

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8854/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Carnegie Gold Pty Ltd

1.3. Property details

Property: Mining Lease 30/157
Mining Lease 30/256
General Purpose Lease 30/8
General Purpose Lease 30/9
Local Government Area: Shire Menzies
Colloquial name: Riverina Gold Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
464.95		Mechanical Removal	Mineral Production and Associated Activities.

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 August 2021

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The clearing permit application area has been broadly mapped as the following Beard vegetation associations:

20: Low woodland; mulga mixed with *Allocasuarina cristata* and *Eucalyptus* sp.;
251: Low woodland; mulga and *Allocasuarina cristata*; and
502: Medium woodland; goldfields blackbutt and red mallee (GIS Database). (GIS Database).

A reconnaissance and targeted flora and vegetation survey were conducted over the application area by Jenny Borger Botanical Consulting during February 2017 and November 2019 (JBBC, 2019).

Subsequently an additional detailed flora and vegetation survey was conducted in January 2021 by JBBC (2021) for the amendment application area. Some portions of the amendment application area were not covered by this additional survey, however these areas are well represented and contiguous to described surveyed areas (GIS Database).

Following is a consolidated list of vegetation associations described over the current permit area and amendment application areas (JBBC, 2021; 2019):

1A - Gently sloping lateritic plain (abundant mantle of fine ironstone gravel)

Eucalyptus oleosa subsp. *oleosa*, *E. corrugata*, *E. griffithsii*, *Casuarina pauper* open woodland to isolated trees over *Acacia burkittii*, *A. tetragonophylla* tall shrubland patches over *Senna artemisioides* subsp. *filifolia*, *Maireana sedifolia*, *Eremophila decipiens* subsp. *decipiens*, *Maireana pyramidata*, *Scaevola spinescens* sparse shrubland over *Ptilotus obovatus* low isolated shrubs.

1B – Gently sloping alluvium at base of greenstone hills

Eucalyptus oleosa subsp. *oleosa*, *E. griffithsii* mallee woodland over *Acacia burkittii*, *A. caesaneura* tall open shrubland over *Acacia burkittii*, *Senna artemisioides* subsp. *filifolia*, *Eremophila decipiens* subsp. *decipiens*, *Hybanthus floribundus* subsp. *curvifolius* sparse shrubland.

2 - Gently sloping stony plain (abundant mantles of quartz, ironstone and calcrete)

Stands of *Eucalyptus corrugata* and *Casuarina pauper* open mallee forest over *Casuarina pauper*, *Dodonaea lobulata*, *Senna artemisioides* subsp. *filifolia*, *Scaevola spinescens*, *Acacia tetragonophylla* open shrubland over *Casuarina pauper*, *Dodonaea lobulata*, *Ptilotus obovatus*, *Scaevola spinescens*, *Senna artemisioides* subsp. *x artemisioides* low open shrubland in *Acacia burkittii*, *A. caesaneura*, *Dodonaea lobulata*, *A. tetragonophylla*, *Senna artemisioides* subsp. *filifolia* open shrubland over *Ptilotus obovatus*, *Senna artemisioides* subsp. *filifolia* over *Ptilotus obovatus*, *Acacia tetragonophylla* low sparse shrubland.

3A - Broad drainage lines on alluvial flats

Eucalyptus griffithsii, *E. oleosa* subsp. *oleosa* woodland over *Acacia burkittii*, *A. assimilis* subsp. *assimilis*, *Pittosporum angustifolium*, *Brachychiton gregorii*, *Santalum spicatum* tall open shrubland over *Senna artemisioides* subsp. *filifolia*, *Dodonaea lobulata*, *Acacia burkittii*, *Eremophila interstans* subsp. *interstans*, *E. decipiens* subsp. *decipiens* open shrubland over *Maireana georgei*, *Solanum lasiophyllum*, *Senna artemisioides* subsp. *filifolia* low open shrubland.

3B - Broad drainage line on alluvial plain; denser patches of vegetation in depressions surrounded by tall open shrubland or open shrubland with isolated trees

Eucalyptus corrugata, *E. griffithsii* woodland over *Casuarina pauper*, *Acacia synchronicia*?, *Eucalyptus corrugata* low open woodland over *Acacia murrayana*, *A. tetragonophylla*, *Casuarina pauper*, *Senna artemisioides* subsp. *filifolia* shrubland over *Senna artemisioides* subsp. *filifolia*, *Maireana sedifolia*, *Casuarina pauper*, *Eremophila decipiens* subsp. *decipiens*.

