



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6657/2  
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, 38/352, 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  
Miscellaneous Licences 38/133, 38/182, 38/234, 38/238;  
Prospecting Licence 38/3544  
Local Government Area: Shire of Laverton  
Colloquial name: Duketon and Gloster Gold Projects

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1900		Mechanical Removal	Mineral Production and Associated Infrastructure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 11 February 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. One Beard vegetation association is located within the original permit area and the amendment area (GIS Database):

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

The vegetation associations and types found within the original permit area are described in decision report CPS 6657/1. The vegetation types mapped within the amendment area are described below.

Ten vegetation communities have been described within the amendment area (Mattiske, 2015):

**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;

**A12:** Open shrubland of *Acacia incurvaneura* and *Acacia mulganeura* over *Acacia tetragonophylla* and *Eremophila oldfieldii* over *Ptilotus obovatus*, *Hibiscus burtonii* and *Solanum lasiophyllum* over mixed grasses on flats to lower slopes with red gravelly clay soil and quartz pebbles.

**A20:** Open to semi-closed shrubland of *Acacia incurvaneura* and *Acacia quadrimarginea* over *Ptilotus obovatus*, *Baeckea* sp. Melita Station (H. Pringle 2738) and *Ptilotus schwartzii* over mixed grasses on red clay loams with numerous granitic outcropping on slopes and ridges.

**A24:** Thicket of *Acacia* sect. *Juliflorae* (*A. ?aneura*, *A. incurvaneura* and *A. craspedocarpa*) with *Acacia tetragonophylla* over open low shrubland of *Eremophila forrestii* subsp. *forrestii*, *Ptilotus obovatus* and *Malvaceae* spp. over *Cheilanthes sieberi* subsp. *sieberi* over tussock grassland of mixed *Poaceae* spp. on red-orange sandy loam to clay loam in minor drainage lines.

**A25:** Thicket of *Acacia* sect. *Juliflorae* (*A. ?aneura*, *A. incurvaneura* and *A. ?caesaneura*) with *Acacia tetragonophylla* over open low shrubland of *Eremophila spectabilis*, *Psydrax suaveolens* and *Solanum lasiophyllum* over *Eragrostis eriopoda* and other mixed grasses on red-orange clay loam on flats with quartz and iron 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.

**A27:** Open scrub of *Acacia* sect. *Juliflorae* (*A. ?aneura* and *A. incurvaneura*) over open low shrubland of *Solanum lasiophyllum* and *Maireana convexa* over mixed grasses on red-orange clay loam on flats with quartz and iron pebbles.

**C5:** Low open Chenopod shrubland of *Maireana pyramidata* and *Eriochiton sclerolaenoides* with emergent *Acacia* sect.

*Juliflorae* (*A. ?aneura* and *A. pteraneura*) and *Acacia tetragonophylla* over *Frankenia setosa* and *Maireana georgei* on red-orange clay-loams on flats with quartz and iron pebbles.

**C6:** Low open Chenopod shrubland of *Maireana triptera*, *Sclerolaena eurotioides*, *Maireana trichoptera* and *Sclerolaena cuneata* with emergent *Acacia* sect. *Juliflorae* (*A. incurvaneura* and *A. craspedocarpa*) over *Ptilotus obovatus* and *Scrophulariaceae* spp. on red-brown clay to clay-loams on flats.

**C7:** Low open Chenopod shrubland of *Sclerolaena eurotioides*, *Sclerolaena cuneata* and *Maireana appressa* with emergent *Acacia incurvaneura* over *Frankenia laxiflora* and *Atriplex ?nana* over mixed grasses on orange clay-loams on slopes.

**Clearing Description** Gloster Gold Mine Project  
Regis Resources Limited proposes to clear up to 1900 hectares of native vegetation within a total boundary of approximately 8,767 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).  
To:  
Pristine: No obvious signs of disturbance (Keighery, 1994).

**Comment** Clearing Permit CPS 6657/1 was granted by the Department of Mines and Petroleum 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.

The permit holder has applied to amend CPS 6657/1 in order to allow for the development of the Gloster Gold Mine Project. This project area (amendment area) is situated approximately 25 kilometres west of the nearest section of the existing clearing permit boundary area. The proposed amendment will result in an increase in the amount of clearing by 450 hectares and occurs within an isolated clearing permit boundary area of approximately 905 hectares solely within Mining Lease 38/1268. As a result of this amendment, the total amount of clearing will increase from 1,450 hectares to 1,900 hectares within a clearing permit boundary area of approximately 8,767 hectares.

