

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 9119/2
Permit type: Purpose

1.2. Proponent details

Proponent's name: Bardoc Gold Limited

1.3. Property details

Local Government Area:

Property: Mining Lease 24/146

Mining Lease 24/395 Mining Lease 24/950

Miscellaneous Licence 24/223 City of Kalgoorlie-Boulder

Colloquial name: Bulletin Project

1.4. Application

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

88.5 Mechanical Removal Mineral Production and Associated Activities.

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 24 August 2021

2. Site Information

Vegetation Description

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

The vegetation of the application area is broadly mapped as the following Beard vegetation association: 2903: Medium woodland; Salmon gum, goldfield blackbutt, gimlet & *Allocasuarina cristata* (GIS Database).

A flora and vegetation survey was conducted over the application area by Botanica Consulting Pty Ltd (Botanica) during September 2020. The following vegetation associations were recorded within the application area (Botanica, 2020):

CLP-EW2: Low woodland of *Eucalyptus moderata/ E. salmonophloia* over mid shrubland of *Acacia/ Eremophila* spp. and low chenopod shrubland on clay-loam plain;

RS-AFW1: Low woodland of *Acacia acuminata/ A. caesaneura* over mid shrubland of *Acacia / Melaleuca* spp. and low mixed shrubland on rocky hillslope; and

RS-EW1: Low open woodland of *Eucalyptus clelandiorum/ E. griffithsii* over tall open shrubland of *Acacia* spp. and low mixed shrubland on rocky hillslope.

Clearing Description Bulletin Project.

Bardoc Gold Limited proposes to clear up to 88.5 hectares of native vegetation within a boundary of approximately 99.728 hectares, for the purpose of mineral production and associated activities. The project is located approximately 40 kilometres north of Kalgoorlie-Boulder, within the City of Kalgoorlie-Boulder.

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

(Keighery, 1994).

To:

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment The vegetation condition was derived from a vegetation survey conducted by Botanica (2020).

Clearing permit CPS 9119/1 was granted by the Department of Mines, Industry Regulation and Safety on 28 January 2021 was valid from 20 February 2021 to 19 February 2026. The permit authorised the clearing of up to 70 hectares of native vegetation within a boundary of approximately 84.5 hectares, for the purpose of mineral production and associated activities.

On 3 June 2021, the Permit Holder applied to amend CPS 9119/1 to increase the amount of clearing to 88.5 hectares, the permit boundary to approximately 99.728 hectares and add Miscellaneous Licence L24/223 to the permit.

3. Assessment of application against Clearing Principles

Comments

Bardoc Gold has applied to amend the permit to increase the amount of clearing by 18.5 hectares and the permit boundary by approximately 15.22 hectares, in order to accommodate the construction and maintenance of a haulage road providing improved access options to the Bulletin gold mine, avoiding the need to operate road trains on a public road (Bardoc, 2021).

The clearing permit application area is located within the Eastern Murchison subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Murchison Bioregion (GIS Database). The Eastern Murchison subregion is characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. Broad plains of red-brown soils and breakaway complexes as well as red sandplains occur, while salt lake systems are associated with the occluded Paleodrainage system. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Tecticornia* shrublands. The climate is arid, with a mean annual rainfall of 200 millimetres, mainly occurring during winter (CALM, 2002).

The amendment area is broadly mapped as Beard vegetation association 2903, which is consistent with the original permit area (GIS Database). Approximately 96% of the pre-European extent of Beard vegetation association 2903 remains uncleared at both state and bioregional levels (Government of Western Australia, 2019). Hence, the vegetation proposed to be cleared does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

Analysis of aerial imagery and available reports (Botanica, 2020) indicates that the vegetation associations and landform types occurring within the amendment area are consistent with those occurring within the original permit boundary and are well represented in the region (GIS Database). None of the vegetation communities are identified as a Threatened or Priority Ecological Community (PEC) (Botanica, 2020; GIS Database).

Botanica (2020) conducted a reconnaissance flora and vegetation survey of the existing permit area during September 2020. A total of 95 flora species were recorded in the area (Botanica, 2020). No Threatened or Priority flora have been recorded in proximity of the amendment application area (DBCA, 2007-; GIS Database), and none were found during the flora and vegetation surveys (Botanica, 2020). Given its linear nature and the similar and contiguous nature of vegetation types represented, it is unlikely that the native vegetation proposed to be cleared represents a higher floristic diversity than the original permit area or surrounding areas.

Botanica (2020) mapped two fauna habitat types within the application area that are considered well represented within the wider region. A desktop assessment identified 122 bird, 73 reptile, 26 mammal and four amphibian species with a potential to occur within the application area, including three species of conservation significance (DAWE, 2021; DBCA, 2007-; Botanica, 2020).

In July 2021 Botanica (2021) undertook a targeted survey for the Critically Endangered Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*) within Bardoo's proposed Bulletin haul road area subject to this clearing permit amendment application, and the Aphrodite Project area further to the north. No evidence of the Butterfly's host ant species (*Camponotus* sp. nr. *terebrans*) colonies were found in the proposed haul road area, which involved sampling for the ants at the base of ten Salmon Gum trees (*Eucalyptus salmonophloia*). On this basis, it is considered unlikely that the amended permit area represents significant habitat for the Arid Bronze Azure Butterfly.

The Malleefowl (*Leipoa ocellata*, Vulnerable) is a species of conservation significance that may potentially occur within the amendment application area, although no evidence of the species was found within the original permit area (Botanica, 2020; DAWE, 2020; DBCA, 2007-). Habitat within the original permit boundary appeared marginal or unsuitable for Malleefowl breeding, however the amendment application area does contain some more densely vegetated areas. Based on this, it is considered the proposed clearing may be at variance with Principle (b), and addition of a fauna management condition to the Clearing Permit is recommended, to minimise the risk of the proposed clearing impacting on this listed fauna species.

