



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6211/3
Permit type: Purpose

1.2. Proponent details

Proponent's name: BC Iron Nullagine Pty Ltd

1.3. Property details

Property: Mining Lease 46/523
Local Government Area: Shire of East Pilbara
Colloquial name: Warrigal Well

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
176.1		Mechanical Removal	Mineral Production and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 7 July 2016

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 and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area (GIS Database):

173: Hummock grasslands, shrub steppe; kanji over soft spinifex and *Triodia wiseana* on basalt.

A survey conducted by Plant Ecology (2013; 2015) identified nine vegetation associations within the application area:

D2a: *Corymbia hamersleyana* scattered low trees to low woodland over mixed *Acacia* spp. Scattered shrubs to shrubland over mixed *Triodia epactia* hummock / *Cenchrus* spp. Tussock grassland;

D2b: *Corymbia hamersleyana* scattered low trees over mixed *Acacia* spp. shrubland over mixed *Triodia epactia* hummock / *Paraneurachne muelleri* tussock grassland;

D4a: *Eucalyptus camaldulensis* woodland over mixed shrubland or mixed **Cynodon dactylon* grassland / *Typha domingensis* sedgeland;

D6a: *Eucalyptus victrix* woodland over *Melaleuca* spp. high shrubland over mixed *Triodia epactia* hummock grassland / *Cenchrus* spp. tussock grassland / *Cyperus vaginatus* sedgeland;

D9a: Mixed *Acacia* spp. shrubland over mixed *Triodia epactia* hummock / *Cenchrus ciliaris* tussock grassland / herbland;

H1a: *Corymbia hamersleyana* scattered low trees over mixed *Acacia* spp. scattered shrubs to shrubland over *Triodia epactia* hummock grassland;

H8a: *Acacia aneura* and *A. pruinocarpa* low woodland over mixed *Eremophila* shrubland over *Triodia pungens* hummock grassland;

H9a: Mixed *Acacia* spp. scattered shrubs to shrubland over *Triodia epactia* hummock grassland; and

H9b: Mixed *Acacia* shrubs over *Triodia wiseana* hummock grasses.

Clearing Description

Warrigal Well.
BC Iron Nullagine Pty Ltd (BC Iron) proposes to clear up to 176.1 hectares of native vegetation within a total boundary of approximately 748.22 hectares, for the purpose of mineral production and associated activities. The project is located approximately 15 kilometres south west of Nullagine, in the Shire of East Pilbara.

Vegetation Condition

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);

To:

Comment

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

The vegetation condition was assessed by botanists from Plant Ecology (2013). The condition was assessed using a scale based on Trudgen (1988) and has been converted to the corresponding Keighery (1994) condition.

Clearing Permit CPS 6211/1 was granted by the Department of Mines and Petroleum (DMP) on 18 September 2014 and authorised the clearing of 162.4 hectares of native vegetation for mineral production and associated activities within a total boundary of approximately 435 hectares.

On 5 August 2015, BC Iron applied to amend CPS 6211/1 in order to increase the authorised clearing area by 13.7 hectares and the approved boundary by 51 hectares.

An application for an amendment to clearing permit CPS 6211/2 was received on 11 May 2016 to increase the permit boundary from 486 hectares to 748.22 hectares. The amount of native vegetation proposed to clear remains the same.

3. Assessment of application against clearing principles

Comments

The amendment to increase the permit boundary by 262.22 hectares is unlikely to have significant environmental impacts.

A Level 2 flora and vegetation survey of the Warrigal Well area was undertaken by Plantecology Consulting in 2012 and 2013, and an additional wet season flora and vegetation survey was undertaken in 2015 (Plant Ecology, 2013; 2015). Surveys within the application area were consolidated by Plant Ecology in 2016 (Plant Ecology, 2016). Species composition and vegetation communities are typical of the area and not considered to be unusually diverse (Plant Ecology, 2016). No Threatened or Priority Flora were recorded within the application area during the flora survey. Plant Ecology (2013) identified nine vegetation units within the application area none of which are representative of Threatened or Priority Ecological communities.

Several weed species including two declared weeds, *Argemone ochroleuca* subsp. *ochroleuca* and *Calotropis procera*, were identified by Plant Ecology (2013; 2016). Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Bamford (2013) mapped two vegetation substrate associations (VSA's) as key habitat types within the amendment area; VSA 1 and VSA 4. VSA 4 is considered to have very high conservation significance, and provides potential habitat for the Northern Quoll and Pilbara Olive Python. The loam-dominated substrate in this VSA is locally uncommon and may support a range of burrowing fauna such as Mulgara (BC Iron, 2016). The amendment area includes approximately 10.4 per cent of potential core Northern Quoll habitat as analysed by Bamford *et al.* (2013). Potential core Northern Quoll habitat was identified along the more deeply dissected drainage systems and steep-sided mesa edges; however core habitat was also identified outside the application area (Bamford *et al.*, 2013). BC Iron (2016) has developed a Northern Quoll management plan as required under BC Iron Nullagine Pty Ltd's EPBC Act approval (BC Iron, 2016).