The proposed mineral production at the Gloster Gold Mine Project involves the development of an open pit, waste dump, access roads, topsoil stockpiles and required infrastructure.

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

The assessment of the original permit area can be found within decision report CPS 6657/1. The contents of this assessment against the clearing principles applies to the additional proposed clearing (450 hectares) within Mining Lease 38/1268.

### 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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (a). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

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 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). Sections of the amendment area considered to be degraded are restricted to small areas that had previously been exposed to both current and historic mining and pastoral activities. Areas considered to be completely degraded (as a result of recent drilling activities) occur within the centre of the amendment area (Mattiske, 2015).

A Level 2 flora and vegetation survey of the amendment area and surrounding area (the Gloster Project area) recorded a total of 118 vascular plant taxa, comprised of 52 genera and 25 families. Ten vegetation communities were identified, all of which are considered to be well represented outside the amendment area (Mattiske, 2015).

Two Priority flora species have been recorded within the local area (20 kilometre radius); *Gunniopsis propinqua* (P3) and *Eremphila pungens* (P4) (DPaW, 2015), however 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. *Hakea kippistiana*, *Hakea recurva* subsp. *arida*, *Ptilotus schwartzii* var. *georgei*, *Senna ?symonii* and *Templetonia incrassata* are not considered to be of conservation significance but their occurrence within

the Gloster Project area represents at least a 300 km range extension to their nearest known distribution. The extension of their range is probably a consequence of limited or reduced survey effort in areas surrounding the Gloster Project (Mattiske, 2015).

The fauna habitats present within the amendment area are common and widespread in the subregion with vast tracts of similar habitat in adjacent areas (Terrestrial Ecosystems, 2015; Regis, 2015). The vegetation within the amendment area is not considered to be providing, or contributing to, important ecological linkages or fauna movement corridors (Terrestrial Ecosystems, 2015).

According to available information, no Threatened Ecological Communities or Priority Ecological Communities (TECs or PECs) are known within the amendment area (GIS Database) and none were identified during the flora and vegetation survey (Mattiske, 2015). The closest known PEC is located more than 50 kilometres east (GIS Database).

The weed species *Bidens bipinnata* was recorded within the amendment area and a number of other weed species are known from the local area (Mattiske, 2015). 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 implementation of a weed management condition.

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** CALM (2002)  
DPaW (2015)  
Mattiske (2015)  
Regis (2015)  
Terrestrial Ecosystems (2015)  
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**

The assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (b). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

A Level 1 fauna survey was conducted over the amendment area and surrounding area (Gloster project area). Terrestrial Ecosystems (2015) identified four broad fauna habitats; flat open mulga woodland over scattered shrubs on a stony sandy-clay substrate; flat open mulga woodland over scattered shrubs on a sandy-clay substrate; floodways with few trees and shrubs on a red clay substrate and highly disturbed areas due to exploration activity.

According to available information, no fauna species of conservation significance have been recorded within 20 kilometres of the amendment area (DPaW, 2015). Following the Level 1 fauna survey of the amendment area, Terrestrial Ecosystems (2015) considers 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, 2015). It is possible that some local fauna species (mostly small vertebrates) may be adversely impacted by proposed clearing activities; however given the amount of native vegetation remaining in the local area, such impacts are unlikely to be detrimental once clearing activities cease (Terrestrial Ecosystems, 2015). The proponent will implement fauna management procedures to mitigate potential impacts to local fauna species.

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** DPaW (2015)  
Terrestrial Ecosystems (2015)

**(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**

The assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (c). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

According to available databases, there are no Threatened flora species known to occur within the amendment area (GIS Database; DPaW, 2015), 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, 2015).

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** DPaW (2015)  
 Mattiske (2015)  
 Regis (2015)  
 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**

The assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (d). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

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 surrounding areas (Gloster Project area) did not identify the presence of any TECs (Mattiske, 2015).

