

# **Clearing Permit Decision Report**

# 1. Application details

### 1.1. Permit application details

Permit application No.: 6657/4

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Regis Resources Limited

1.3. Property details

Property: Mining Leases 38/237, 38/250, 38/283, 38/292, 38/303, 38/316, 38/317, 38/343, 38/344,

38/352, 38/354, 38/407, 38/498, 38/499, 38/500, 38/589, 38/802, 38/939, 38/940, 38/943, 38/1091 38/1092, 38/1249, 38/1250, 38/1251, 38/1257, 38/1258, 38/1259, 38/1260, 38/1261,

38/1262, 38/1263, 38/1268, 38/1269, 38/1270;

Miscellaneous Licences 38/133, 38/182, 38/234, 38/238;

Local Government Area: Shire of Laverton

Colloquial name: Duketon, Gloster and Banyego Gold Projects

1.4. Application

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

2,759 Mechanical Removal Mineral Production and Associated Infrastructure

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 27 October 2016

# 2. Site Information

# 2.1. Existing environment and information

### 2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area (i.e. the area previously approved under CPS 6657/1, 6657/2, 6657/3 and the proposed amendment area for CPS 6657/4. Only Beard vegetation association 18 is mapped within the amendment area) (GIS Database):

Beard vegetation association 18: Low woodland; mulga (Acacia aneura).

The vegetation associations and types found within the previously approved areas (CPS 6657/1, CPS 6657/2 and CPS 6657/3 are described in the relevant decision reports. The vegetation types mapped within the amendment area are described below.

Ten vegetation communities were identified within the amendment area during a Level 2 flora and vegetation assessment that covered the majority of the amendment area (Mattiske, 2015):

- A7: Low open woodland of Acacia aneura over Acacia craspedocarpa, Acacia tetragonophylla, Santalum spicatum, Eremophila georgei and Senna artemisioides subsp. filifolia over Sida calyxhymenia, Ptilotus obovatus and Eriachne mucronata on orange sandy-loams in minor drainage lines;
- A8: Low open woodland to open shrubland of Acacia ayersiana, Acacia aneura var. aneura and Acacia aptaneura with Acacia tetragonophylla over Eremophila latrobei subsp. filiformis, Ptilotus obovatus, Dianella revoluta and Eragrostis eriopoda on orange sandy-loams on flats;
- A13: Semi-closed to open shrubland of Acacia mulganeura, Acacia incurvaneura, Acacia tetragonophylla and Acacia craspedocarpa over Ptilotus obovatus, Hibiscus burtonii and Solanum lasiophyllum on flats with red clay soil and quartz pebbles;
- **A26:** Scrub to open scrub of *Acacia* sect. *Juliflorae* (*A. incurvaneura*, *A. macraneura* and *A. mulganeura*) over open low shrubland of *Ptilotus obovatus* and *Solanum lasiophyllum* over low chenopod shrubland of *Maireana triptera* and *Sclerolaena cuneata* on red-orange clay loam on flats and slopes (rarely) with quartz pebbles;
- **A28:** Scrub to open scrub of *Acacia* sect. *Juliflorae* (A.?aneura, A. incurvaneura and A. ?pteraneura) over open low shrubland of *Cratystylis subspinescens*, *Ptilotus obovatus*, *Senna artemisioides* subsp. ×sturtii, Solanum lasiophyllum over Maireana pyramidata on red-orange clay loam on flats and slopes with quartz and iron pebbles;
- A29: Thicket to scrub of Acacia tetragonophylla, Acacia sect. Juliflorae (A. ?aneura and A. incurvaneura) and Acacia ?burkittii with emergent Hakea recurva subsp. arida over low shrubland of Senna artemisioides subsp. xartemisioides, Cratystylis subspinescens, Eremophila ?youngii and Ptilotus divaricatus over mixed grasses on red-orange clay loam to sandy loam on minor drainage lines;
- C1: Low open Chenopod shrubland of Maireana pyramidata and Cratystylis subspinescens with emergent Acacia aneura and Hakea preissii over Frankenia setosa, Maireana georgei, Maireana planifolia, Maireana tomentosa and Sclerolaena eriacantha on orange clay-loams on flats;