3C - Broad drainage line on alluvial plain; Patches of *Acacia aptaneura* tall shrubland or low open woodland

Acacia aptaneura low open woodland over *Acacia aptaneura* tall open shrubland over *Acacia aptaneura*, *A. tetragonophylla*, *Senna artemisioides* subsp. *x artemisioides*, *Ptilotus obovatus*, *Atriplex vesicaria* open shrubland over *Ptilotus obovatus*, *Acacia aptaneura*, *Maireana tomentosa*, *Sida* sp, *Senna artemisioides* subsp. *x artemisioides* low sparse shrubland over *Enneapogon* sp., *Sida* sp, *Senna artemisioides* subsp. *x artemisioides* low sparse tussock grassland.

3D - Broad drainage line; alluvial plain

Senna artemisioides subsp. *x artemisioides*, *Acacia tetragonophylla* sparse shrubland over *Senna artemisioides* subsp. *x artemisioides*, *Maireana pyramidata* low sparse shrubland over *Ptilotus obovatus*, *Maireana thesioides*, *Sida* sp., *Atriplex vesicaria*, *Enneapogon* sp. low sparse shrubland.

3E - Broad drainage line on alluvial plain

Acacia burkittii, *Acacia aptaneura*, *A. murrayana*, *Santalum spicatum* tall shrubland over *Senna artemisioides* subsp. *x artemisioides*, *Senna artemisioides* subsp. *filifolia*, *Acacia murrayana*, *Senna pleurocarpa* var. *pleurocarpa*, *Pimelea microcephala* shrubland over *Senna artemisioides* subsp. *filifolia*, *Ptilotus obovatus* low open to sparse shrubland.

4A - Greenstone hills; midslopes; aspect variable

Casuarina pauper open woodland over *Acacia quadrimarginea*, *Casuarina pauper* low open forest over *Acacia quadrimarginea*, *Eremophila oldfieldii* subsp. *angustifolia*, *Dodonaea lobulata*, *Acacia burkittii* tall open shrubland over *Dodonaea lobulata*, *Dodonaea rigida*, *Eremophila oldfieldii* subsp. *angustifolia* open shrubland over *Dodonaea lobulata*, *Dodonaea rigida*, *Ptilotus obovatus*, *Acacia quadrimarginea* low sparse shrubland over *Cheilanthes lasiophylla*, *Enneapogon* sp., *Haloragis trigonocarpa*, *Solanum lasiophyllum* low sparse fernland.

4B - Greenstone hills; midslopes

Allocasuarina acutivalvis subsp. *acutivalvis* or *Casuarina pauper* isolated low trees (8–9 m) over *Acacia ramulosa* var. *ramulosa*, *A. quadrimarginea*, *A. caesaneura* tall shrubland over *Philothea brucei* subsp. *brucei*, *Eremophila latrobei* subsp. *latrobei*, *Dodonaea rigida*, *Prostanthera althoferi* subsp. *althoferi* open shrubland.

4C - Crests and upper slopes of greenstone hills

Casuarina pauper low open woodland over *Casuarina pauper*, *Acacia quadrimarginea*, *Eremophila oldfieldii* subsp. *angustifolia* tall open shrubland over *Eremophila oldfieldii* subsp. *angustifolia*, *Casuarina pauper*, *Dodonaea lobulata*, *Senna artemisioides* subsp. *filifolia*, *Acacia tetragonophylla* open shrubland over *Ptilotus obovatus*, *Dodonaea lobulata*, *Senna artemisioides* subsp. *filifolia* low open shrubland.

4D – Upper slopes

Acacia quadrimarginea, *Santalum spicatum* tall shrubland over *Dodonaea lobulata*, *Acacia quadrimarginea*, *Philothea brucei* subsp. *brucei*, *Senna cardiosperma*, *Eremophila oldfieldii* subsp. *angustifolia* open shrubland over *Ptilotus obovatus*, *Dodonaea lobulata*, *Acacia quadrimarginea*, *Sida calyxhymenia*, *Senna cardiosperma* low sparse shrubland over low isolated *Cheilanthes sieberi* subsp. *sieberi*, *Enneapogon* sp., *Haloragis trigonocarpa*, *Marsdenia australis*, *Vincetoxicum lineare*.

