Government of Western Australia
Department of Mines, Industry Regulation and Safety

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2283/6
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: *Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972*, Temporary Reserve 70/4193
Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972, Temporary Reserve 70/4882
Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972, Temporary Reserve 70/4883
Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972, Temporary Reserve 70/4884
Local Government Area: Shire of East Pilbara
Colloquial name: Greater Broadway Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
355		Mechanical Removal	Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 8 November 2018

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The previous permit area has been broadly mapped as the following four Beard vegetation associations (GIS Database):

18: Low woodland; mulga (*Acacia aneura*).

29: Sparse low woodland; mulga, discontinuous in scattered groups.

82: Hummock grasslands, low tree steppe; snappygum over *Triodia wiseana*.

175: Short bunch grassland - savanna/grass plain (Pilbara).

Vegetation communities recorded within the previous permit area are detailed in Decision Reports CPS 2283/1 and CPS 2283/5.

The amendment application area is broadly mapped as Beard vegetation associations 29 and 82.

A flora and vegetation survey was conducted over an area of approximately 243 hectares, which included the amendment application area and surrounding areas. The survey identified the following eleven vegetation communities, broadly associated with landform types (Rio Tinto, 2018):

Hills and Slopes
H1: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia, Corymbia deserticola* and *Eucalyptus gamophylla* over open shrubland of *Acacia atkinsiana* over open hummock grassland of *Triodia vanleeuwenii;*

H2: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* over mixed shrubs over very open hummock grassland of *Triodia pungens* over mixed grasses and herbs*;*

H3: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over mixed shrubs over very open hummock grassland of *Triodia pungens* and *T. vanleeuwenii* over mixed annual species*;*

H4: Low open woodland of *Corymbia hamersleyana* over scattered shrubs of *Acacia atkinsiana* over low open shrubland of *Corchorus lasiocarpus* over very open hummock grassland of *Triodia pungens;*

Plains
P1: Low woodland of *Acacia catenulata* subsp. *occidentalis, A. aptaneura and A. atkinsiana* over open shrubland of *Eremophila forrestii* over very open hummock grassland of *Triodia pungens* over annual species*;*

P2: Tall open shrubland of *Acacia aptaneura* over scattered low shrubs of *Eremophila lanceolata* and *Solanum lasiophyllum* over very open tussock grassland of *Aristida contorta* over mixed annual species*;*

P3: Scattered tall shrubs of *Acacia aptaneura* over low open shrubland of *Solanum morrisonii* over very open tussock grassland of *Eriachne flaccida* over very open sedgeland of *Fimbristylis dichotoma* over mixed annual species*;*

P4: Tall open shrubland of *Acacia ayersiana* hybrid and *A. aptaneura* over low open shrubland of *Eremophila lanceolata* over very open tussock grassland of *Aristida contorta* over mixed annual herbs*;*

P5: Low open woodland of *Acacia aptaneura* over very open tussock grassland of *Aristida latifolia* and *Digitaria brownie;*

Drainage Lines
D1: Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Corymbia hamersleyana* over tall open shrubland of *Acacia monticola, Petalostylis labicheoides* and *Gossypium robinsonii* over scattered shrubs of *Acacia maitlandii* over open hummock grassland of *Triodia pungens;*

D2: Low open woodland of *Corymbia hamersleyana* over tall open shrubland of *Petalostylis labicheoides, Gossypium robinsonii* and *Acacia monticola* over low open shrubland of *Tephrosia* sp. Fortescue (A.A. Mitchell 606) over very open tussock grassland of *Themeda triandra, Cymbopogon ambiguus* and *Eulalia aurea* over mixed annuals.

Clearing Description

Greater Broadway Project.
Hamersley Iron Pty Ltd proposes to clear up to 355 hectares of native vegetation within a total boundary of approximately 4,930 hectares, for the purpose of mineral exploration. The project is located approximately 42 kilometres north-west of Newman, in the Shire of East Pilbara.