C3: Open Chenopod shrubland of *Tecticornia pergranulata*, *Maireana pyramidata*, *Frankenia georgei* and *Sclerolaena fusiformis* on flats with red clay soil and quartz pebbles;

**C8:** Low open Chenopod shrubland of *Tecticornia* sp., *Roycea divaricata*, *Maireana pyramidata* and *Maireana triptera* with emergent *Acacia* sect. *Juliflorae* (A. ?aneura and A. incurvaneura) over *Frankenia setosa* and *Cratystylis subspinescens* on red brown clay to clay-loams on flats and slopes with quartz pebbles;

**E1**: Open woodland of *Eucalyptus oleosa* subsp. *oleosa* over open low shrubland of *Tecticornia* sp., *Cratystylis subspinescens*, *Scaevola spinescens* and *Atriplex* sp. on red-orange clay loam on flats.

\*Note: cleared areas also occur within the amendment area.

### Clearing Description

Gloster Gold Mine Project, Greater Duketon Gold Project & Banyego Gold Mine Project

Regis Resources Limited proposes to clear up to 2,759 hectares of native vegetation within a total boundary of approximately 11,447 hectares, for the purpose of mineral production. The project is located approximately 140 kilometres north of Laverton in the Shire of Laverton.

# Vegetation Condition

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

Tο

Pristine: No obvious signs of disturbance (Keighery, 1994).

#### Comment

Clearing Permit CPS 6657/1 was granted by the Department of Mines and Petroleum (DMP) on 15 October 2015 and authorised the clearing of up to 1,450 hectares of native vegetation within a clearing permit boundary of approximately 7,862 hectares. The clearing was authorised for the purpose of mineral production and associated infrastructure. CPS 6657/1 consolidated five existing permits into one new permit and resulted in an increase in the total amount of clearing by 95 hectares.

Clearing permit CPS 6657/2 was granted by DMP on 11 February 2016 and authorised the clearing of up to 1,900 hectares within a clearing permit boundary of approximately 8,767 hectares. This amendment was required in order to allow for the development of the Gloster Gold Mine Project.

Clearing permit CPS 6657/3 was granted by DMP on 21 April 2016 and authorised the clearing of up to 2,250 hectares within a clearing permit boundary of approximately 9,744 hectares. This amendment was required in order to allow for the construction a haul road connecting the Gloster Gold Mine area to the Greater Duketon Gold Project area.

The assessment of the previously approved permit areas can be found within decision reports CPS 6657/1, CPS 6657/2 and CPS 6657/3. The content of this assessment against the clearing principles applies to the additional proposed clearing (509 hectares) within Mining Leases 38/344, 38/1269 and 38/1270, which is required in order to allow for the development of the Banyego Gold Mine.

The condition of the vegetation in the current amendment area (CPS 6657/4) was determined via a flora and vegetation survey conducted by Mattiske Consulting Pty Ltd (2015).

# 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 areas previously approved under CPS 6657/3, when combined with the proposed amendment area, is considered to be the new application area. The full assessment of all previously approved areas can be found within the relevant decision reports for CPS 6657/1, CPS 6657/2 and CPS 6657/3. These assessments found the proposed clearing to be 'not likely to be at variance' to Principle (a). A weed management condition was imposed on the granted permit to address potential impacts.

The area subject to this amendment (the amendment area), applies to the area proposed for the Banyego open pit gold mine, where the proponent intends to re-mine and expand an existing open pit. The proposed Baneygo Gold Mine is a satellite deposit that will provide ore to be treated at the Garden Well ore processing facility.

An additional 509 hectares is proposed within a clearing permit boundary of approximately 2,680 hectares. The proposed amendment will result in the clearing of up to 2,759 hectares, over three separate project areas (Gloster Gold Mine Project, Greater Duketon Gold Project & Banyego Gold Mine Project) within a total clearing permit boundary of 11,447 hectares.