4E - Drainage lines, valleys on mid to upper slopes; usually incised.

Patches of *Eucalyptus oleosa* subsp. *oleosa* mallee woodland in *Casuarina pauper*, *Eucalyptus oleosa* subsp. *oleosa* low woodland over *Acacia assimilis* subsp. *assimilis*, *Casuarina pauper*, *Alectryon oleifolius* subsp. *canescens* tall open shrubland over *Dodonaea lobulata*, *Acacia assimilis* subsp. *assimilis*, *Acacia quadrimarginea*, *Eremophila longifolia*, *Acacia tetragonophylla*, *Senna cardiosperma* shrubland over *Casuarina pauper*, *Ptilotus obovatus*, *Dodonaea lobulata* low sparse shrubland.

5 - Ridge (original application area only)

Grevillea nematophylla subsp. *nematophylla* isolated medium trees over *Acacia incurvaneura* low open forest over *Acacia burkittii*, *Acacia tetragonophylla*, *Acacia ramulosa* var. *ramulosa*, *Eremophila clarkei*, *Casuarina pauper* tall open shrubland over *Philothea brucei* subsp. *brucei*, *Eremophila clarkei*, *Dodonaea lobulata*, *Dodonaea rigida*, *Scaevola spinescens* sparse shrubland over *Hybanthus floribundus* subsp. *curvifolius*, *Philothea brucei* subsp. *brucei*, *Dodonaea rigida*, *Eremophila clarkei*, *Scaevola spinescens* low open shrubland.

6A - Greenstone hills; mostly lower slopes

Eucalyptus clelandiorum, *E. corrugata*, *E. oleosa* or *E. salubris* woodlands over *Eremophila* sp. Mt Jackson, *E. oldfieldii* subsp. *angustifolia* tall sparse shrubland over *Eremophila* sp. Mt Jackson, *Senna artemisioides*

subsp. *filifolia* sparse shrubland over *Ptilotus obovatus*, *Eremophila* sp. *Mt Jackson*, *Senna artemisioides* subsp. *filifolia*, *Maireana* spp., *Casuarina pauper* low sparse shrubland.

6B - Greenstone hills; ridge;

Eucalyptus corrugata woodland over *Eucalyptus corrugata*, *Casuarina pauper* low open woodland over *Acacia burkittii*, *Dodonaea lobulata* tall sparse shrubland over *Dodonaea lobulata*, *Scaevola spinescens*, *Senna artemisioides* subsp. *filifolia*, *Acacia burkittii*, *Casuarina pauper* sparse shrubland over *Dodonaea lobulata*, *Ptilotus obovatus*, *Senna artemisioides* subsp. *filifolia*, *Eremophila decipiens* subsp. *decipiens*, *Acacia tetragonophylla* low sparse shrubland.

7 - Greenstone hills; summit

Acacia caesaneura, *Brachychiton gregorii*, *Acacia quadrimarginea* tall shrubland over *Eremophila latrobei* subsp. *latrobei* sparse shrubland over *Senna cardiosperma*, *Ptilotus obovatus*, *Acacia caesaneura*, *Solanum lasiophyllum* low sparse shrubland over *Cheilanthes lasiophylla* low open fernland.

8 Greenstone hills, outwash slope; valley

Casuarina pauper low isolated trees over *Acacia burkittii*, *Allocasuarina eriochlamys* subsp. *eriochlamys*, *Pittosporum angustifolium* tall shrubland over *Allocasuarina eriochlamys* subsp. *eriochlamys*, *Acacia burkittii*, *Eremophila decipiens* subsp. *decipiens*, *Senna artemisioides* subsp. *filifolia*, *Dodonaea lobulata*, *Acacia tetragonophylla* open shrubland, *Ptilotus obovatus*, *Acacia tetragonophylla* low sparse shrubland.

9A - Greenstone hills, outwash slope; valley

Eucalyptus leptopoda subsp. *subluta*, *E. oleosa* subsp. *oleosa*, *Acacia burkittii*, *Casuarina pauper* open mallee woodland over *Acacia burkittii*, *A. ramulosa* var. *ramulosa*, *A. tetragonophylla* tall open shrubland over *Acacia assimilis* subsp. *assimilis*, *A. burkittii*, *A. ramulosa* var. *ramulosa* sparse shrubland over *Ptilotus obovatus* low isolated shrubs.

