

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8710/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Big Bell Gold Operations Pty Ltd

1.3. Property details

Property: Mining Lease 51/504

Mining Lease 51/668

Local Government Area: Shire of Meekatharra
Colloquial name: Maid Marion Project

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of:

80.6 Mechanical Removal Mineral Exploration and Mineral Production

1.5. Decision on application

Decision on Permit Application: Gr

Decision Date: 19 December 2019

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The vegetation of the application area is broadly mapped as the following Beard vegetation association:

29: Sparse low woodland; mulga, discontinuous in scattered groups (GIS Database).

A flora and vegetation survey was conducted over the application area by Native Vegetation Solutions during August, 2019. The following vegetation associations were recorded within the application area (Native Vegetation Solutions, 2019):

Open Acacia aneura shrubland; and

Acacia aneura shrubland over Ironstone outcrop.

Clearing Description Maid Marion Project.

Big Bell Gold Operations Pty Ltd proposes to clear up to 80.6 hectares of native vegetation within a boundary of approximately 80.6 hectares, for the purpose of mineral exploration and mineral production. The project is located approximately 14 kilometres north-east of Meekatharra, within the Shire of Meekatharra.

Vegetation ConditionGood: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate

(Keighery, 1994);

To

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 Native Vegetation Solutions (2019).

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 is located within the Western Murchison subregion of the Murchison Interim biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). This subregion is characterised by Mulga low woodlands, often rich in ephemerals (usually with bunch grasses), on outcrop and fine textured Quaternary alluvial and eluvial surfaces (extensive hardpan washplains that dominate and characterise the subregion) mantling granitic and greenstone strata of the northern part of the Yilgarn Craton. Surfaces associated with the occluded drainage occur throughout with hummock grasslands on Quaternary sandplains, saltbush shrublands on calcareous soils and Halosarcia low shrublands on saline alluvia (CALM, 2002).

A total of 43 flora taxa from 11 families and 17 genera were recorded from the greater flora survey area (Native Vegetation Solutions, 2019). The floral diversity and composition recorded was consistent with the Murchison bioregion and the landforms present (Native Vegetation Solutions, 2019). None of the species recorded were identified as a Threatened flora species (Native Vegetation Solutions, 2019).

One Priority Flora Species *Calytrix verruculosa* (P3) was recorded at one location within the survey area. Two plants were recorded at this location (Native Vegetation Solutions, 2019). Clearing of this species within the application area is not likely to upgrade or increase its Conservation rating, as this species is both widespread and in large numbers throughout the local and regional area and is well documented by other regional surveys (Native Vegetation Solutions, 2019).

No weed species were identified within the application area (Native Vegetation Solutions, 2019). 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.

There were two broad fauna habitats identified across the application area (MWH, 2016; GIS Database). The habitats are well represented in the local region and the diversity of habitats is similar to those of the surrounding area. No species of conservation significance have been recorded within the application area (MWH, 2016). Given the habitats and habitat features present within the application area, the disturbance area are not likely to support a higher level of faunal diversity than surrounding areas.

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

Methodology

CALM (2002)

MWH (2016)

Native Vegetation Solutions (2019)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- 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

No fauna surveys were undertaken as part of this proposal, however several surveys have previously been undertaken in the local area. Based upon these surveys, the following two fauna habitats are likely to be present within the application area (MWH, 2016):

- Mulga Plain
- Rocky Outcrop

Information provided by Native Vegetation Solutions (2019) has also indicated that there were also areas that were described as degraded and have been degraded by mining related infrastructure. All of the habitats recorded were considered to be widespread and of limited significance for local fauna species (MWH, 2016).

The Mulga Plain habitat was the most dominant habitat within the application area with the remaining habitats only comprising a small portion of the area (MWH, 2016; Native Vegetation Solutions, 2019). There are also significant areas that were mapped as disturbed. The vegetation of the Mulga Plain was suitable for supporting small birds, reptiles and mammals and has high foraging potential for nectivorous birds when in flower (MWH, 2016). The habitat is also suitable for burrowing and fossorial species however, the habitat is not likely to support high species diversity and is largely composed of generalist species (MWH, 2016).

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

Methodology

MWH (2016)

Native Vegetation Solutions (2019)

GIS Database:

- Imagery
- Pre-European Vegetation
- 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 (Native Vegetation Solutions, 2019).

The vegetation associations within the application area are common and widespread within the region (Native Vegetation Solutions, 2019; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened (rare) flora.

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

Methodology Native Vegetation Solutions (2019)

GIS Database:

- Pre-European Vegetation
- 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 (Native Vegetation Solutions, 2019).

