



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4033/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Saracen Gold Mines Pty Limited**

1.3. Property details

Property: Mining Lease 31/30
Mining Lease 31/380
Mining Lease 31/381
Local Government Area: Shire of Menzies
Colloquial name: Margaret's Project

1.4. Application

| | | | |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 126 | | Mechanical Removal | Mineral Production |

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 9 November 2010

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 at a 1:250,000 scale for the whole of Western Australia. The vegetation of the application area is broadly mapped as Beard Vegetation Association 400: Succulent steppe with open low woodland; mulga over bluebush (GIS Database).

Botanica Consulting (2010) conducted a flora survey of the application area on the 12 and 13 July 2010, and described the vegetation of the application area as follows:

Creekline Vegetation - Upper-storey of *Acacia burkittii*, *Santalum lanceolatum* and *Santalum spicatum*. The mid-storey included *Eremophila longifolia*, *Acacia tetragonophylla* and *Maireana pyramidata*. The lower-storey included *Sida calyxhymenia*, *Maireana triptera* and *Cheilanthes sieberi* subsp. *sieberi*. Many germinants of Asteraceae species were found within this vegetation unit;

Maireana pyramidata Chenopod Shrubland - Upper-storey of *Santalum lanceolatum*, *Acacia aneura*, *Acacia burkittii*, *Acacia tetragonophylla* and *Hakea preissii*. The middle canopy included *Maireana sedifolia*, *Maireana pyramidata*, *Pittosporum angustifolium*, *Themeda triandra* and *Eremophila longifolia*. The lower-storey included *Scaevola spinescens*, *Eremophila clarkei* and *Solanum ferocissimum*;

Maireana sedifolia Chenopod Shrubland - Upper-storey comprised *Santalum lanceolatum*, *Acacia aneura*, *Acacia burkittii*, *Acacia tetragonophylla* and *Hakea preissii*. The middle canopy included *Maireana sedifolia*, *Maireana pyramidata*, *Pittosporum angustifolium*, *Themeda triandra* and *Eremophila longifolia*. The lower-storey included *Scaevola spinescens*, *Eremophila clarkei* and *Solanum ferocissimum*;

Mulga Woodland - Upper-storey *Acacia ramulosa*, *Acacia aneura*, *Acacia tetragonophylla* and *Casuarina pauper*. The middle canopy included *Maireana sedifolia*, *Maireana pyramidata*, *Maireana triptera*, *Themeda triandra* and *Eremophila longifolia*. The lower-storey included *Scaevola spinescens*, *Eremophila clarkei* and *Solanum ferocissimum* (Botanica Consulting, 2010).

Clearing Description The Margaret's Project forms part of the Saracen Gold Mines Pty Ltd Carosue Dam Operations (Saracen Gold Mines Pty Ltd, 2010). The Margaret's Project overlaps the Enterprise deposit. Saracen Gold Mines Pty Ltd has applied to clear up to 126 hectares of native vegetation within a 296.5 hectare application area (GIS Database).

Vegetation will be cleared for the development of open pits, and associated waste dumps, run of mine (ROM) pads, haul roads, a turkey nest for mine dewatering and other mining infrastructure and drilling.

The vegetation will be cleared using bulldozers or other heavy machinery. The vegetation and topsoil will be stockpiled for use in rehabilitation.

Vegetation Condition Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

Comment The application area is located approximately 135 kilometres north-east of Kalgoorlie in the Murchison region of Western Australia (GIS Database). The vegetation condition was derived from a vegetation survey conducted by Botanica Consulting (2010).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

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

The application area occurs within the East Murchison subregion of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development (CALM, 2002). The salt-lake systems are associated with the occluded Paleodrainage system (CALM, 2002). The vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002).

A vegetation survey of the application area and surrounding vegetation identified 51 species of native flora belonging to 35 genera and 23 families (Botanica Consulting, 2010). No Declared Rare Flora (DRF) or Priority flora species were found. A search of the Department of Conservation and (DEC) Declared Rare and Priority Flora databases revealed that one Priority 2 species (*Thryptomene eremaea*) may potentially occur in the application area. An additional unsurveyed area along the eastern side of the Enterprise Clearing Permit area was added after the surveys were complete. Vegetation units in this area have been interpreted from aerial photography.

Four vegetation types as described by Botanica Consulting (2010) were identified within the application area, and the vegetation condition was classified as 'good'. No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) were recorded or identified within the application area (Botanica Consulting, 2010; GIS Database). The vegetation within the application area consists of Beard vegetation association 400 which is common and widespread throughout the Goldfields region, with approximately 100% of the pre-European extent remaining (Shepherd, 2007; GIS Database). The vegetation communities identified within the application area are typical of the floristics of the East Murchison IBRA subregion and are unlikely to be of higher biodiversity than the surrounding areas. The proposed clearing is unlikely to have a significant impact on the biological diversity of the region.