9B - Incised drainage line; valley western slope

Casuarina pauper isolated low trees over *Acacia burkittii*, *A. ramulosa* var. *ramulosa*, *A. tetragonophylla* tall shrubland.

Clearing Description	Riverina Gold Project. Carnegie Gold Pty Ltd (Carnegie Gold) proposes to clear up to 464.95 hectares of native vegetation within a boundary of approximately to 464.95 hectares, for the purposes of mineral production and associated activities. The project is located approximately 45 kilometres west of Menzies, within the Shire of Menzies.
Vegetation Condition	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994). To; Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).
Comment	The vegetation condition was derived from flora and vegetation surveys conducted by JBBC (2021; 2019). Several areas within the application are severely degraded due to prior mining and grazing activities (JBBC, 2021). Clearing permit CPS 8854/1 was granted by the Department of Mines, Industry Regulation and Safety on 18 June 2020 and was valid from 11 July 2020 to 10 July 2025. The permit authorised the clearing of up to 219.5 hectares of native vegetation within a boundary of approximately 219.5 hectares, for the purposes of mineral production and associated activities. On 30 April 2021, the Permit Holder applied to amend CPS 8854/1 to increase the permit boundary and approved clearing area to approximately 464.95 ha hectares (an increase of 245.45 hectares) to enable an expansion of the Riverina Gold Project.

3. Assessment of application against Clearing Principles

Comments

Carnegie Gold has applied to amend the permit to increase the permit boundary and approved clearing area by approximately 245.45 hectares. The applicant has identified additional mineral resources requiring extension to the approved clearing permit area, to accommodate two additional satellite pits, extensions to an existing waste rock landform, construction of new waste rock landforms, and modifications to access roads, village and the existing airstrip.

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: internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development; broad plains with red-brown soils and breakaway complexes as well as red sandplains; and salt lake systems (CALM, 2002). Vegetation is dominated by mulga woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Tecticornia* shrublands (CALM, 2002).

The amendment area is broadly mapped as Beard vegetation associations 20, 251 and 502, which is consistent with the original permit area (GIS Database). Approximately 99% of the pre-European extent of each of these Beard vegetation associations remains uncleared at both the state and bioregional level (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.

JBBC (2021) conducted a detailed flora and vegetation survey of the amendment area during January 2021. A total of 44 vascular taxa from 11 families and 23 genera were recorded in the area. No Threatened or Priority flora have been recorded within the amendment application area (DBCA, 2007-; GIS Database), and none were found during the detailed flora and vegetation survey (JBBC, 2021).

None of the vegetation communities within the application area were identified as a Threatened or Priority Ecological Community (GIS Database). Analysis of aerial imagery indicates that the vegetation associations and landform types occurring within the amendment area are similar to those occurring within the original permit boundary (JBBC, 2019) and are well represented in the region (JBBC, 2021; GIS Database).

The amendment application area includes additional portions of the low greenstone hills which characterise the western side of the current mine development, however there is no indication that this is a habitat of specific conservation significance (JBBC, 2021).

Four broad fauna habitats were described for the amendment area, as part of the fauna assessment completed by Ecotec (2021):

- Acacia/Allocasuarina/Casuarina Shrubland on rocky hills and slopes;
- Acacia/Allocasuarina/Casuarina Shrubland on sandplain;
- Eucalypt Woodland on rocky hills and slopes - mainly found in the west of the survey area;
- Eucalypt Woodland on sandplain - mainly found in the east of the survey area; and
- Major Creek Line - dense vegetation along significant, defined creek lines.

A total of 33 native fauna species were recorded during the field fauna survey, comprised of 26 bird species, 4 mammal species and 3 reptile species (Ecotec, 2021). No species of conservation significance were recorded during the field survey and all fauna species recorded were considered relatively common and widespread (Ecotec, 2021). Database records indicate 116 fauna species have previously been recorded within 20 kilometres of the survey area (DAWE, 2021; DBCA, 2007-).

No evidence of the Malleefowl (*Leipoa ocellata*, VU) was recorded during the survey, however the amendment application area falls within the known distribution range for the species and contains suitable habitat (DAWE, 2021; DBCA, 2007-; Ecotec, 2021). Hence, continued implementation of the existing Malleefowl management condition is recommended, to minimise the risk of impacting on the species.

A number of other bird species of conservation significance have the potential to occur within the application area (DAWE, 2021; DBCA 2007-; Ecotec, 2021), however each are known from much broader distribution ranges and are nomadic or migratory in nature, and are therefore unlikely to rely on habitats found within the amendment application area for their survival (Ecotec, 2021).

