

Clearing Permit Decision Report

1. Application details

1.1. Permit application details
Permit application No.: 7924

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Michael Guerinoni

1.3. Property details

Property: Mining Lease 80/637

Local Government Area: Shire of Wyndham-East Kimberley

Colloquial name: Pivot Hill Quarry

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of: 4.4 Mechanical Removal Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 1 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. There is one Beard vegetation association mapped within the application area (GIS Database):

59: Grasslands, high grass savanna sparse tree; bauhinia and coolabah over mitchell, blue and tall upland grasses.

A flora and vegetation survey was conducted over the application and adjacent areas by Botanical North on 25 April 2010 and 12 February 2012. The following vegetation associations were recorded within the application area (Botanical North, 2012):

Open Boab Woodland (Hillcrest): Open woodland of Adansonia gregorii and Terminalia platyptera over Cochlospermum fraseri and Terminalia canescens over Sehima nervosum, and Eriachne obtusa;

Open Boab Woodland (Hillslope): Open Woodland of Adansonia gregorii, Eucalyptus confertiflora and Terminalia platyptera, Cochlospermum fraseri and Hakea arborescens over mixed grassland of Sehima nervosum and Heteropogon contortus;

Open Boab Woodland (Footslope): Open Woodland of *Adansonia gregorii, Bauhinia cunninghamii* and *Eucalyptus confertiflora* over *Flueggea virosa* over grassland of *Heteropogon contortus* and *Sehima nervosum;* and

Very Open Woodland (Plain): Very Open Woodland of *Adansonia gregorii* and *Bauhinia cunninghamii* over grassland of *Heteropogon contortus* and *Chloris barbata*.

Clearing Description

Pivot Hill Quarry.

Michael Guerinoni proposes to clear up to 4.4 hectares of native vegetation within a boundary of approximately 18 hectares, for the purpose of a basalt quarry. The project is located approximately 20 kilometres south-east of Wyndham, within the Shire of Wyndham-East Kimberley.

Vegetation Condition

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

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Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation condition was derived from a vegetation survey conducted by Botanical North (2012) and observations by the assessing officer during a site visit on 8 December 2016.

The 2011/2012 wet season was exceptionally dry up to the time of the survey in February 2012 so the sampling

3. Assessment of application against Clearing Principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments Proposal is not likely to be at variance to this Principle

The vegetation survey identified four vegetation communities within the permit area (Botanical North, 2012). The majority of these were all of a similar structure being open boab woodland. None of the vegetation communities have been identified as being a Threatened or Priority Ecological Community (Botanical North, 2012; GIS Database). The majority of the permit area is in excellent condition with some areas disturbed by previous quarrying activities (Botanical North, 2012).

A total of 100 flora species from 38 families were recorded during the flora survey (Botanical North, 2012). No species of Threatened flora have been recorded within the permit area (Botanical North, 2012; GIS Database). The Priority 3 flora species *Brachychiton tridentatus* was recorded during the flora survey within the 'open woodland (hillcrest)' vegetation community, however, it was not located within the permit area (Botanical North, 2012). Suitable habitat for this species is present within the permit area. This habitat is common and widespread in the local area and the proposed clearing of 4.4 hectares is not likely to have a significant impact on this species (Botanical North, 2012; GIS Database).

There were nine weed species recorded during the flora survey (Botanical North, 2012). Weeds have the potential to out-compete native species and reduce the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna habitats present within the permit area are common within the local region (GIS Database). The permit area is not likely to support as high level of faunal diversity as the adjacent Parry Lagoons wetlands which are known to support a rich faunal assemblage.

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

Methodology Botanical North (2012)

GIS Database:

- Imagery
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered
- Threatened Fauna

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments Proposal is not likely to be at variance to this Principle

During the vegetation survey, fauna habitat and any opportunistic fauna sightings were recorded. The majority of the vegetation within the permit area can be categorised as 'open boab woodland' with other areas described as 'very open woodland' (Botanical North, 2012). The survey did not record any significant habitat features such as tree hollows, caves, burrows or permanent water sources (Botanical North, 2012).

The permit area is located within the Parry Lagoon Nature Reserve which contains habitat that supports critical life stages of annually migrating bird species and provides breeding habitat for 16 species of wetland dependent birds (Department of Environment and Conservation, 2012). The permit area is elevated within this wetland environment and does not contain and any ephemeral creeks or areas subject to regular inundation (Botanical North, 2012; GIS Database).