The amendment area is located within the East Murchison subregion of the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The East Murchison subregion is characterised by internal drainage, extensive areas of elevated red desert sandplains with minimal dune development, salt lake systems associated with the occluded paleodrainage system, broad plains of red-brown soils and breakaway complexes, as well as red sandplains (CALM, 2002). Vegetation is dominated by Mulga woodlands which are often rich in ephemerals; hummock grasslands, saltbush shrublands and *Halosarcia* shrublands (CALM, 2002).

The condition of the vegetation within the amendment area varies from 'Degraded' to 'Pristine' (Mattiske, 2015). Areas of 'Completely degraded' to 'Degraded' vegetation occur as a result of historical mining activities and pastoral use (Mattiske, 2015). The majority of the vegetation within the amendment area is considered to be in a predominantly 'Excellent' to 'Pristine' condition, showing little to no signs of disturbance. Despite the lack of disturbance, the health of plants was regarded to be very poor, with little to no fertile material available

(lacking flowers and fruits). This is likely a result of water stress. (Mattiske, 2015).

A Level 2 flora and vegetation survey was conducted over the majority of the amendment area. A total of 141 vascular plant taxa, comprised of 67 genera and 33 families were recorded (Mattiske, 2015). There were a number of limitations noted within the flora survey, such as below average rainfall in the lead up to the survey and signs of vegetation stress which inhibited the confirmation of some taxa to species level. A total of 43 taxa could only be confirmed to genus or family due to insufficient fruiting or flowering material available (Mattiske, 2015). Despite survey limitations, impacts to flora species of conservation significance are considered unlikely, given that only two Priority flora species are known to occur within the local area (20 kilometre radius); Gunniopsis propinqua (P3) and Phyllanthus baeckeoides (P3) (DPaW, 2016). No Threatened or Priority flora species were recorded within the amendment area during the flora and vegetation survey (Mattiske, 2015). Five flora species recorded during the flora and vegetation survey represented an extension to their current known distributions namely Alyxia buxifolia, Enchylaena lanata, Eucalyptus oleosa subsp. oleosa, Hakea kippistiana, Hakea recurva subsp. arida, Ptilotus schwartzii var. georgei and Sporobolus actinocladus. These species are not considered to be of conservation significance but their occurrence within the amendment area represents at least a 300 kilometre range extension to their nearest known distribution (Mattiske, 2015). The extension of their range is probably a consequence of limited or reduced survey effort in surrounding areas (Mattiske, 2015).

Nine vegetation communities were identified, all of which are considered to be well represented outside the amendment area (Mattiske, 2015). No Threatened or Priority Ecological Communities were recorded within the amendment area. The closest community (a Priority Ecological Community) is located more than 30 kilometres south (GIS Database).

The fauna habitats present within the amendment area are common and widespread in the landscape and bioregion, with vast tracts of similar habitat in adjacent areas (Terrestrial Ecosystems, 2016). The vegetation within the amendment area is not considered to be providing, or contributing to, important ecological linkages or fauna movement corridors (Terrestrial Ecosystems, 2016).

Two introduced (weed) species; Chenopodium murale and Sonchus oleraceus were recorded within the amendment area (Mattiske, 2016). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the continued implementation of a weed management condition.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

#### Methodology

CALM (2002) DPaW (2015) Mattiske (2015) Terrestrial Ecosystems (2016)

### GIS Database:

- IBRA WA (Regions Sub Regions)
- Pre-European vegetation
- Threatened Ecological Sites Buffered

# (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

A Level 1 fauna survey was conducted over the majority of the amendment area. Terrestrial Ecosystems (2016) identified five broad fauna habitats:

- flat open mulga woodland over scattered shrubs on a stony sandyclay substrate;
- flat open chenopod shrubland on a sandy-clay or stony sandy-clay substrate;
- floodways and minor drainage lines with trees and shrubs on a clay substrate;
- minor ridges and breakaways; and
- highly disturbed areas due mostly to mining activity.