A targeted fauna survey for Pilbara Leaf-nosed Bats during October 2012 and May 2013 indicated that although the bats may forage throughout the amendment area, they do not appear to utilise day-roosts within the application area. Foraging is likely to concentrate around Bonnie Creek and the nearby Nullagine River (Bamford & Metcalf, 2013). An existing condition which limits clearing in this zone to access roads and associated roadside infrastructure and a watercourse management condition will minimise the impacts upon riparian vegetation.

There are no permanent watercourses or wetlands within the amendment boundary, however, the application area does include the ephemeral Bonnie Creek and its tributaries which flow into the Nullagine river (GIS Database). Plant Ecology (2013) mapped vegetation association D6a (fauna habitat type VSA4) within the amendment boundary, which is a significant riparian zone which is linear and allows for movement of dependent fauna through the landscape and includes several small semi-permanent pools. Potential impacts to riparian vegetation may be minimised through the implementation of a vegetation management condition.

Therefore, the proposed clearing is at variance to Principle (f), may be at variance to Principle (b), is not likely to be at variance to Principles (a), (c) and (d), and is not at variance to Principle (e).

Current environmental information has been reviewed and the assessment of clearing principles, (g), (h), (i) and (j) is consistent with the assessment in clearing permit decision reports CPS 6211/1 and CPS 6211/2.

Methodology

Bamford (2013)
Bamford *et al.* (2013)
Bamford & Metcalf (2013)
BC Iron (2016)
Plant Ecology (2013)
Plant Ecology (2015)
Plant Ecology (2016)

- GIS Database:
- DPaW Tenure
 - Hydrography, linear
 - IBRA Australia
 - 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 (WC1999/016) over the area under application (Department of Aboriginal Affairs, 2016). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are 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 Warrigal Well proposal was referred to the former Australian Government Department of Sustainability Environment Water Population and Communities (SEWPaC), now Department of the Environment (DotE), under the EPBC Act on 31 May 2013 as part of a larger proposal. SEWPaC determined that the Warrigal Well proposal is a Controlled Action, due to potential impacts on listed threatened species and communities. Approval was granted on 5 March 2014 (EPBC 2013/6887) subject to conditions.

The clearing permit application was advertised on 6 June 2016 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology Department of Aboriginal Affairs (2016)

- GIS Database:
- Aboriginal Sites Register System

4. References

- Bamford (2013) BC Iron Nullagine Project Extension Areas -Bonnie East, Warrigal North and Coongan: Assessment of Fauna Values. Report prepared for BC Iron by Bamford Consulting Ecologists, Kingsley, WA.
- Bamford, M., Bancroft, W., and Moore, A (2013) BC Iron Nullagine Project – Extension Areas (Bonnie East, Warrigal North and Coongan): Northern Quoll Regional Analysis. Report prepared for BC Iron Nullagine PL, April 2013.
- Bamford, M & Metcalf, B (2013) Pilbara Leaf-nosed Bat (*Rhinonictis aurantia*), Surveys of the Warrigal North Deposit. Report prepared for BC Iron Nullagine PL, July 2013.
- BC Iron (2016) Nullagine Iron Ore Joint Venture, Warrigal Well native Vegetation Clearing Permit Amendment M46/523 – Mulla Mulla. BC Iron Nullagine Pty Ltd, May 2016.
- Department of Aboriginal Affairs (2016) Aboriginal Heritage Enquiry System. Government of Western Australia, <http://maps.dia.wa.gov.au/AHIS2/>. (Accessed 21 June 2016).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Plant Ecology Consulting (2013) Nullagine Iron Ore Joint Venture Project Expansion: Level 2 Flora and Vegetation Survey. Report prepared for BC Iron Nullagine PL, Perth, May 2013.
- Plant Ecology Consulting (2015) Nullagine Iron Ore Joint Venture Warrigal Extension, Flora and Vegetation Survey. Report prepared for BC Iron Nullagine PL, July 2015.
- Plant Ecology Consulting (2016) Nullagine Iron Ore Project, Flora and Vegetation Consolidation. Report prepared for BC Iron Nullagine PL, December 2015.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora

DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T	<p>Threatened species: Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, 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).</p> <p>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.</p> <p>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.</p> <p>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.</p>
CR	<p>Critically endangered species Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
EN	<p>Endangered species Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
VU	<p>Vulnerable species Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
EX	<p>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 <i>Wildlife Conservation Act 1950</i>, 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.</p>
IA	<p>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 <i>Wildlife Conservation Act 1950</i>, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
CD	<p>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 <i>Wildlife Conservation Act 1950</i>, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
OS	<p>Other specially protected fauna Fauna otherwise in need of special protection to ensure their conservation. Published as Specially</p>

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.