



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3169/3  
Permit type: Purpose

### 1.2. Proponent details

Proponent's name: Hamersley Iron Pty Ltd

### 1.3. Property details

Property: Temporary Reserves 70/4192, 70/4266, 70/4267 and 70/4737 pursuant to *Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972*  
Local Government Area: Shire of East Pilbara  
Colloquial name: Hope Downs 4 Rail Alignment Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
22			Mineral exploration and associated works.

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 27 November 2014

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Beard vegetation associations have been mapped for the whole of Western Australia. Three Beard vegetation associations have been mapped within the application area (GIS Database).

- 18: Low woodland; mulga (*Acacia aneura*);
- 29: Sparse low woodland; mulga, discontinuous in scattered groups; and
- 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.

Mattiske Consulting Pty Ltd (Mattiske) (2008) undertook flora and vegetation surveys that covered the Hope Downs 4 Mine Infrastructure Corridor project area. Mattiske (2008) identified seven vegetation communities within the original permit boundary:

#### Flowlines (Creeklines and Drainage Areas):

**C2** -Low woodland of *Eucalyptus xerothermica* and *Eucalyptus vitrix* over *Acacia citrinoviridis*, *Acacia maitlandii*, *Gossypium australe*, *Melaleuca lasiandra*, *Petalostylus labicheoides*, *Rulingia luteiflora* over *Triodia epactia*, *Chrysopogon fallax* and *Triodia pungens* on minor creeklines with sandy soils.

**C3**- Tall shrubland of *Acacia arida*, *Acacia bivenosa*, *Acacia ancistrocarpa*, *Acacia maitlandii*, *Acacia monticola* with occasional emergent *Corymbia deserticola* subsp. *deserticola*, *Eucalyptus gamophylla* and *Eucalyptus leucophloia* over *Gompholobium polyzygum*, *Indigofera monophylla*, *Rulingia luteiflora* over mixed *Triodia* species on sandy-loam soils in minor gullies.

#### Flats and Broad Plains:

**M1**- Low woodland to low open forest of *Acacia aneura* var. *aneura*, *Acacia pruinocarpa*, *Acacia catenulata* subsp. *occidentalis*, *Acacia rhodophloia*, *Grevillea berryana* with occasional emergent *Eucalyptus leucophloia* and *Eucalyptus gamophylla* over *Psydrax latifolia*, *Keraudrenia nephrosperma*, *Acacia distans*, *Eremophila fraseri*, *Acacia tetragonophylla*, *Eremophila forrestii* subsp. *forrestii*, *Solanum lasiophyllum* over *Chrysopogon fallax*, *Triodia pungens* and *Triodia epactia* and a range of annual species on sandy-loam flats and broad plains.

**M5**- Low woodland of *Acacia aneura* var. *aneura* to a tall shrubland of *Acacia pyriformis*, *Acacia bivenosa*, *Acacia ancistrocarpa* and *Acacia maitlandii* with occasional emergent *Eucalyptus xerothermica*, *Corymbia aspersa*, *Psydrax latifolia* and *Acacia citrinoviridis* over *Gompholobium polyzygum*, *Rulingia luteiflora*, *Themeda triandra*, *Triodia epactia* and *Triodia pungens* on sandy soils on flats on edges of major creeklines.

#### Ranges, Hills and Hillslopes:

**S1**- Hummock grassland of *Triodia epactia* with pockets of *Triodia basedowii* and *Triodia pungens* with emergent patches of *Corymbia hamersleyana*, *Eucalyptus gamophylla*, *Eucalyptus leucophloia* over *Acacia aneura* var. *aneura*, *Acacia pruinocarpa*, *Acacia rhodophloia*, *Codonocarpus cotinifolius*, *Psydrax latifolia* and *Grevillea berryana* over *Acacia adoxa* var. *adoxo*, *Acacia arida*, *Acacia tenuissimam*, *Acacia tetragonophylla*, *Acacia bivenosa*, *Acacia distans*, *Acacia hilliana*, *Eremophila latrobei* and *Eremophila forrestii* subsp. *forrestii* over a

range of annual species on gravelly soils on lower slopes.