According to available information, the only fauna species of conservation significance to have been recorded within 20 kilometres of the amendment area is the Rainbow Bee-eater (*Merops omatus*) (DPaW, 2016). Following the Level 1 fauna survey of the amendment area, Terrestrial Ecosystems (2016) considered that the proposed clearing is unlikely to impact on any species of conservation significance. Conservation significant species identified as potentially occurring in the vicinity are either migratory or able to relocate easily into neighbouring areas (Terrestrial Ecosystems, 2016). It is possible that some local fauna species (mostly small vertebrates) may be adversely impacted by proposed clearing activities. The proponent will implement fauna management procedures to mitigate potential impacts to local fauna species.

The amendment area currently does not provide any important ecological linkage or fauna movement corridor (Terrestrial Ecosystems, 2016). There are station and exploration tracks that dissect the project area but most

of these are relatively narrow and unlikely to provide a barrier that would inhibit the movement of fauna within the general area.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

### Methodology DPaW (2016)

Terrestrial Ecosystems (2016)

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

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

According to available databases, there are no Threatened flora species known to occur within the amendment area (DPaW, 2016: GIS Database). No Threatened flora species have been previously recorded near the amendment area and none were recorded during a Level 2 flora and vegetation survey (Mattiske, 2015; Regis, 2016).

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

#### Methodology

DPaW (2016) Mattiske (2015) Regis (2016)

**GIS Database** 

- Threatened and Priority Flora List

# (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

According to available datasets, there are no known Threatened Ecological Communities (TECs) within the amendment area (GIS Database). A Level 2 flora and vegetation survey of the amendment area and did not identify the presence of any TECs (Mattiske, 2015).

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

# Methodology Mattiske (2015)

GIS Database:

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

# (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 amendment area falls within the Murchison IBRA bioregion (GIS Database) in which approximately 99% of pre-European vegetation remains (see table) (Government of Western Australia, 2015; GIS Database). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

One Beard vegetation association has been mapped within the amendment area (GIS Database). As the below table illustrates, Beard vegetation association 18 is well represented, retaining at least 99% of pre-European vegetation within the state and bioregion (Government of Western Australia, 2015). Given the amount of vegetation remaining in the local area and bioregion, the vegetation proposed to be cleared is not considered to represent a remnant within an extensively cleared area, nor is the amendment area considered to be providing, or contributing to, important ecological linkages or fauna movement corridors (Terrestrial Ecosystems, 2016).

|                            | Pre-European<br>area (ha)* | Current extent (ha)* | Remaining<br>%* | Conservation<br>Status** | Pre-European % in<br>DPaW Managed<br>Lands |
|----------------------------|----------------------------|----------------------|-----------------|--------------------------|--|
| IBRA Bioregion - Murchison | 28,120,586                 | 28,044,823           | ~ 99            | Least Concern            | ~ 7.8                                      |
| Beard veg assoc State      |                            |                      |                 |                          |  |
| 18                         | 19,892,304                 | 19,843,727           | ~ 99            | Least Concern            | ~ 6.3                                      |
| Beard veg assoc Bioregion  |                            |                      |                 |                          |  |

| 18 | 12,403,172 | 12,363,252 | ~ 99 | Least Concern | ~ 5 |
|----|------------|------------|------|---------------|-----|

<sup>\*</sup> Government of Western Australia (2015)

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not at variance to this principle.

#### Methodology

Department of Natural Resources and Environment (2002) Government of Western Australia (2015) Terrestrial Ecosystems (2016)

GIS Database:

- IBRA WA (regions subregions)
- 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 variance to this Principle

The areas previously approved under CPS 6657/3, when combined with the proposed amendment area, is considered to be the new application area. The full assessment of all previously approved areas can be found within the relevant decision reports for CPS 6657/1, CPS 6657/2 and CPS 6657/3. These assessments found the proposed clearing to be 'at variance' to Principle (f). A watercourse management condition was imposed on the granted permit to address potential impacts.

Several non-perennial watercourses have been mapped within the amendment area (GIS Database) and one of the ten vegetation communities identified within the amendment area is considered to be growing in minor drainage lines (Mattiske, 2015).

