Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6556/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **David Leslie Martin**

1.3. Property details

Property: Mining Lease 04/38
Mining Lease 04/213
Mining Lease 04/308
Mining Lease 04/445
Local Government Area: Shire of Derby-West Kimberley
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
12.435		Mechanical Removal	Sand Mining

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 25 June 2015

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. Two Beard vegetation associations are located within the application area (GIS Database):

Beard vegetation association 745: Shrublands, pindan; acacia shrubland with scattered low trees over spinifex; and
Beard vegetation association 756: Medium woodland; river gum & terminalia mixed with coolabah & ghost gum (*Eucalyptus papuana*).

Clearing Description David Leslie Martin proposes to clear up to 12.435 hectares of native vegetation within a total boundary of approximately 12.44 hectares, for the purpose of sand mining. The project is located approximately 35 kilometres east of Darby, in the Shire of Derby-West Kimberley.

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

To:

Very Good: Vegetation structure altered, obvious signs of disturbance (Keighery, 1994).

Comment There have been no flora or fauna surveys undertaken over the application area. The vegetation condition was inferred from aerial photography (GIS Database).

David Leslie Martin proposes to undertake sand mining in four different locations using an existing track for access to the river. The vegetation within the application area is of a sparse nature, and any large trees will be avoided.

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 application area occurs within the Fitzroy Trough subregion of the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This bioregion is characterised by acacia thickets with scattered trees and areas of grasslands and savannas (CALM, 2002).

The vegetation under application is comprised of four separate areas, all of which contain sparse vegetation within creek beds. There was no flora and vegetation survey conducted over the application area or the surrounding region. A search of the Department of Parks and Wildlife's Threatened and Priority Flora databases revealed no records of Threatened Flora species, and one Priority Flora species within a 5 kilometre radius of

the application area; *Tephrosia rosea* var. Napier Range (C.R. Dunlop 7760 & B.K. Simon) (Priority 3) (DPaW, 2015). This Priority Flora species *Acacia aphanoclada* has been found in six locations within the Central Kimberley and Dampierland IBRA bioregions (Western Australian Herbarium, 2015; GIS Database). The application areas do not contain preferable habitat types for this Priority Flora species (Western Australian Herbarium, 2015). Given that the proposed clearing is to maintain an existing access track and clear the riparian vegetation in the middle of the creek to access the sand, it is unlikely that the clearing of 12.435 hectares of sparse native vegetation will significantly impact the conservation significance of this species.

No threatened ecological communities or priority ecological communities were recorded within the application area (GIS Database).

Aerial imagery shows vegetation within the application area to be sparse in nature. There may be potential faunal habitat associated with the riparian vegetation of the May and Lennard River, however aerial imagery suggests that the faunal habitat present within the application area is abundant throughout the local area (GIS Database).

Give the movement of vehicles in the area and the proximity to a watercourse, there is potential for weed species to be transported or spread through the local area. Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

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

Methodology DPaW (2015)
Western Australian Herbarium (2015)
GIS Database:
- IBRA WA (Regions - Subregions)
- Imagery
- Pre-European vegetation
- Threatened Ecological Sites Buffered

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(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

There was no fauna survey conducted over the application area or the surrounding region. The application area sits within small sections of four creek beds, one which is located in the Lennard River and three within the May River, all of which include an existing access track to the river banks. The habitat associated with the Lennard River and May River area is of good habitat value and the access track is in a degraded condition. Aerial imagery suggests that the faunal habitat present within the application area appears to be abundant within the local area. The proposed clearing only proposes to remove sparse vegetation within the creek beds (GIS Database) and large trees will be avoided. Given the sparse nature of the vegetation within the application area and the availability of similar habitat that appears to be in a better condition outside the areas under application (GIS Database), the proposed clearing is not likely to impact the potential significance of the Lennard River and May River fauna habitats.

There are two conservation significant species listed as Threatened under the *Environment Protection and Biodiversity Conservation Act 1999* or protected under Western Australian legislation (*Wildlife Conservation Act, 1950*), that may potentially occur within the application areas (DPaW, 2015);

- Australian Bustard (*Ardeotis australis*) (DEC – Priority 4); and
- Rainbow Bee-eater (*Merops ornatus*) (EPBC Act - Migratory species; JAMBA, CAMBA).

The Rainbow Bee-eater is seasonally widespread and utilises both natural and degraded habitats. This bird could potentially use the application area and adjoining areas for foraging, roosting and possibly breeding but they would not be specifically attracted to the site (GIS Database). The Australian Bustard is known to be highly mobile but may use the application area for foraging as part of a larger territory. Although fauna of conservation significance may forage in the area, the application area is unlikely to represent significant habitat.

The proposed clearing to upgrade an existing track and to clear very sparse vegetation within the creek bed is unlikely to have any significant impacts on the available fauna habitat at a local or regional scale.

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

Methodology DPaW (2015)
GIS Database:
- Imagery
- Threatened Fauna

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(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

According to the available databases, there are no known records of Threatened Flora within the application area (GIS Database). A search of the Department of Parks and Wildlife's Threatened and Priority Flora databases identified no Threatened Flora species as occurring within a 10 kilometre radius of the application area (DPaW, 2015).

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

Methodology DPaW (2015)
GIS Database:
- Declared Rare and Priority Flora List

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(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

A search of the available databases showed that there are no known Threatened Ecological Communities situated within 5 kilometres radius of each of the application areas (GIS Database).

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

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(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 areas fall within the Dampierland IBRA bioregion (GIS Database). The vegetation within the application areas is recorded as:

Beard vegetation association 745: Shrublands, pindan; acacia shrubland with scattered low trees over spinifex; and
Beard vegetation association 756: Medium woodland; river gum & terminalia mixed with coolabah & ghost gum (*Eucalyptus papuana*).