No threatened or significant fauna species or habitats of significance were recorded within the application area during the field survey (Botanica, 2020). Given that the amendment application area is adjacent to an existing operational mine site that is highly disturbed and well vegetated areas of similar native vegetation occur throughout the local area and bioregion (GIS Database; Botanica, 2020), the narrow corridor of vegetation required to establish the haul road is unlikely to provide significant habitat for local fauna species.

There are no permanent watercourses or wetlands within the amendment application area (GIS Database), however one ephemeral drainage line is present (GIS Database). Waterway crossings should be avoided if possible (DWER, 2021). Should waterway crossings be unavoidable, impacts to the natural waterway should be minimised (DWER, 2021). Potential impacts to vegetation growing in association with drainage lines from

the proposed clearing may be minimised by the implementation of a watercourse management condition.

The proposed clearing is located in the Broad Arrow Dam Catchment Area (GIS Database). This catchment area is not used for drinking water supply, however is still a proclaimed source under the *Country Areas Water Supply Act 1947* (DWER, 2021). No priority areas or protection zones have been assigned to this catchment (DWER, 2021).

The proposed clearing occurs in the Campsite, Leonora and Moriarty Land Systems (DPIRD, 2021). It is noted that all three of these land systems are susceptible to soil erosion if the ground cover is removed or the soil surface is disturbed (DPIRD, 2021). In particular, drainage tracts are highly susceptible to water erosion, particularly in areas where cover has been reduced or the soil surface disturbed. It is also noted that impedance to natural drainage lines can initiate soil erosion and/or result in water starvation to downstream vegetation (DPIRD, 2021). Based on the above, the proposed clearing is at variance to principle (g). Staged clearing and watercourse management conditions will minimise the risk of land degradation. It is also noted that cleared vegetation and topsoil will be stockpiled for rehabilitation purposes (Bardoc, 2021) and the haul road design approved under the *Mining Act 1978* includes floodways to minimise interference to natural waterflows.

Due to the linear and narrow nature of the proposed clearing to establish a haul road, the amendment application is considered unlikely to degrade groundwater quality, or increase the incidence or intensity of natural flood events.

There are no conservation areas in the vicinity of the amendment application area. The nearest DBCA (formerly DPaW) managed land is the former Goongarrie Station (UCL, LR3068/801) and Goongarrie National Park, which is located approximately 30 kilometres north-northeast of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

Several weed species were identified during the survey of the current permit area, and known to be locally and regionally widespread (Botanica, 2021) Weeds have the potential to out-compete native vegetation and reduce biodiversity. Continued implementation of the existing weed management condition may minimise the risk of spread of weeds into the amendment application area.

The vegetation associations, habitat types and landforms found within the amendment area are similar to those contained within the original permit area, and locally well represented (Botanica, 2020; GIS Database). The clearing to be conducted within the amendment application area to construct a haul road is unlikely to have any significant additional impacts.

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 9119/1, with the exception of Principles (b) and (g) which may be at variance and are at variance, in comparison to the original assessment which concluded clearing was not likely to be at variance with these Principles.

Methodology

Bardoc (2021)

Botanica (2020)

Botanica (2021)

CALM (2002)

DAWE (2021)

DBCA (2007-)

DPIRD (2021)

DWER (2021)

Government of Western Australia (2019)

GIS Database:

- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Landsystem Rangelands
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Soils, Statewide
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

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

Comments

The amendment application was advertised on 28 June 2021 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2004/010) over the area under application (DPLH, 2021). This claim has been determined by the Federal Court on behalf of the claimant group (WAD28/2019). 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, 2021). 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 (2021)

4. References

Bardoc (2021) Supporting additional information received in relation to Bardoc Clearing Permit Application CPS 9119/2.

Bardoc Gold Limited, Western Australia.

Botanica (2020) Detailed Flora/Vegetation Survey & Basic Fauna Survey - Bulletin Project. Report prepared for Bardoc Gold Limited by Botanica Consulting Pty Ltd, November 2020.

Botanica (2021) Survey for the Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*). Aphrodite Project. Report prepared for Bardoc Gold Limited by Botanica Consulting Pty Ltd, July 2021.

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

DAWE (2021) EPBC Act Protect Matters Search Tool. Department of Agriculture, Water and the Environment. https://www.environment.gov.au/epbc/protected-matters-search-tool (Accessed 20 July 2021).

DBCA (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. https://naturemap.dbca.wa.gov.au/ (Accessed 20 July 2021).

DPIRD (2021) Advice received in relation to Clearing Permit Application CPS 9119/1. Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, 29 January 2021.

DPLH (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 20 July 2021).

DWER (2021) Advice received in relation to Clearing Permit Application CPS 9119/2. Department of Water and Environmental Regulation, Western Australia, 26 July 2021.

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.

5. Glossary

Acronyms:

BC Act Biodiversity Conservation Act 2016, Western Australia
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)

DAWE
Department of Agriculture, Water and the Environment, Australian Government
DBCA
Department of Biodiversity, Conservation and Attractions, Western Australia
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)

DoEE Department of the Environment and Energy (now DAWE)
DoW Department of Water, Western Australia (now DWER)

DPaW Department of Parks and Wildlife, Western Australia (now DBCA)

DPIRD Department of Primary Industries and Regional Development, Western Australia

DPLH Department of Planning, Lands and Heritage, Western Australia

DRF Declared Rare Flora (now known as Threatened Flora)

DWER Department of Water and Environmental Regulation, Western Australia

EP Act Environmental Protection Act 1986, Western Australia **EPA** Environmental Protection Authority, 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:

{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 Priority species:

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.

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
- (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.