Vegetation Condition

Pristine: No obvious signs of disturbance (Keighery, 1994);

To

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment

The above vegetation condition descriptions relate to the entire permit area, and were described using a scale based on Trudgen (1988) and converted to the corresponding Keighery (1994) condition. The vegetation condition of the amendment area was described as ranging from Very Good to Excellent on the Keighery scale (Rio Tinto, 2018).

Clearing permit CPS 2283/1 was granted by the Department of Industry and Resources (now Department of Mines, Industry Regulation and Safety) on 23 April 2008, authorising the clearing of up to 200 hectares of native vegetation within a boundary of approximately 949 hectares, for the purpose of mineral exploration.

CPS 2283/2 was granted on 12 May 2011 to change the reporting date from 31 March to 31 July each year. The area approved to clear and the permit boundary remained unchanged.

CPS 2283/3 was granted on 16 February 2012, extending the period in which clearing was authorised by five years and the duration of the permit by five years.

CPS 2283/4 was granted on 30 March 2017 to extend the period in which clearing was authorised and the duration of the permit by five years, and change the permit reporting date from 31 July for the previous financial year to 30 June for the previous calendar year.

CPS 2283/5 was granted on 31 December 2017, increasing the amount of clearing authorised to 342 hectares and increasing the clearing permit boundary to approximately 4,849 hectares, incorporating the area previously approved under CPS 4149/3.

On 9 August 2018, the permit holder applied to amend CPS 2283/5 to increase the amount of clearing authorised from 342 hectares to 355 hectares, and increase the permit boundary from approximately 4,849 hectares to approximately 4,930 hectares.

3. Assessment of application against Clearing Principles

Comments

Hamersley Iron Pty Ltd has applied to increase the amount of clearing authorised by 13 hectares, and increase the permit boundary by approximately 81 hectares. The amendment application area consists of four separate areas. The four amendment areas are located within TR 70/4884, and to the west of the existing permit areas.

The application area occurs within the Hamersley subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The amendment areas are broadly mapped as Beard vegetation associations 29 and 82, which is consistent with the majority of the previous permit area (GIS Database). Approximately 99% of the pre-European extent of these Beard vegetation associations remains uncleared within both the state and the Pilbara bioregion (Government of Western Australia, 2018). Hence, the vegetation proposed to be cleared does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

A flora and vegetation survey was conducted over the amendment area and surrounding areas during February 2018 (Rio Tinto, 2018). A total of 171 native flora taxa, representing 85 genera and 34 families were recorded during the survey. The vegetation condition of the amendment area was described as ranging from Very Good to Excellent, with the majority of the vegetation considered to be in Excellent condition (Rio Tinto, 2018).

No threatened flora or Threatened Ecological Communites (TEC) have been recorded within the amendment areas (Rio Tinto, 2018; GIS Database).

The flora and vegetation survey conducted over the amendment areas determined that none of the vegetation types within the amendment areas was representative of any PEC (Rio Tinto, 2018). A vegetation unit within the existing permit area (CPS 2283/5) was previously identified as needing protection due to the presence of Priority flora and potential for it to be representative of the 'West Angelas Cracking-Clays' Priority Ecological Community (PEC). The continued implementation of the existing permit condition excluding the clearing of this vegetation association, may minimise potential impacts to the PEC.

The flora and vegetation survey conducted over the amendment area and surrounding areas, recorded three Priority flora species within the survey area: *Aristida jerichoensis* var. *subspinulifera* (P3); *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3); and *Goodenia nuda* (P4) (Rio Tinto 2018). These three species are all known from more than one IBRA bioregion (Western Australian Herbarium, 2018), and Rio Tinto (2018) reported that these species are widely distributed in the local area and are well represented outside of the permit area. Three other Priority flora species were previously recorded within the existing permit area: *Euphorbia inappendiculata* var. *queenslandica* (P1); *Isotropis parviflora* (P2); and *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P2) (Rio Tinto, 2016; 2017). These species all have relatively restricted distributions, and the continued implementation of the existing flora management condition on the permit, may minimise potential impacts to these Priority flora.