Botanica Consulting (2010) found four weed species within the application area. These were: Saffron Thistle (*Carthamus lanatus*), Pie Melon (*Citrullus lanatus*), Wild Sage (*Salvia verbenaca*), and Pimpernel (*Lysimachia arvensis*) (Botanica Consulting, 2010). The weed Ruby Dock (*Acetosa vesicaria*) was noted germinating at Margaret's during a site visit in September 2010 (Saracen Gold Mines Pty Ltd, 2010). One of these species (*Carthamus lanatus*) is listed as a 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food (DAFWA). This species is a Priority 4 weed species and therefore infestation must be prevented from the property on or in livestock, fodder, grain, vehicles and/or machinery, and all plants must be treated to destroy and prevent seed set (DAFWA, 2009).

Weeds have the potential to significantly change the dynamics of a natural ecosystem, affecting natural processes such as stream flows and water quality, and lower the biodiversity of an area. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weeds to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed control condition.

A fauna survey of the proposed haul road between the Carosue Dam Operations and the Safari/Red October Operation, which is reflective of the application area, recorded five reptiles, 39 land birds, 10 waterbirds, and five native mammals (Bamford Consulting Ecologists, 2002). The vertebrate fauna of the proposed Haul Road corridor is likely to be typical of a broad area of the Eastern Goldfields (Bamford Consulting Ecologists, 2002).

There is a low likelihood of the area under application has a higher biodiversity than other remnant vegetation in the local area, and the species and communities are well represented in the adjoining subregions.

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

Methodology Bamford Consulting Ecologists (2002)
Botanica Consulting (2010)
CALM (2002)
DAFWA (2009)
Saracen Gold Mines Pty Ltd (2010)
Shepherd (2007)
GIS Database:
- IBRA WA (regions - subregions)
- 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 may be at variance to this Principle

No fauna surveys have been conducted over the application area. Bamford Consulting Ecologists (2002) conducted a desktop study and a fauna survey of the proposed haul road between the Carosue Dam Operations and the Safari/Red October Operation, which is reflective of the application area. The survey was conducted on 6-10 May 2002 (Bamford Consulting Ecologists, 2002).

There are nine species of birds, four mammals, and one reptile listed as Threatened Species under the *Environmental Protection and Biodiversity Conservation Act 1999* or protected under Western Australian legislation that are likely to occur within the area covered by all Saracen tenements (Saracen Gold Mines Pty Ltd, 2010). No protected or threatened bird species have been recorded within Birds Australia database of sightings within Saracen leases or the wider region (Holm & Associates, 2006). Of these species, the Peregrine Falcon (*Falco peregrinus*) is likely to be present on Saracen tenements and has been recently sighted elsewhere in the general area. There have been unconfirmed sightings of *Leipoa ocellatal* (Mallee fowl) around Carosue Dam and footprints found south of the Karari pit and mounds along the access roads during recent fauna surveys (Biologica, 2010; Coffey Environments, 2010). No sightings have been recorded in the Margaret's area (Saracen Gold Mines Pty Ltd, 2010).

Four of the bird species; Cattle Egret (*Ardea ibis*), Great Egret (*Ardea alba*), Fork-tailed Swift (*Apus pacificus*) and Oriental plover (*Charadrius veredus*) are listed as migratory under the *EPBC Act 1999*. These birds may overfly and be occasional visitors to the application area (with Lake Rebecca 14 kilometres south-west or Lake Raeside 18 kilometres north-east), rather than using the habitats of the project areas regularly. The proposed clearing is not likely to impact critical feeding or breeding habitat for any migratory species.

There were seven broad habitat types as occurring within the survey area as recorded by Bamford Consulting Ecologists (2002):

1. Breakaways;
2. Drainage Lakes;
3. Dunefields;
4. Hills;
5. Salt Lakes;
6. Undulating Plains; and
7. Broad valleys (Bamford Consulting Ecologists, 2002).

There is 100% of the pre-European native vegetation remaining within the Murchison bioregion (Shepherd, 2007; GIS Database). Given the extent of the native vegetation remaining in the local area and bioregion, the vegetation to be cleared does not represent a significant ecological link.