There are records of a number of conservation significant fauna within 10 kilometres of the permit area (Department of Biodiversity, Conservation and Attractions, 2018). The majority of the these species are migratory bird species protected under international agreements. Whilst they may be present within the permit area, the habitat present does not contain any significant wetland vegetation (Botanical North, 2012). The habitat in the surrounding Parry Lagoon system is of much higher significance for bird species. Several other species recorded also have habitat preferences for areas of inundation and dense riparian vegetation which is not present within the permit area (Botanical North, 2012).

The Northern Quoll (*Dasyurus hallucatus* - Vulnerable) has been recorded within 5 kilometres of the permit area (Department of Biodiversity, Conservation and Attractions, 2018). The Northern Quoll is known to den in hollow logs, tree hollows and rock crevices (Department of the Environment and Energy, 2018). None of these features have been observed within the permit area (Botanical North, 2012). Whilst the Northern Quoll may use the permit area for foraging and dispersal, the vegetation within the area is not likely to be significant habitat for this species.

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

Methodology Botanical North (2012)

Department of Biodiversity, Conservation and Attractions (2018)

Department of the Environment and Energy (2018)

GIS Database:

- Hydrography, linear
- Imagery
- Threatened Fauna

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is not likely to be at variance to this Principle

There are no known records of Threatened flora within the application area (GIS Database). Flora surveys of the application area did not record any species of Threatened flora (Botanical North, 2012).

There is one species of Threatened flora known from the Victoria Bonneparte IBRA region; *Typhonium* sp. Kununurra (Western Australian Herbarium, 2018). Based on the known distribution and habitat preference of *Typhonium* sp. Kununurra, this species is not likely to be present within the permit area (Western Australian Herbarium, 2018).

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

Methodology Botanio

Botanical North (2012)

Western Australian Herbarium (2018)

GIS Database:

- Threatened and Priority 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.

Comments Proposal is not likely to be at variance to this Principle

There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (Botanical North, 2012).

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

Methodology Botanical North (2012)

GIS Database:

- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The application area falls within the Victoria Bonneparte Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 98.72% of the pre-European vegetation still exists in the bioregion (Government of Western Australia, 2016). The application area is broadly mapped as Beard vegetation association 59 (GIS Database). This vegetation association has not been extensively cleared as over 85% remains at both a state and bioregional level (Government of Western Australia, 2016). The application area is not a remnant nor does it form part of any remnants within the local area (GIS Database).

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

Methodology Government of Western Australia (2016)

GIS Database:

- IBRA Australia

- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is not likely to be at variance to this Principle

The permit area is within the Ord River Floodplain which is a Ramsar listed wetland (GIS Database). This Ramsar site covers an area in excess of 140,000 hectares and includes the Ord Estuary, False Mouths of the Ord and the Parry Lagoons (Hale, 2008). The wetland supports a number of threatened species and contains significant wetland and mangrove communities (Hale, 2008).

The permit area itself is located on an elevated area of the floodplain and does not contain any watercourses or areas of significant inundation (GIS Database). None of the vegetation communities identified during the flora and vegetation survey were described as growing in association with a watercourse or wetland (Botanical North, 2012). Given there are no significant riparian areas within the permit area, the proposed clearing of 4.4 hectares is not likely to have a significant impact on the Ord River Floodplain.

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

Methodology Hale (2008)

GIS Database:

- Hydrography, linear

- Ramsar Sites Western Australia

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not likely to be at variance to this Principle

The application area lies within the Angallari, Frayne and Pinkerton land systems (GIS Database). These land systems have been mapped and described in technical bulletins produced by the former Department of Agriculture (now the Department of Primary Industries and Regional Development).

The Angallari land system consists of small areas of timbered gently sloping alluvial plains with benched yellowish loamy or sandy soils (Payne and Schoknecht, 2011). This land system is not generally susceptible to erosion (Payne and Schoknecht, 2011).

The Frayne Land System is described as undulating to low hilly basalt country with predominantly red soils. (Payne and Schoknecht, 2011). Most parts of this land system have a low susceptibility to erosion (Payne and Schoknecht, 2011).

The Pinkerton land system is described as rugged stony country on sedimentary rocks (Payne and Schoknecht, 2011). Due to the rugged nature of this land system, it is not likely to be susceptible to erosion.

The proposed clearing of up to 4.4 hectares of native vegetation within a boundary of approximately 18 hectares, is unlikely to cause appreciable land degradation.

