



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7449/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Pilbara Minerals Ltd

1.3. Property details

Property:
Mining Lease 45/78
Mining Lease 45/333
Mining Lease 45/511
Mining Lease 45/1256
Miscellaneous Licence 45/388
Miscellaneous Licence 45/402
Miscellaneous Licence 45/411
Miscellaneous Licence 45/413
Miscellaneous Licence 45/414
Miscellaneous Licence 45/417
Miscellaneous Licence 45/426
Miscellaneous Licence 45/430

Local Government Area: Shire of East Pilbara and Town of Port Hedland
Colloquial name: Pilgangoora Lithium-Tantalum Project

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|---------------------|
| 1,330.1 | | Mechanical Removal | Mineral Production |

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 29 March 2018

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. The following two Beard vegetation associations are located within the application area (GIS Database):

Beard Vegetation Association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and

Beard Vegetation Association 93: Hummock grasslands, shrub steppe; kanji over soft spinifex.

A Level 2 flora and vegetation survey was undertaken over the majority of the application area (covering M 45/333, M 45/78, M 45/511 and M 45/1256) by MMWC Environmental Pty Ltd. A total of eleven vegetation communities were identified within the application area (MMWC, 2016a):

- **Vegetation code 1a:** Scattered low trees of *Corymbia hamersleyana* over open shrubland of *Acacia acradenia*, *Acacia inaequilatera* and *Acacia ancistrocarpa* over low open shrubland of *Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601) over open hummock grassland of *Triodia wiseana* and *Triodia epactia*;
- **Vegetation code 2a:** Scattered low trees of *Corymbia hamersleyana* over scattered tall shrubs of *Acacia inaequilatera* over low open shrubland of *Acacia stellaticeps* and *Corchorus parviflorus* over open hummock grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia wiseana*;
- **Vegetation code 3a:** Scattered tall shrubs of *Acacia inaequilatera* over scattered shrubs of *Acacia acradenia* over hummock grassland of *Triodia wiseana*, *Triodia brizoides* and *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835);
- **Vegetation code 3b:** Scattered shrubs of *Acacia inaequilatera* over hummock grassland of *Triodia wiseana* and *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835);
- **Vegetation code 3c:** Scattered low trees of *Corymbia hamersleyana* over high shrubland of *Acacia orthocarpa* over hummock grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia wiseana*;

- **Vegetation code 4a:** Low woodland of *Eucalyptus victrix* over high open shrubland of *Acacia tumida* var. *pilbarensis*, *Melaleuca glomerata* and *Acacia bivenosa* over open hummock grassland of *Triodia epactia* over open tussock grassland of **Cenchrus ciliaris* and *Cymbopogon ambiguus*;
- **Vegetation code 5a:** Low open woodland of *Corymbia hamersleyana* and *Corymbia candida* subsp. *dipsodes* over high shrubland of *Acacia ampliceps*, *Acacia acradenia*, *Melaleuca glomerata*, *Acacia pyrifolia* and *Petalostylis labicheoides* over very open hummock grassland of *Triodia epactia* over open tussock grassland of **Cenchrus ciliaris*, **Cenchrus setiger* and *Cymbopogon ambiguus* over scattered sedges of *Cyperus vaginatus*;
- **Vegetation code 5b:** Low open woodland of *Eucalyptus victrix* and *Corymbia hamersleyana* over high shrubland of *Acacia acradenia* over scattered shrubs of *Acacia bivenosa* over open hummock grassland of *Triodia epactia* over very open tussock grassland of **Cenchrus ciliaris* and *Cymbopogon ambiguus*;
- **Vegetation code 6a:** Scattered low trees of *Corymbia hamersleyana* over high open shrubland of *Acacia acradenia* and *Grevillea wickhamii* subsp. *hispidula* over scattered shrubs of *Acacia bivenosa* and *Cajanus cinereus* over open hummock grassland of *Triodia epactia* and *Triodia wiseana* over very open tussock grassland of *Eriachne mucronata* and *Cymbopogon ambiguus*;
- **Vegetation code 6b:** Scattered low trees of *Corymbia hamersleyana* over high shrubland of *Acacia acradenia* over open shrubland of *Acacia bivenosa* over open hummock grassland of *Triodia epactia*; and
- **Vegetation code 6c:** Scattered low trees of *Corymbia hamersleyana* over high shrubland of *Acacia tumida* var. *pilbarensis* and *Petalostylis labicheoides* over open hummock grassland of *Triodia epactia* and *Triodia angusta* over very open tussock grassland of *Eriachne benthamii*.