The amendment application area falls within the habitat distribution range for the Critically Endangered Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*), however undisturbed smooth barked eucalypt communities suitable for the host ant were not identified as part of the surveys and the species is deemed highly unlikely to occur (Carnegie, 2021; Ecotec, 2021; JBBC, 2021).

No other fauna of conservation significance were deemed likely to occur within the application area (Ecotec, 2021). All fauna habitats represented within the application are considered common and widespread within the region and have been subject to some level of pastoral or mining disturbance (GIS Database; Ecotec, 2021; JBBC, 2021). Therefore, the proposed clearing of native vegetation for the minesite expansion is unlikely to represent a significant habitat for fauna species.

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the amendment area (GIS Database). The application area is dissected by some ephemeral drainage lines which have already been intersected by current minesite operations (JBBC, 2021). While the mapped vegetation types have not been identified as riparian, potential local impacts to vegetation growing in association with the drainage lines can be minimised by the continued implementation of a watercourse management condition.

The amendment application area occurs within the Moriarty, Lawrence and Bunyip Land Systems (GIS Database). These land systems have some susceptibility to erosion, particularly along drainage tracts and where vegetation cover is removed (Pringle et al., 1994). To minimise the potential for land degradation, Ora Banda Mining (2021) will implement a number of avoidance, mitigation and management strategies including: minimising ground disturbance wherever possible, scheduling creek crossing construction activities to coincide with no creek flow periods where practicable, environmental supervision during clearing and topsoil recovery, cleared vegetation and topsoil stockpiled for use in progressive rehabilitation, ensuring topsoil is stockpiled away from drainage lines and installation of erosion control structures along roads and areas of high erosion risk (Ora Banda Mining, 2021). The continued implementation of watercourse management and staged clearing conditions will also minimise the potential for land degradation.

The application area is not within or in close proximity to any conservation areas (GIS Database). The nearest DBCA (formerly DPaW) managed land is the former Credo Pastoral Lease which is located approximately

three kilometres south of the amendment application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.

No weeds were identified during the vegetation survey of the amendment application area (JBBC, 2021), however several species of weeds are known to occur regionally (DAWE, 2021). Weeds have the potential to out-compete native vegetation and reduce biodiversity if brought into the application area. 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 the original permit area and are well represented in surrounding areas (JBBC, 2021; GIS Database). The clearing to be conducted within the amendment application area for the mine expansion 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 8854/1.

Methodology

CALM (2002)
DAWE (2021)
DBCA (2007-)
Ecotec (2021)
Government of Western Australia (2019)
JBBC (2019)
JBBC (2021)
Ora Banda Mining (2021)
Pringle et al. (1994)

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 24 May 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 are no native title claims over the area under application (DPLH, 2021). 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

- 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 14 July 2021).
- DBCA (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. <https://naturemap.dbca.wa.gov.au/> (Accessed 14 July 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 14 July 2021).
- Ecotec (2021) Riverina Area Fauna and Habitat Survey. Report prepared for Ora Banda Mining Limited, by Ecotec (WA) Pty Ltd, on behalf of Jenny Borger Botanical Consulting, January 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>
- JBBC (2019) Targeted Vegetation and Flora Survey - Riverina Gold Operations. Report prepared for Ora Banda Mining Limited, by Jenny Borger Botanical Consulting, November 2019.
- JBBC (2021) Detailed vegetation and flora survey in the Riverina area to support the amendment of Clearing Permit CPS 8854-1 for Ora Banda Mining Ltd. Report prepared for Ora Banda Mining Limited, by Jenny Borger Botanical Consulting, April 2021.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Ora Banda Mining (2021) Riverina Gold Operations Application for Amendment # 1 for CPA 8854-1 Riverina Pit Extension M30/256, G30/8 and G30/9. Report prepared by OraBanda Mining Limited, April 2021.
- Pringle, H.J.R., Van Vreeswyk, A.M.E. and Gilligan, S.A. (1994) An inventory and condition survey of the north-eastern Goldfields, Western Australia. Technical Bulletin No. 87. Department of Agriculture, South Perth, Western Australia.

5. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016, Western Australia</i>
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	<i>Environmental Protection Act 1986, Western Australia</i>
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)</i>
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914, Western Australia</i>
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 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.