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

Methodology Payne and Schoknecht (2011)

GIS Database:

- Landsystem Rangelands

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposal may be at variance to this Principle

The permit area is within the Parry Lagoon Nature Reserve (GIS Database). The nature reserve contains habitat that supports critical life stages of annually migrating bird species and provides breeding habitat for 16 species of wetland dependent birds (Department of Environment and Conservation, 2012). It also includes a variety of important habitats such as freshwater springs, components of rainforest, grasslands, woodland, rugged sandstone and floodplain, which support a rich faunal assemblage (Department of Environment and Conservation, 2012).

The permit area does not contain any wetlands or watercourses and is not likely to represent significant fauna habitat (GIS Database). There are existing areas of disturbance from previous quarrying activities which are

proposed to be expanded (GIS Database). The spread or introduction of weeds into the nature reserve is a significant risk from mining activities in the area. There were nine species of weed recorded during the flora survey (Botanical North, 2012). Care needs to be taken to ensure that clearing activities do not increase the spread of weeds within the nature reserve. The applicant has proposed several weed management measures to reduce the risk of spreading or introducing weeds in the area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The proposed clearing of 4.4 hectares is not likely to impact on any significant environmental values of the Parry Lagoon Nature Reserve. Given the permit area has been previously subject to quarrying activities, the proposed clearing is not likely to impact on the future land use of the nature reserve.

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

Methodology

Botanical North (2012)

Department of Environment and Conservation (2012)

GIS Database:

- DPaW Tenure
- Hydrography, linear
- Imagery

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). The permit area lies within the Ord River Floodplain which is a Ramsar listed wetland, however, there are no watercourses or areas subject to regular inundation within the permit area (GIS Database). The proposed clearing of 4.4 hectares is not likely to have a significant impact on the surface water quality within local watercourses and wetland areas.

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). The surrounding area remains largely uncleared and the proposed clearing of 4.4 hectares is unlikely to cause deterioration in the quality of underground water.

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

Methodology

GIS Database:

- Hydrography, Linear
- Public Drinking Water Source Areas
- Ramsar Sites Western Australia

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposal is not likely to be at variance to this Principle

The climate of the region is dry hot tropical, semi-arid, with summer rainfall (CALM, 2002). The permit area is located on the slopes of Pivot Hill and there are no permanent water courses or waterbodies within the application area (GIS Database). The permit area lies within the greater Ord River Floodplain which is subject to inundation following summer rainfall (GIS Database). The proposed clearing of 4.4 hectares is not likely to cause an increase in the incidence or intensity of flooding in the area.

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

Methodology

CALM (2002)

GIS Database:

- Hydrography, linear

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

The clearing permit application was advertised on 22 January 2018 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. One submission was received in relation to heritage matters.

There are no native title claims over the area under application (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*.

There are no 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.

The project was referred to the Environmental Protection Authority (EPA) on 9 January 2015. The EPA determined that the project would be 'not assessed: public advice given'.

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.

Methodology DPLH (2018)

4. References

- Botanical North (2012) Assessment of the Flora and Fauna Within Pivot Hill Mining Tenement M80/618. Report prepared for JAB Industries by Botanical North, March 2012.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DPLH (2018) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 26 February 2017).
- Department of Biodiversity, Conservation and Attractions (2018) NatureMap. Department of Biodiversity, Conservation and Attractions, Perth http://naturemap.dec.wa.gov.au (Accessed 26 February 2018).
- Department of Environment and Conservation (2012) Ord River and Parry Lagoons Nature Reserves, Management Plan 77 2012. Department of Environment and Conservation, Perth.
- Department of the Environment and Energy (2018) Dasyurus hallucatus, Species Profile and Threats Database. Department of the Environment and Energy, Canberra http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=331
- Government of Western Australia (2016) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2016. WA Department of Parks and Wildlife, Perth.
- Hale, J. (2008) Ecological Character Description of the Ord River Floodplain Ramsar Site. Report to the Department of Environment and Conservation, Perth, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Payne, A.L. and Schoknecht, N. (2010) Land Systems of the Kimberley Region, Western Australia. Department of Agriculture and Food, Western Australia. Technical Bulletin 98, 250p.
- Western Australian Herbarium (2018) FloraBase the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ (Accessed 26 February 2018).

5. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government

DAADepartment of Aboriginal Affairs, Western Australia (now DPLH)DAFWADepartment of Agriculture and Food, Western Australia (now DPIRD)DBCADepartment 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.