The Pilgangoora Access Road (L 45/388) was not surveyed; however 14 relevés were surveyed along the length of L 45/388 at nine proposed borrow pit locations, which provide information on the likely habitat types present throughout the length of L45/388. The following twelve vegetation communities were identified (MMWC, 2016b):

1. Scattered low trees of *Corymbia hamersleyana* over open hummock grassland of *Triodia wiseana* and *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835);
2. Low open woodland of *Corymbia hamersleyana* over high open shrubland of *Acacia bivenosa* over hummock grassland of *Triodia angusta* and *Triodia wiseana* over scattered tussock grasses of *Eragrostis eriopoda*;
3. Scattered low trees of *Corymbia hamersleyana* over open shrubland of *Acacia acradenia* and *Acacia bivenosa* over *Triodia wiseana*;
4. Scattered low trees of *Corymbia hamersleyana* over open shrubland of *Acacia ancistrocarpa* over open hummock grassland of *Triodia epactia* and *Triodia brizoides*;
5. Open shrubland of *Acacia ancistrocarpa* over open hummock grassland of *Triodia brizoides* and *Triodia epactia*;
6. Scattered low trees of *Eucalyptus victrix* and *Corymbia hamersleyana* over open shrubland of *Acacia acradenia* over low open shrubland of *Acacia stellaticeps* over open hummock grassland of *Triodia wiseana* over very open tussock grassland of **Cenchrus* sp.;
7. Low open woodland of *Corymbia hamersleyana* over high open shrubland of *Acacia orthocarpa* over open hummock grassland of *Triodia wiseana*;
8. Scattered low trees of *Corymbia hamersleyana* over low open heath of *Acacia stellaticeps* over open hummock grassland of *Triodia brizoides*;
9. Low open woodland of *Melaleuca argentea* over open heath of *Melaleuca argentea* and *Acacia trachycarpa* over very open hummock grassland of *Triodia epactia* over scattered herbs of *Cassyltha capillaris*;
10. Low open woodland of *Eucalyptus victrix* over high shrubland of *Acacia ampliceps* and *Melaleuca glomerata* over open hummock grassland of *Triodia angusta* and *Triodia epactia* over scattered tussock grasses of *Eriachne benthamii*;
11. Scattered low trees of *Corymbia hamersleyana* and *Corymbia zygophylla* over open scrub of *Acacia tumida* var. *pilbarensis* and *Acacia acradenia* over hummock grassland of *Triodia wiseana*; and
12. Scattered low trees of *Corymbia hamersleyana* over high open shrubland of *Acacia trachycarpa* and *Hakea lorea* subsp. *lorea* over open hummock grassland of *Triodia wiseana*.

No survey data is available for areas within L 45/413 and L45/414. The survey information provided for the other tenements and adjacent areas (totalling in excess of 1,600 ha) is considered sufficient as a means of predicting likely vegetation communities within L 45/413 and L 45/414.

* Denotes weed species

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|-----------------------------|---|
| Clearing Description | Pilgangoora Lithium-Tantalum Project. Pilbara Minerals Ltd (Pilbara Minerals) proposes to clear up to 1,330.1 hectares of native vegetation within a total boundary of approximately 2,251 hectares, for the purpose of mineral production. The project is located approximately 90 kilometres south-south east of Port Hedland in the Shire of East Pilbara. |
| Vegetation Condition | Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994); To: Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994). |
| Comment | The vegetation condition was derived from flora and vegetation surveys conducted by MMWC Environmental Pty Ltd (2016a; 2016b). Clearing permit CPS 7449/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 23 March 2017. The clearing permit authorised the clearing of 1,217 hectares of native vegetation within a total boundary of 1,217 hectares for the purpose of mineral production. |

CPS 7449/1 was amended on 3 August 2017, for the purpose of increasing the permit boundary and the amount of authorised clearing by 113.1 hectares, and to include Miscellaneous Licence 45/417.