The above Beard vegetation associations retain approximately 99**%** or above of their pre-European extent at both the state and bioregion level (Government of Western Australia, 2013). The areas proposed to be cleared are not a significant remnant of native vegetation.

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

Methodology Government of Western Australia (2013)
GIS Database:
- IBRA WA (regions - subregions)
- Pre-European Vegetation

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(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 at variance to this Principle

The areas under application sit within the creek beds of the Lennard River, which is a non-perennial watercourse over 175 kilometres long, and the May River, which is a perennial watercourses over 66 kilometres long. Both watercourses have a wide, well defined sandy drainage channel (GIS Database). Aerial imagery suggests a sparse presence of riparian vegetation associated with the watercourses. The proposed clearing is to enable the proponent to undertake sand extraction from the creek bed, along one small section of May River and three small sections of Lennard River, therefore impacting on riparian vegetation. Given the sparse nature of vegetation within the areas under application and that the proponent has committed to avoiding large trees, it is unlikely that the proposed clearing will significantly impact the May River and Lennard River.

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

Methodology GIS Database:
- Geodata, Lakes
- Hydrography, Linear
- Imagery

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

Comments

Proposal may be at variance to this Principle

The application areas are located on the banks of two rivers (GIS Database) which could potentially be moderately susceptible to erosion if vegetation cover is lost. There is some risk of soil erosion if natural drainage regimes are disturbed or slopes are cleared and exposed to high intensity rainfall.

Potential impacts from land degradation as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology GIS Database:
- Imagery

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(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 is not likely to be at variance to this Principle

The application areas are not located within any conservation area (GIS Database). The nearest conservation area is Windjana Gorge National Park, located approximately 10 kilometres east of the eastern most application area (GIS Database).

Given the distance of the application area from Windjana Gorge National Park, the proposed clearing is not likely to provide a significant ecological linkage or fauna movement corridor and is not likely to impact the environmental values of the conservation area.

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

Methodology GIS Database:
- DEC Tenure

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(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

The application area is not located within a Public Drinking Water Source Area (GIS Database). The application area is located within the proclaimed Canning-Kimberley groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for the purposes other than domestic and/or stock watering is subject to licence by the Department of Water.

The application areas are partially situated within Lennard River and May River; these sites are subject to inundation (GIS Database) but remain dry for large periods of the year and only flow and hold surface water following significant rainfall events (CALM, 2002). Therefore it is considered unlikely that the proposed clearing will result in any significant impact to surface water quality.

The groundwater within the areas under application is considered to be potable (Groundwater salinity levels of 500 to 1,000 milligrams/Litre Total Dissolved solids (TDS)) (GIS Database). With high annual evaporation rates and low annual rainfall, there is little recharge into regional groundwater (BoM, 2015). The proposed clearing is unlikely to further deteriorate the quality of underground water (GIS Database).

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

Methodology GIS Database:
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

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(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 application area experiences a dry hot tropical and semi-arid climate, with an annual average summer rainfall of approximately 881 millimetres per year (CALM, 2002; BoM, 2015). Based on an average annual evaporation rate of 2,800 - 3,200 millimetres (BoM, 2015), any surface water resulting from rainfall events is likely to be relatively short lived.

Given the location of most of the application areas lies within creek beds, and the size of the area to be cleared (12.435 hectares over four areas) compared to the size of the Lennard River catchment area (1,437,458 hectares) (GIS Database) it is unlikely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

Methodology GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments - Catchments
- Rainfall, Mean Annual

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

Comments

There are no Native Title claims over the area under application (DAA, 2015). 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 known registered Aboriginal Sites of Significance within the application area (DAA, 2015). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, Department of Parks and Wildlife and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 1 June 2015 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Determined by the Federal Court
- Native Title Claims - Filed at the Federal Court
- Native Title Claims - Registered with the NNTT

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4. References

BoM (2015) Climate Statistics for Australian Locations. A Search for Climate Statistics for Curtin Aero, Australian Government Bureau of Meteorology, viewed 15 June 2015, <http://reg.bom.gov.au/climate/averages/tables/cw_003080.shtml>.

CALM (2002) Biological Summary of the 2002 Biodiversity Audit for Western Australia, A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 - Dampierland 1 (DL1) – Fitzroy Trough subregion), ed. N.L McKenzie, J.E May and S. McKenna, Government of Western Australia, Perth, Western Australia.

DAA (2015) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth Western Australia, viewed 5 June 2015 < http://maps.dia.wa.gov.au/AHIS2/>.

DPaW (2015) NatureMap Department of Parks and Wildlife, viewed 2 June 2015 <http://naturemap.dec.wa.gov.au>.

Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.

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

Western Australian Herbarium (2015) FloraBase - The Western Australian Flora. Department of Parks and Wildlife, viewed 15 June 2015 <http://florabase.dpaw.wa.gov.au/>.

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	*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
s.17	Section 17 of *the Environment Protection Act 1986*, Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

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

Threatened Fauna and Flora are further recognised by DPaW according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.

Rankings:
CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.
EN: Endangered - considered to be facing a very high risk of extinction in the wild.
VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

X **Presumed Extinct species:**
Specially protected under the *Wildlife Conservation Act 1950,* listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

IA **Migratory birds protected under an international agreement:**
Specially protected under the *Wildlife Conservation Act 1950,* listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.
Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

S **Other specially protected fauna:**
Specially protected under the *Wildlife Conservation Act 1950,* listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

P1 **Priority One - Poorly-known species:**
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

P2 **Priority Two - Poorly-known species:**
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

P3 **Priority Three - Poorly-known species:**

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring:**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

P5 **Priority Five - Conservation Dependent species:**
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Principles for clearing native vegetation:

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

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

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

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

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

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

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

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

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