Based on the previous assessment for CPS 6657/1 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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not at variance' to Principle (e). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

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, 2014; 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, 2014). 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, 2015).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion - Murchison	28,120,586	28,044,823	~ 99	Least Concern	~ 7.7
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

\* Government of Western Australia (2014)

\*\* Department of Natural Resources and Environment (2002)

Based on the previous assessment for CPS 6657/1 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 (2014)  
Terrestrial Ecosystems (2015)  
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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'at variance' to Principle (f). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

Two minor 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 (Regis, 2015; BoM, 2015), 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 implementation of a watercourse management condition.

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing is at variance to this principle.

**Methodology** BoM (2015)  
Regis (2015)  
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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing 'may be at variance' to Principle (g). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

Three land systems have been mapped within the amendment area; Nuveb, Felix and Bevon (GIS Database). The Nuveb land system is characterised by gently undulating stony plains, minor low rises and drainage floors and is moderately susceptible to erosion in drainage zones and where there is disturbance to the surface mantle on saline stony plains (Pringle *et al.* 1994). The 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 implementation of a staged clearing condition.

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing may be at variance to this Principle.

**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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (h). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

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 east (GIS Database).

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

Based on the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Terrestrial Ecosystems (2015)  
Regis (2015)  
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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (i). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

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 (CALM, 2002; BoM, 2015). 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, 2015). 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 450 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 the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** BoM (2015)  
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 assessment of the original permit area can be found within decision report CPS 6657/1. The assessment found the proposed clearing to be 'not likely to be at variance' to Principle (j). The amendment area is situated approximately 25 kilometres west of the nearest section of the original clearing permit boundary area.

The amendment area is located in the Murchison region, where evaporation far exceeds annual rainfall (CALM, 2002; BoM, 2015) and surface water does not persist for extended periods (Regis, 2015).

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 the previous assessment for CPS 6657/1 and the above information, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** BoM (2015)  
CALM (2002)  
Regis (2015)

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

### Comments

There are no native title claims over the previously approved application area (CPS 6657/1) or the amendment area (GIS Database; DAA, 2015). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no Sites of Aboriginal Significance within the previously approved application area. Four Sites of Aboriginal Significance are located in the amendment area (GIS Database; DAA, 2015). 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 11 January 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 (2015)

## 4. References

- BoM (2015) Climate Statistics for Australian Locations. A Search for Climate Statistics, Australian Government Bureau of Meteorology. <<http://www.bom.gov.au>>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management.
- DAA (2015) Aboriginal Heritage Inquiry System, Department of Aboriginal Affairs, Perth, Western Australia <<http://maps.dia.wa.gov.au>>.
- 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 (2015) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>>.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. 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 Gloster Project Area. *Supporting Information for CPS 6657/2*. Mattiske Consulting Pty Ltd. Kalamunda, Western Australia.
- 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 (2015) Application to Amend Purpose Permit 6657/1, Gloster Gold Mine (M38/1238) - *Supporting Information for CPS 6657/2*. Regis Resources Ltd. Subiaco, Western Australia.
- Terrestrial Ecosystems (2015) Level 1 Fauna Risk Assessment for the Gloster Project and Haul Road. *Supporting Information for CPS 6657/2*. Terrestrial Ecosystems. Mt Claremont, Western Australia.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DPaW and DER)
<b>DER</b>	Department of Environment Regulation, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DotE</b>	Department of the Environment, Australian Government
<b>DoW</b>	Department of Water, Western Australia
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia
<b>DSEWPac</b>	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , 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	<p><b>Threatened species:</b> Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, 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).</p> <p><b>Threatened fauna</b> is that subset of ‘Specially Protected Fauna’ declared to be ‘likely to become extinct’ pursuant to section 14(4) of the Wildlife Conservation Act.</p> <p><b>Threatened flora</b> 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.</p> <p>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.</p>
CR	<p><b>Critically endangered species</b> Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
EN	<p><b>Endangered species</b> Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
VU	<p><b>Vulnerable species</b> Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.</p>
EX	<p><b>Presumed extinct species</b> 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 <i>Wildlife Conservation Act 1950</i>, 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.</p>
IA	<p><b>Migratory birds protected under an international agreement</b> 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 <i>Wildlife Conservation Act 1950</i>, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
CD	<p><b>Conservation dependent fauna</b> 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 <i>Wildlife Conservation Act 1950</i>, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>
OS	<p><b>Other specially protected fauna</b> Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i>, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.</p>



**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.