Pilbara Minerals has applied to amend CPS 7449/2 for the purpose of including additional tenure and increasing the permit boundary.

3. Assessment of application against clearing principles

Comments

The permit holder has applied to increase the clearing permit boundary from 1,330.1 hectares to 2,251 hectares. The amount of clearing authorised remains unchanged. The amendment to the clearing boundary is required as Pilbara Minerals have moved into the 2016 Mining Proposal format, and as the current clearing permit boundary closely follows the disturbance footprint a buffer is required around these activities (Pilbara Minerals, 2018).

As the authorised clearing area remains unchanged, it is unlikely that there will be additional impacts to vegetation communities within the amended clearing boundary. The vegetation associations recorded in the proposed amendment area are well represented in the region and are not a significant remnant of native vegetation. No new vegetation communities will be cleared as part of the amendment (GIS Database). The proposed amendment to the clearing boundary will not impact any Threatened flora, Priority flora or Threatened Ecological Communities or Priority Ecological Communities (Pilbara Minerals, 2018; GIS Database).

There are numerous minor, ephemeral watercourses that intersect the amended clearing permit boundary (GIS Database). No additional watercourses will be impacted as part of the amended clearing permit boundary. As the amendment will be impacting the ephemeral watercourses, the proposed clearing is at variance to clearing Principle (f). A watercourse management condition exists on the original permit which requires the permit holder to avoid clearing riparian vegetation and to ensure that surface water flow is maintained. The vegetation management condition remains on the amended clearing permit, CPS 7449/3.

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 7449/2.

Methodology Pilbara Minerals (2018)

GIS Database:

- Clearing Regulations – Environmentally Sensitive Areas
- Clearing Regulations – Instruments
- Hydrography, Linear
- Imagery
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered
- Threatened Fauna

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

There are two native title claims over the amended application area (WC1999/008 and WC1999/003) (DPLH, 2018). 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 Sites of Aboriginal Significance located in the area applied to clear (DPLH, 2018). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Biodiversity Conservation and Attractions and the Department of Water and Environmental Regulation, 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 amended clearing permit application was advertised on 29 January 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received.

Methodology DPLH (2018)

4. References

- DPLH (2018) Aboriginal Heritage Inquiry System, Department of Planning, Lands and Heritage, Western Australia. <http://maps.dia.wa.gov.au/AHIS2/> (Accessed 12 March 2018).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MMWC (2016a) Pilgangoora Project Area Flora, Vegetation and Fauna Assessment V2. Report prepared for Pilbara Minerals Ltd by MMWC Environmental Pty Ltd, June 2016.
- MMWC (2016b) Pilgangoora Access Road Borrow Pits Flora and Vegetation Assessment. Report prepared for Pilbara Minerals Ltd by MMWC Environmental Pty Ltd, July 2016.
- Pilbara Minerals (2018) Application for amendment of Clearing Permit CPS 7449/2. Pilbara Minerals Ltd, January 2018.

5. Glossary

Acronyms:

| | |
|-----------------|---|
| BoM | Bureau of Meteorology, Australian Government |
| DAA | Department of Aboriginal Affairs, Western Australia (now DPLAH) |
| 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) |
| DotEE | 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 |
| DPLAH | Department of Planning, Lands and Heritage, Western Australia |
| DRF | Declared Rare Flora |
| DoE | Department of the Environment, Australian Government (now DotEE) |
| DoW | Department of Water, Western Australia (now DWER) |
| DPaW | Department of Parks and Wildlife, Western Australia (now DBCA) |
| DWER | Department of Water and Environmental Regulation, Western Australia |
| 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 (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.

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.

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.