Aerial photography and imagery analysis, along with a review of the vegetation associations found within the application area indicate that the proposed clearing area is comprised of the drainage lines, undulating plains and broad valley habitats (GIS Database; Bamford Consulting Ecologists, 2002). It is unlikely that of the four mammals and one reptile listed under either the *EPBC Act 1999* or protected under Western Australian legislation that breeding or habitat niches would be found in the application area. Any vertebrate fauna assemblages that are likely to be recorded within the application area are likely to be similar to those found in neighbouring areas due to the availability of fauna habitats in the surrounding areas. The proposed clearing is not likely to significantly impact important habitat for endemic fauna.

The habitats recorded during the survey are considered typical to those found in the Goldfields region. Bamford Consulting Ecologists (2002) suggest however that patches of uncommon habitat exist, and are likely to be disproportionately significant in improving local biodiversity. Specifically, the drainage line habitat could be used by a variety of bird species due to the dense vegetation provided, and may act as a refuge area during dry periods (Bamford Consulting Ecologists, 2002).

It is unlikely that stygofauna are present in the application area as there is no calcrete below the water table in the Margaret's area (Saracen Gold Mines Pty Ltd, 2010).

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

Methodology Bamford Consulting Ecologists (2002)
Biologica (2010)
Coffey Environments (2010)
Holm & Associates (2006)
Saracen Gold Mines Pty Ltd (2010)
Shepherd (2007)
GIS Database:
- Edjudina 1.4m Orthomosaic 2003
- IBRA WA (regions - subregions)

(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

Searches made on the available GIS Databases reveal that there are no known records of Declared Rare Flora (DRF) existing in the application area, or within 100 kilometres of the application area (GIS Database). A search of the Department of Environment and Conservation Declared Rare and Priority Flora databases revealed that no DRF species have been found in the application area.

A flora survey was conducted by Botanica Consulting on the 12th and 13th of July, 2010 (Botanica Consulting, 2010). There were no DRF recorded in the application area (Botanica consulting, 2010).

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

Methodology Botanica Consulting (2010)
GIS Database:
- Declared Rare 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

A search of the available databases shows that there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest TEC is situated approximately 291 kilometres north-west of the application area (Booylgoo ranges) (GIS Database). There would be a low likelihood of any impact to the TEC from this distance from the proposed clearing.

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

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The application area falls within the Murchison IBRA bioregion (GIS Database). Beard vegetation association 400 retains approximately 100% of its pre-European extent, which is more than the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

The vegetation within the application area is recorded as Beard vegetation association 400: Succulent steppe with open low woodland; mulga over bluebush (GIS Database; Shepherd, 2007).

According to Shepherd (2007) approximately 100% of these Beard vegetation associations remain within the Murchison bioregion (see table below).

| | Pre-European area (ha)* | Current extent (ha)* | Remaining %* | Conservation Status** | Pre-European % in IUCN Class I-IV Reserves |
|---|-------------------------|----------------------|--------------|-----------------------|--|
| IBRA Bioregion - Murchison | 28,120,590 | 28,120,590 | 100 | Least Concern | 1 |
| Beard vegetation associations - State | | | | | |
| 400 | 190,823 | 190,823 | 100 | Least Concern | N/A |
| Beard vegetation associations - Bioregion | | | | | |
| 400 | 190,823 | 190,823 | 100 | Least Concern | N/A |

* Shepherd (2007)

** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes
(Department of Natural Resources and Environment 2002)

| | |
|------------------|--|
| Presumed extinct | Probably no longer present in the bioregion |
| Endangered* | <10% of pre-European extent remains |
| Vulnerable* | 10-30% of pre-European extent exists |
| Depleted* | >30% and up to 50% of pre-European extent exists |
| Least concern | >50% pre-European extent exists and subject to little or no degradation over a majority of this area |

* or a combination of depletion, loss of quality, current threats and rarity gives a comparable status

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

Methodology Department of Natural Resources and Environment (2002)
EPA (2000)
Shepherd (2007)
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

There are no permanent watercourses or wetlands as shown by the available databases within the application area (GIS Database). Lake Rebecca is the closest permanent wetland at 14 kilometres south-west of the application area (GIS Database). There is however a narrow ephemeral creek line located within the northern half of the application area which flows in a south-southwest direction, joining a broad draining line which flows through the southern half of the application area (GIS Database; Saracen Gold Mines Pty Ltd, 2010).