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

Methodology Native Vegetation Solutions (2019)

GIS Database:

- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(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 Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Murchison Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation association 29: Sparse low woodland; mulga, discontinuous in scattered groups (GIS Database). Approximately 99% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2019).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Murchison	28,120,587	28,044,823	~99.73	Least Concern	7.79
Beard vegetation associations – WA					
29	7,903,991	7,898,973	~99.94	Least Concern	6.28
Beard vegetation associations – Murchison Bioregion					
29	2,956,382	2,955,695	~99.98	Least Concern	3.15

^{*} Government of Western Australia (2019)

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

^{**} Department of Natural Resources and Environment (2002)

Methodology

Department of Natural Resources and Environment (2002)

Government of Western Australia (2019)

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 at

Proposal is at variance to this Principle

There are no watercourses or wetlands within the area proposed to clear (Native Vegetation Solutions, 2019; GIS Database).

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

Methodology

Native Vegetation Solutions (2019)

GIS Database:

- Hydrography, Lakes
- Hydrography, linear

(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 Belele and Violet 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 Belele land system is described as 'Hardpan wash plains interspersed by low sandy (wanderrie) banks supporting tall shrublands of mulga with understorey shrubs on the hardpan plains and non-saline shrubs with perennial grasses on the banks.' This land system is not generally susceptible to erosion (GIS Database).

The Violet land system consists of 'Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and patchy halophytic shrublands.' This land system is not generally susceptible to erosion (GIS Database).

The proposed clearing of up to 80.6 hectares of native vegetation within a boundary of approximately 80.6 hectares, for the purpose of mineral exploration and mineral production 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

- GIS Database:
- Landsystem Rangelands
- Soils, Statewide

(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

There are no conservation areas in the vicinity of the application area. The nearest DBCA (formerly DPaW) managed land is the former Mooloogool Pastoral Lease which is located approximately 62 kilometres east of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

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

Methodology

GIS Database:

- DPaW Tenure

(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.

Comment

Proposal is not likely to be at variance to this Principle

There are no Public Drinking Water Source Areas within the application area (GIS Database). The nearest Public Drinking Water Source Area is the Meekatharra Water Reserve located approximately 1.5 kilometres south of the application area (GIS Database). Generally, groundwater within the application area is 1,000 to

3,000 milligrams per litre of total dissolved solids which is considered to be brackish (GIS Database). The broader region remains largely uncleared and it is not likely that the proposed clearing will have an impact on groundwater quality in the local area.

There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows.

The proposed clearing 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

(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 semi-arid, with a low average rainfall of approximately 237.9 millimetres per year (BoM, 2019). With an average annual evaporation rate of 3800 millimetres (GIS Database), drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall.

There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

Methodology

BoM (2019)

GIS Database:

- Evaporation Isopleths
- Hydrographic Catchments Catchments
- Hydrography, linear

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

Comments

The clearing permit application was advertised on 4 November 2019 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2019). 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 (DPLH, 2019). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

Methodology

DPLH (2019)

4. References

BoM (2019) Bureau of Meteorology Website – Climate Data Online, Meekatharra Airport. Bureau of Meteorology. http://www.bom.gov.au/climate/data/ (Accessed 16 December 2019).

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

DPLH (2019) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 16 December 2019).

- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- MWH (2016) Gibraltar and Five Mile Well Project Areas; Level 1 Flora and Fauna Assessment. Report prepared for Metals X Limited, by MWH, July 2016.
- Native Vegetation Solutions (2019) Reconnaissance Flora and Vegetation Survey of the Maid Marion Mining Project. Report prepared for Westgold Group by Native Vegetation Solutions, August 2019

5. Glossary

Acronyms:

BoM Bureau of Meteorology, Australian Government

DAA
 Department of Aboriginal Affairs, Western Australia (now DPLH)
 DAFWA
 Department of Agriculture and Food, Western Australia (now DPIRD)
 DBCA
 Department of Biodiversity, Conservation and Attractions, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DBCA and DWER)

DoEEDepartment of the Environment and Energy, Australian GovernmentDERDepartment of Environment Regulation, Western Australia (now DWER)DMIRSDepartment of Mines, Industry Regulation and Safety, Western AustraliaDMPDepartment 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 DoEE)

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 DoEE)

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)

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:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T Threatened species:

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

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 in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for endangered fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for endangered flora.

VU Vulnerable species

Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for vulnerable flora.

Extinct Species:

EX Extinct species

Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes 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 fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018.*

P <u>Priority species:</u>

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species 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.