Given that the amendment area is located in an area of low rainfall, where watercourses only flow after sporadic rainfall events (BoM, 2016; Regis, 2016); significant impacts to vegetation growing in association with a watercourse are unlikely. The proponent will implement management procedures to mitigate potential impacts to watercourses and the associated vegetation. Potential impacts to vegetation growing in association with a watercourse or wetland as a result of the proposed clearing may also be minimised by the continued implementation of a watercourse management condition.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is at variance to this principle.

# Methodology

BoM (2016) Regis (2016) Mattiske (2015)

GIS Database:

- Hydrography, linear

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

# **Comments** Proposal may be at variance to this Principle

The areas previously approved under CPS 6657/3, when combined with the proposed amendment area, is considered to be the new application area. The full assessment of all previously approved areas can be found within the relevant decision reports for CPS 6657/1, CPS 6657/2 and CPS 6657/3. These assessments found the proposed clearing 'may be at variance' to Principle (g). A staged clearing condition was imposed on the granted permit to address potential impacts.

Four land systems have been mapped within the amendment area; Steer, Hootanui, Felix and Bevon (GIS Database). The majority of the amendment area (over 70%) is mapped within the Steer and Hootanui land systems (Mattiske, 2015). The Hootanui land system is susceptible to water erosion in areas where perennial shrub cover is substantially reduced or the soil surface is disturbed (Pringle *et al.* 1994). The Steer, Felix and Bevon land systems are generally not prone to erosion as stone mantles provide effective protection (Pringle *et al.* 1994), although the proposed clearing has the potential to cause soil erosion by breaking protective stony mantles and exposing underlying soils that may be susceptible to erosion.

The proponent will implement management procedures to mitigate potential land degradation issues. Potential land degradation as a result of the proposed clearing may be further minimised by the continued implementation of a staged clearing condition.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing may be at variance to this Principle.

<sup>\*\*</sup> Department of Natural Resources and Environment (2002)

### Methodology Pringle et al. (1994)

GIS Database:

- Landsystems Rangelands

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

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

The amendment area is not located within or adjacent to any conservation areas (GIS Database). The closest conservation area (De La Poer Range Nature Reserve) is situated approximately 50 kilometres north-north east (GIS Database).

Given that the local area is well vegetated, with large amounts of intact native vegetation remaining (Terrestrial Ecosystems, 2015, 2016; Regis, 2016), the proposed clearing is unlikely to impact on the environmental values of adjacent or nearby conservation areas.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

#### Methodology

Terrestrial Ecosystems (2015)

Terrestrial Ecosystems (2016)

Regis (2016)

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.

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

The amendment area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The amendment area is located within an arid environment with an average annual rainfall of approximately 236 millimetres and experiences mean annual evaporation of approximately 3,400 millimetres (BoM, 2016; CALM, 2002). Although there are a number of minor ephemeral watercourses located in the amendment area, it is likely these drainage lines would only flow for short periods following significant rainfall events (Regis, 2016). Considering there are no permanent watercourses within the amendment area, the proposed clearing is unlikely to impact on surface water quality.

Groundwater within the amendment area ranges from marginal to brackish (500 – 3000 TDS mg/L). The local area and region is well vegetated and the proposed clearing of hectares of native vegetation is unlikely to significantly impact on the quality of underground water. While clearing activities may be unlikely to result in impacts, mining activities do have the potential to impact on groundwater quality. The proponent will implement management procedures to mitigate potential impacts to the quality of underground water.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

### Methodology

BoM (2016)

CALM (2002) GIS Database:

- Groundwater Salinity, Satewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- RIWI Act, Groundwater 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 amendment area is located in the Murchison region, where evaporation far exceeds annual rainfall (BoM, 2016; CALM, 2002) and surface water does not persist for extended periods (Regis, 2016).

Given the climatic conditions of the Murchison region and the large amount of remaining vegetation in the local area, the proposed clearing is unlikely to result in a significant increase in the incidence or intensity of flooding.

