (GIS Database). Neither of these species have been recorded within or in close proximity to the application area (Rio Tinto, 2010). Therefore, it is not anticipated that these species will occur in the application area.

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

**Methodology** Rio Tinto (2010)  
Western Australian Herbarium (2014)  
GIS Database:  
-Millstream 1.4m Orthomosaic - Landgate 2007  
-Topographic contours, statewide properties

**(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 review of available databases determined that the closest Threatened Ecological Community (TEC) to the application area is the Themeda Grasslands on Cracking Clays TEC, which is situated approximately 47 kilometres to the southeast of the application area (GIS Database). No vegetation communities matching the description of a TEC have been recorded in the application area (Rio Tinto, 2010).

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

**Methodology** Rio Tinto (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 application area is situated within the Hamersley sub-region of the Pilbara bioregion as defined within the IBRA (GIS Database). The application area is contained within Beard vegetation association 82 (GIS Database). This Beard vegetation association retains more than 99% of its pre-European extent for the state and bioregion (see table below). Hence, the application area does not represent a significant remnant of vegetation within an extensively cleared area.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPAW Managed Land
IBRA Bioregion - Pilbara	17,808,657	17,733,583	~99.58	Least Concern	8.37
Beard vegetation associations - State					
82	2,565,901	2,553,217	~99.51	Least Concern	10.51
Beard vegetation associations - Bioregion					
82	2,563,583	2,550,898	~99.51	Least Concern	10.52

\* Government of Western Australia (2013)

\*\* 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)  
 Government of Western Australia (2013)  
 GIS Database:  
 -IBRA WA (regions, subregions)  
 -Pre-European Vegetation Properties

**(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 at variance to this Principle**

Several ephemeral watercourses traverse through the application area (GIS Database). Consequently, it is expected that the proposed clearing activities will impact on riparian vegetation communities associated with these watercourses.

The proposed activities will result in the clearing of approximately 10 hectares of native vegetation within a total application area of approximately 151 hectares, therefore it is considered unlikely the clearing activities will result in adverse impacts to the conservation status and distribution of riparian vegetation communities or the integrity of watercourses.

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

**Methodology** GIS Database:  
 -Hydrography, linear properties

**(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 is situated within the Newman and Boolgeeda land systems (GIS Database). The Newman land system is described as consisting of rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al, 2004). The Boolgeeda land system is described as consisting of stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands (Van Vreeswyk et al, 2004). The Boolgeeda land system is not prone to erosion and the Newman land system has experienced little erosion to date (Van Vreeswyk et al, 2004). The clearing of 10 hectares of vegetation is not expected to increase the incidence of erosion within these land systems given their inherent resilience to erosion and the small size of the area to be cleared.

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 application area is not situated within or in close proximity to any conservation areas (GIS Database). The closest conservation area to the application area is the Millstream Chichester National Park, which is situated approximately 47 kilometres to the north west 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**

A review of available databases determined that the application area is situated within the Priority 1 and Priority 2 sections of the Millstream Water Reserve (GIS Database). Written advice from the Department of Water (DoW) indicated that clearing 10 hectares of native vegetation for the purpose of mineral exploration and hydrogeological investigation activities is unlikely to have an impact on groundwater quality, provided clearing activities are conducted in accordance with DoW guidelines and advice (DoW, 2014).

The application area intercepts several ephemeral watercourses (GIS Database). These watercourses would only be expected to flow during severe rainfall events, when the water flowing through these watercourses would be carrying a sediment load. Whilst the cleared areas might contribute additional sediment to surface water flows during significant rainfall events, it is not anticipated that adverse impacts to surface water quality would result from the proposed clearing activities. In addition, the proposed activities are temporary in nature and all ground disturbance associated with these activities will be rehabilitated at the end of the exploration programme. Therefore any additional sediment contribution to surface water flows caused by the clearing activities will be temporary in nature.

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

**Methodology** DoW (2014)  
GIS Database:  
-Public Drinking Water Source Areas  
-Hydrography, linear properties

**(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 is situated within the Fortescue River Catchment (GIS Database). The Fortescue River Catchment has an area of approximately 1,860,184 hectares and would experience flooding during significant rainfall events and cyclonic conditions. Considering the catchment areas natural propensity for flooding, it is unlikely the clearing of 10 hectares over four areas will increase the incidence or intensity of flooding within this catchment area.

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

**Methodology** GIS Database:  
-Hydrographic catchments

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

**Comments**

There are three Native Title Claims (WC03/3, WC99/012 and WC99/014) over the area under application (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups. 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 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 Regulation, Department of Parks and Wildlife 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.

This clearing permit application was advertised on 25 August 2014 inviting submissions from the public. No submissions were received.

**Methodology** GIS Database:  
-Aboriginal sites of significance  
-Native Title Claims - Determined by the Federal Court  
-Native Title Claims - Registered with the NNTT

### **4. References**

- 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.
- DoW (2014) Department of Water advice regarding potential impacts to Public Drinking Water Source Millstream Water Reserve. WA Department of Water, Perth.
- Government of Western Australia (2013) 2012 State-wide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Rio Tinto (2010) Flora and Vegetation Survey for Exploration Drilling at Caliwingina Creek and Native Vegetation Clearing Permit Supporting Report.
- Western Australian Herbarium (2014) Florabase - The Western Australian Flora. Department of Parks and Wildlife. <<http://florabase.dpaw.wa.gov.au/>> Accessed September 2014.
- Van Vreeswyk, A.M.E.; Payne, A.L.; Leighton, K.A.; Hennig, P. (2004) Technical Bulletin 92: An inventory and condition survey of the Pilbara region, Western Australia.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>s.17</b>	Section 17 of <i>the Environment Protection Act 1986</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

- T**      **Threatened species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).  
Threatened Fauna and Flora are further recognised by the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorhynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.  
Rankings:  
CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.  
EN: Endangered - considered to be facing a very high risk of extinction in the wild.  
VU: Vulnerable - considered to be facing a high risk of extinction in the wild.
- X**      **Presumed Extinct species:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).
- IA**      **Migratory birds protected under an international agreement:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.  
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.
- S**      **Other specially protected fauna:**  
Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1**      **Priority One - Poorly-known species:**  
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2**      **Priority Two - Poorly-known species:**  
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

**P3**

**Priority Three - Poorly-known species:**

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

**P4**

**Priority Four - Rare, Near Threatened and other species in need of monitoring:**

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**P5**

**Priority Five - Conservation Dependent species:**

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.