Based on vegetation mapping by Botanica Consulting (2010) one of the five vegetation associations found within the application area is associated with drainage areas;

Creekline Vegetation - Upper-storey of *Acacia burkittii*, *Santalum lanceolatum* and *Santalum spicatum*. The mid-storey includes *Eremophila longfolia*, *Acacia tetragonophylla* and *Maireana pyramidata*. The lower-storey includes *Sida calyxhymenia*, *Maireana triptera* and *Cheilanthes sieberi* subsp. *sieberi*. Many germinant species of the Asteraceae family were recorded within this vegetation group (Botanica Consulting, 2010).

The Margaret open pit lies immediately west to Enterprise Creek (Saracen Gold Mines Pty Ltd, 2010). Development of the open pit and required abandonment bund will require some modification to the creek line (Saracen Gold Mines Pty Ltd, 2010). A road is also required through the creek line.

Based on the above, the proposed clearing is at variance to this Principle. As the creek line located within the application area is only likely to flow following significant rainfall, the proposed clearing is unlikely to result in any significant impact to any watercourse or wetland provided natural surface water flow patterns are not disturbed. Saracen Gold Mines Pty Ltd (2010) has advised that modification to the creek line will be managed to minimise erosion and sedimentation while maintaining water flows. Impact to the creek line will be limited to a <300 metre section, where the creek will be diverted around the abandonment bund and back into an existing channel. The road will be designed as a floodway to minimise disruption to water flows in the creek bed (Saracen Gold Mines Pty Ltd, 2010).

Methodology Botanica Consulting (2010)
Saracen Gold Mines Pty Ltd (2010)
GIS Database:
- Geodata, Lakes
- Hydrography, Linear

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

Comments Proposal may be at variance to this Principle

The application area is broadly mapped as the Gundockerta land system (GIS Database).

The Gundockerta land system comprises of extensive, gently undulating, calcareous, stony plains with stony mantles and lower alluvial tracts, supporting mainly succulent bluebush shrublands (Pringle et al., 1994). Parts of this land system (saline plains and adjacent lower alluvial tracts) are susceptible to water erosion, particularly in areas where perennial shrub cover is substantially reduced and/or the soil surface is disturbed, though other units with stony mantles are inherently resistant (Pringle et al., 1994).

The terrain of the Margaret's application area is generally sloping to the west from a ridge of granite outcrop. This is covered by thin superficial soils and is traversed by a narrow ephemeral creek line (Saracen Gold Mines Pty Ltd, 2010). Saracen Gold Mines Pty Ltd (2010) has advised that modification to the creek line will be managed to minimise erosion and sedimentation while maintaining water flows.

Based on the above, the proposed clearing may be at variance to this Principle. There is a risk of wind and/or water erosion occurring should water flows be altered and/or areas remain exposed. Potential erosion impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition to ensure large areas are not exposed of vegetative cover for extended periods.

Methodology Pringle et al., (1994)
Saracen Gold Mines Pty Ltd (2010)
GIS Database:
- Rangeland Land System Mapping

(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 proposed application area is not located within any conservation areas (GIS Database). Goongarrie National Park is the nearest known conservation reserve, located approximately 58 kilometres south-west of the application area (GIS Database).

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

Methodology GIS Database:
- DEC 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 may be at variance to this Principle**
The available databases show that the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The application area has a groundwater salinity that ranges from almost fresh (less than 1,000 milligrams/Litre Total Dissolved Solids (TDS)) to hypersaline (up to 300,000 milligrams/Litre TDS) (Saracen Gold Mines Pty Ltd, 2010). A water sample from Enterprise creek showed 2,300 milligrams/Litre TDS, whereas a historic bore at the application area (adjacent to the Enterprise creek line) was 1,250 milligrams/Litre TDS (Saracen Gold Mines Pty Ltd, 2010). Due to the variation in groundwater salinity, the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

A narrow semi-incised creek line and a broad drainage tract which discharges into Lake Rebecca (approximately 14 kilometres south-west of the application area), transect the application area (GIS Database). Saracen Gold Mines Pty Ltd (2010) advises that disturbance to these drainage tracts will be minimised and managed to minimise erosion, and that sedimentation of the lake is unlikely.

Groundwater in the Enterprise and Margaret's area is 25 metres below surface prior to mining commencement. The maximum depth of the Margaret's open pit is 85 metres and will remain as a void at the completion of mining (Saracen Gold Mines Pty Ltd, 2010). The Margaret's pit voids will act as groundwater sinks and at least partially fill with water. It is likely that the water quality within the open pit will become more saline over time due to saline inflows and concentration of salts via evaporation (Saracen Gold Mines Pty Ltd, 2010). Saracen Gold Mines Pty Ltd (2010) have advised that dewatering of the Margaret's open pit will be necessary and the water will be pumped to a turkey nest and then to Lake Rebecca. A dewatering bore located at Margaret's is located next to the Enterprise creek line (Saracen Gold Mines Pty Ltd, 2010). This most likely intersects the shallow aquifer below the creek and it is likely that as this bore is pumped, groundwater quality will deteriorate (Aquaterra, 2009). Vegetation in the drainage line will be monitored for impacts from dewatering and mining in general (Saracen Gold Mines Pty Ltd, 2010).