Based on previous assessments (CPS 6657/1, CPS 6657/2 & CPS 6657/3) and the above information, the proposed clearing is not likely to be at variance to this Principle.

### Methodology

BoM (2016)

CALM (2002)

Regis (2016)

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

#### Comments

All proposed mining activities and operations within the application area permit boundary (11,447 hectares) have been approved under the *Mining Act 1978*. Within the approved associated mining proposals that cover the three separate gold projects, the proponent has committed to implementing management measures to reduce potential environmental impacts. In addition to this, a Mine Closure Plan (MCP) has been developed and continues to be revised to address mine closure issues. Within the MCP, the proponent has committed to conducting rehabilitation activities post mining.

There are no native title claims over the previously approved application area (CPS 6657/3) or the amendment area (DAA, 2016; GIS Database). 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* 

No Sites of Aboriginal Significance are known from the amendment area; however, four Sites of Aboriginal Significance are located throughout other areas of the application area (DAA, 2016; GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

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

The amendment application was advertised on 26 September 2016 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application regarding potential aboriginal heritage issues.

Methodology DAA (2016)

### 4. References

- BoM (2016) Climate Statistics for Australian Locations. A Search for Climate Statistics, Australian Government Bureau of Meteorology <a href="http://www.bom.gov.au">http://www.bom.gov.au</a> Accessed September 2016.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- DAA (2016) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia < http://maps.dia.wa.gov.au> Accessed September 2016.
- 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.
- DPaW (2016) NatureMap, Department of Parks and Wildlife <a href="http://naturemap.dec.wa.gov.au">http://naturemap.dec.wa.gov.au</a> Accessed September 2016. Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske (2015) Flora and Vegetation Survey of the Banyego Project Area (Level 2 Assessment). Report prepared for Regis Resources Limited, by Mattiske Consulting Pty Ltd, December 2015.
- 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, Western Australia, Perth.
- Regis (2016) Gloster Gold Mine. Native Vegetation Clearing Permit Application Supporting Document. Regis Resources Ltd, Western Australia. March 2016
- Terrestrial Ecosystems (2015) Level 1 Fauna Risk Assessment for the Gloster Project and Haul Road. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems. November 2015.
- Terrestrial Ecosystems (2016) Level 1 Fauna Risk Assessment for the Banyego Project. Report prepared for Regis Resources Limited, by Terrestrial Ecosystems. April 2016.

### 5. Glossary

### **Acronyms:**

BoM Bureau of Meteorology, Australian Government
DAA Department of Aboriginal Affairs, Western Australia
DAFWA Department of Agriculture and Food, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DPaW and DER)

DER Department of Environment Regulation, Western Australia
DMP Department of Mines and Petroleum, Western Australia

**DRF** Declared Rare Flora

**DotEE** Department of the Environment and Energy, Australian Government

**DoW** Department of Water, Western Australia

**DPaW** Department of Parks and Wildlife, Western Australia

DSEWPaC Department of Sustainability, Environment, Water, Population and Communities (now DotE)

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

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System ha Hectare (10,000 square metres)

IBRA Interim Biogeographic Regionalisation for Australia

IUCN International Union for the Conservation of Nature and Natural Resources – commonly known as the

World Conservation Union

PEC Priority Ecological Community, Western Australia

RIWI Act Rights in Water and Irrigation Act 1914, Western Australia

TEC Threatened Ecological Community

#### **Definitions:**

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

### T Threatened species:

Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

**Threatened fauna** is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

**Threatened flora** is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

#### CR Critically endangered species

Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

# EN Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

# VU Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

### EX Presumed extinct species

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

# IA Migratory birds protected under an international agreement

Birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

# CD Conservation dependent fauna

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

# OS Other specially protected fauna

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

### P Priority species

Species which are poorly known; or

Species that are adequately known, are rare but not threatened, and require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

### P1 Priority One - Poorly-known species:

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

# P2 Priority Two - Poorly-known species:

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

# P3 Priority Three - Poorly-known species:

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

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

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for Vulnerable, but are not listed as Conservation Dependent.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.