No conservation significant fauna were recorded during the survey conducted over the application area and surrounding areas (Rio Tinto, 2018). No restricted fauna habitats (such as bat caves) were recorded within the survey area (Rio Tinto, 2018). Some fauna of conservation significance may occur within the amendment area, however none are likely to be specifically dependant on the fauna habitats within the amendment areas.

Three broad fauna habitat types were recorded within the survey area: Stony hills and slopes; Mulga on plains; and Drainage lines (Rio Tinto, 2018). The vegetation associations, landforms, and fauna habitat types occurring within the amendment areas are similar to those occurring within the previously approved permit area, and are well represented in the region (Rio Tinto, 2018; GIS Database). The amendment areas are not likely to represent areas of greater biodiversity than the previous permit area or surrounding areas, and the additional clearing and extension of the permit boundary is unlikely to have a significant impact on fauna habitat availability at a local or regional scale.

The amendment areas fall within the Boolgeeda, Newman, Spearhole and Wannamunna land systems, all of which also occur within the previous permit area (GIS Database). These land systems are considered to be generally not susceptible to erosion (Van Vreeswyk et al., 2004). The proposed increase in clearing by 13 hectares within an additional 81 hectares is unlikely to result in appreciable land degradation.

There are no permanent watercourses or wetlands within the amendment application area. Several minor ephemeral water courses intersect the amendment areas (Rio Tinto, 2018; GIS Database). These watercourses are dry for most of the year, and none of the vegetation associations recorded within the amendment areas were considered to be riparian vegetation (Rio Tinto, 2018). The continued inplementation of the existing watercourse management condition may minimise the impacts of the proposed clearing on vegetation associated with watercourses. The additional clearing is unlikely to have any significant additional impact on surface or groundwater quality, or on the incidence or intensity of flooding.

There are no conservation areas in close proximity to the application area. The nearest DBCA (formerly DPaW) managed land is the former Juna Downs pastoral lease, which is located approximately 27 kilometres northwest of the amendment application area, at its nearest point (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986.* Environmental information has been reviewed, and the assessment of the proposed clearing against the clearing principles remains consistent with the assessment contained in decision report CPS 2283/5.

Methodology

Government of Western Australia (2018)
Rio Tinto (2016)
Rio Tinto (2017)
Rio Tinto (2018)
Van Vreeswyk et al. (2004)
Western Australian Herbarium (1998-2018)

GIS Database:
- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Pre-European Vegetation

- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Flora
- Threatened Fauna

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

Comments

There are three native title claims over the application area (DPLH, 2018). These claims have been determined by the Federal Court on behalf of the claimant groups. However, the mining tenements have 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 several registered Aboriginal Sites of Significance within the application area (DPLH, 2018). 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 Water and Environmental Regulation and the Department of Biodiversity Conservation and Attractions, 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 amendment application was advertised on 3 September 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

Methodology DPLH (2018)

4. References

DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 31 October 2018).

Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Rio Tinto (2016) Flora, Vegetation and Fauna Habitat Assessment at Ophthalmia. Supporting information for clearing permit amendment CPS 4149/3. Rio Tinto Iron Ore, July 2016.

Rio Tinto (2017) Flora, Vegetation and Fauna Habitat Assessment at Ophthalmia. Supporting information for clearing permit amendment CPS 2283/5. Rio Tinto Iron Ore, May 2017.

Rio Tinto (2018) Native Vegetation Clearing Permit – Supporting Report. Rio Tinto Iron Ore, July 2018.

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.

Western Australian Herbarium (2018) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ (Accessed 31 October 2018).

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DBCA	Department of Biodiversity Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia

EPA	Environmental Protection Authority, Western Australia
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
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T **Threatened species:**
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the *Wildlife Conservation Act 1950*.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the *Wildlife Conservation Act 1950*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN **Endangered species**
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU **Vulnerable species**
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX **Presumed extinct species**
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA **Migratory birds protected under an international agreement**
Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD **Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS **Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P **Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species:**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species:**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species:**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations 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 locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

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 are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

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.