**S2-** Hummock grassland of *Triodia basedowii*, *Triodia* aff. *wiseana* and *Triodia epactia* with emergent *Acacia pruinocarpa*, *Acacia inaequilatera*, *Corymbia deserticola* subsp. *deserticola*, *Corymbia hamersleyana*, *Eucalyptus leucophloia* and *Eucalyptus gamophylla* over *Eremophila latrobei*, *Acacia adoxa* var. *adoxo*, *Acacia arida*, *Acacia bivenosa*, *Eremophila exilifolia*, *Acacia spondylophylla*, *Acacia ancistrocarpa*, *Acacia bivenosa*, *Acacia inaequilatera*, *Acacia hilliana*, *Indigofera monophylla* and a range of annual species on gravelly soils on mid and upper slopes of small ranges.

**X4-** Hummock grassland of *Triodia basedowii*, *Triodia wiseana* and *Triodia pungens* with emergent *Eucalyptus leucophloia* and *Corymbia hamersleyana* over *Acacia adoxa* var. *adoxo*, *Acacia tetragonophylla*, *Mirbelia viminalis*, *Acacia victoriae*, *Eremophila cuneifolia*, *Acacia hamersleyana*, *Petalostylis labicheoides*, *Senna glutinosa* subsp. *glutinosa* and *Acacia bivenosa* and a range of annual species on calcrete soils in lower slopes.

Astron Environmental Services (Astron) undertook a flora and vegetation survey of the additional areas from 13 to 17 May 2014. The survey identified the following five vegetation associations within the additional areas (Astron, 2014):

**MnC01:** *Corymbia hamersleyana* low open woodland over *Acacia tumida* var. *pilbarensis* and *Petalostylis labicheoides* open shrubland to open heath over *Themeda triandra* very open tussock grassland to tussock grassland. Can exist with *Triodia pungens* very open to open hummock grassland;

**DP01:** *Acacia catenulata* subsp. *occidentalis* low open woodland to low woodland over *Acacia pruinocarpa* scattered tall shrubs to tall open shrubland over mixed open tussock grassland. Can exist with *Triodia pungens* very open hummock grassland.

**RrB01:** *Eucalyptus leucophloia* subsp. *leucophloia*, *Eucalyptus gamophylla* and *Corymbia hamersleyana* low open woodland over *Acacia hamersleyana* shrubland over *Triodia pungens* and *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) hummock grassland.

**HSC01:** *Eucalyptus gamophylla* low open woodland over mixed *Acacia* open shrubland over *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) hummock grassland.

**HSC02:** This is a mosaic of two vegetation associations that could not be mapped separately:  
1.) *Eucalyptus leucophloia* subsp. *leucophloia* over mixed *Acacia* scattered low shrubs to shrubland over *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia pungens* open hummock grassland to hummock grassland.  
2.) *Eucalyptus gamophylla* scattered low trees over *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) very open hummock grassland to open hummock grassland and *Amphipogon sericeus* very open tussock grassland to open tussock grassland.

<b>Clearing Description</b>	Hope Downs 4 Rail Alignment Project. Hamersley Iron Pty Ltd proposes to clear up to 22 hectares within a boundary of 721.2 hectares for the purposes of mineral exploration (sterilisation drilling), establishment of access tracks and associated works. The project areas are located approximately 49 kilometres north-west of Newman in the Shire of East Pilbara.
<b>Vegetation Condition</b>	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management;  to  Pristine: No obvious signs of disturbance (Keighery, 1994).
<b>Comment</b>	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.  Clearing Permit CPS 3169/1 was granted by the Department of Mines and Petroleum on 23 July 2009 and authorised the clearing of 8.4 hectares of native vegetation. The permit was amended on 3 October 2013 to extend the duration of the permit to 31 July 2020. Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised from 8.4 hectares to 22 hectares and increase the permit boundary from 130.6 hectares to 721.2 hectares.

### 3. Assessment of application against clearing principles

#### Comments

Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised by 13.6 hectares and increase the permit boundary by 590.6 hectares.

There have been five vegetation associations mapped within the additional areas (Astron, 2014). The vegetation ranged from 'excellent' to 'pristine' (Astron, 2014). None of these vegetation associations are considered to be a Threatened or Priority Ecological Community (Astron, 2014; GIS Database). The vegetation within the additional areas is considered to be widespread and representative of vegetation expected on comparable landforms in the region (Astron, 2014).