The application area experiences a semi-arid climate with highly sporadic rainfall and occasional heavy summer rains. The application area receives an average annual rainfall of 250 millimetres/year with an average annual pan evaporation rate of approximately 2,400 millimetres/year (BoM, 2010; Saracen Gold Mines Pty Ltd, 2010), and there is little surface flow during normal seasonal rains. The proposed clearing is not likely to cause the quality of surface area to deteriorate.

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

Methodology Aquaterra (2009)
BoM (2010)
Saracen Gold Mines Pty Ltd (2010)

GIS Database:

- Public Drinking Water Source Areas
- Hydrography, Linear
- Groundwater Salinity, Statewide

(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 application area experiences a semi-arid climate with an average annual rainfall of 250 millimetres recorded at the closest weather station at Edjudina, approximately 5 kilometres away south-east of the application area (BoM, 2010; GIS Database). The application area experiences a relatively high average annual evaporation rate of approximately 2,400 millimetres (BoM, 2010).

The application area is within the Raeside-Ponton catchment area (GIS Database). The size of the application area to be cleared (126 hectares) compared to the size of the catchment area (11,589,533 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area, or within the catchment.

There is a narrow ephemeral creek line in the northern section of the application area that runs south-southwest between the Margaret and Enterprise deposits, which joins a major drainage line in the southern half of the application area that eventually discharges into Lake Rebecca (Saracen Gold Mines Pty Ltd, 2010). The broad drainage line consists of several semi-incised channels in a broad flood zone; however the channels within the draining line only contain water after rainfall (Saracen Gold Mines Pty Ltd, 2010). Saracen Gold Mines Pty Ltd (2010) advises that whole areas floods only after major, but infrequent rainfall. The total area cleared within the clearing proposal is minimal in relation to the total size of the Lake Rebecca catchment, and will have a minimal effect on the amount of discharge.

The Margaret ore body lies immediately west of the Enterprise Creek and will require some modification to the creek line. Impact to the creek line will be limited to a <300 metre section which will require diverting around the final abandonment bund. A new channel of similar to the existing channel will be constructed. Modification to the creek line will be managed to minimise erosion and sedimentation while maintain water flows (Saracen Gold Mines Pty Ltd, 2010).

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

Methodology BoM (2010)
Saracen Gold Mines Pty Ltd (2010)
GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, Linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The clearing permit application was advertised on 1 November 2010 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received in relation to this application regarding aboriginal heritage issues. A written response was provided on the matters raised.

There are no Native Title claims over the area under application. 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 (GIS Database). 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 Environment and Conservation 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.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Determined
- Native Title Federal
- Native Title NNTT

4. References

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- Saracen Gold Mines Pty Ltd (2010) Margaret's Project, Clearing Permit Application Supporting Documentation, Unpublished report dated October 2010.
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5. Glossary

Acronyms:

| | |
|-----------------|---|
| BoM | Bureau of Meteorology, Australian Government |
| CALM | Department of Conservation and Land Management (now DEC), Western Australia |
| DAFWA | Department of Agriculture and Food, Western Australia |
| DEC | Department of Environment and Conservation, Western Australia |
| DEH | Department of Environment and Heritage (federal based in Canberra) previously Environment Australia |
| DEP | Department of Environment Protection (now DEC), Western Australia |
| DIA | Department of Indigenous Affairs |
| DLI | Department of Land Information, Western Australia |
| DMP | Department of Mines and Petroleum, Western Australia |
| DoE | Department of Environment (now DEC), Western Australia |
| DoIR | Department of Industry and Resources (now DMP), Western Australia |
| DOLA | Department of Land Administration, Western Australia |
| DoW | Department of Water |
| EP Act | Environmental Protection Act 1986, Western Australia |
| EPBC Act | Environmental 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 |
| RIWI Act | Rights in Water and Irrigation Act 1914, Western Australia |
| s.17 | Section 17 of the Environment Protection Act 1986, Western Australia |
| TEC | Threatened Ecological Community |

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1 Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2 Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3 Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4 Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1 Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2 Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3 Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4 Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1 Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2 Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3 Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4 Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5 Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W) Extinct in the wild:** A native species which:

- (a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
- (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.