The flora survey recorded a total of 177 flora taxa from 32 families and 84 genera (Astron, 2014). The flora species recorded was considered typical of what would be expected in the local area (Astron, 2014). The Threatened flora species *Lepidium catapycnon* has been recorded within 5 kilometres of the additional areas (GIS Database). Suitable habitat was systematically searched but the species was not recorded (Astron, 2014).

This species has distinctive characteristics and Astron (2014) considers that if the species was within the additional areas it would have been visible at the time of the survey.

The Priority 1 flora species *Arista jerichoensis* var. *subspinulifera* and the Priority 3 flora species *Rhagodia* sp. Hamersley were both recorded within the additional areas (Astron, 2014). *Arista jerichoensis* var. *subspinulifera* was recorded at two locations with a total population of approximately 80 plants (Astron, 2014). The Western Australian Herbarium (2014) has 11 records of this species, mostly from the Hamersley subregion. Previous records suggest that this species prefers hardpan plains with red soils (Western Australian Herbarium, 2014). Within the additional areas it was found within alluvial drainage plains (Astron, 2014). This species is found across Australia however, the loss of the western population would significantly reduce its distribution. Potential impacts to this species may be minimised by the implementation of a flora management condition.

*Rhagodia* sp. Hamersley was recorded at 123 locations with 232 individuals being identified (Astron, 2014). This species was also primarily found within alluvial drainage plains habitat (Astron, 2014). Given the frequency of records and availability of suitable habitat, it is likely that this species is well represented in the local area. The proposed clearing of 22 hectares within a 721.2 hectare boundary is not likely to have a significant impact on this species.

The following four broad fauna habitats have been identified within the additional areas (Astron, 2014):

- Drainage line;
- Mulga woodland;
- Hill top and hill slope; and
- Gorge/gully.

Nearly three quarters of the additional area is comprised of the 'hill top and hill slope' habitat. There is approximately 2.5 hectares of the 'gorge/gully' habitat within the additional areas. The gorge/gully area does not contain rocky habitat that contains any roosting caves for bat species or suitable denning sites for Northern Quolls (*Dasyurus hallucatus*) (Astron, 2014). The remaining habitats are considered to be common in the local region. There were eight active mounds of the Western Pebble-mound Mouse (*Pseudomys chapmani* - Priority 4) recorded within the additional areas (Astron, 2014). Suitable habitat for this species is widespread in the region. The proposed additional clearing is not likely to have a significant impact on local fauna species.

There are several minor drainage lines that pass through the additional areas (GIS Database). The MnC01 vegetation association was found to be associated with minor creeklines and drainage lines (Astron, 2014). Surface water is only likely to flow following heavy rainfall events. There are numerous drainage lines in the surrounding areas (GIS Database). The proposed additional clearing is not likely to have a significant impact on surface water quality or watercourses in the local area.

The additional areas are comprised of the Boolgeeda, Newman and Spearhole land systems (GIS Database). These land systems are generally not prone to erosion (Van Vreeswyk et al., 2004).

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

**Methodology** Astron (2014)  
Van Vreeswyk et al. (2004)  
Western Australian Herbarium (2014)  
GIS Database:  
- Hydrography, linear  
- Rangeland Land System Mapping  
- Threatened and Priority Flora  
- Threatened Ecological Sites Buffered

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

#### **Comments**

There is one native title claim (WC2005/006) over the application area (GIS Database). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the Act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases, there are no registered Aboriginal sites of significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment 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.

The clearing permit application was advertised on 1 September 2014 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 Claims – Registered with the NNTT

#### 4. References

- Astron (2014) Rhodes Ridge, AR-13-11926 Vegetation, Flora and Fauna Survey. Unpublished report prepared for Rio Tinto Iron Ore, dated May 2014.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske (2008) Flora and vegetation on the Hope Downs 4 Mine Infrastructure Corridor. Mattiske Consulting Pty Ltd, Western Australia.
- Trudgen, M.E. (1998) A Report on Flora and Vegetation of the Port Kennedy Area. Unpublished report prepared for Bowman Bishaw and Associates, West Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A & Hennig, P. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.
- Western Australian Herbarium (2014) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <<http://florabase.dpaw.wa.gov.au/>> Accessed 20 October 2014.

#### 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 the <i>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 DPaW 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.**

**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.