Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2996/1
Permit type: Purpose Permit

1.2. Proponent details

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

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: Enterprise Gold Mine

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Associations have been mapped at a 1:250,000 scale for the whole of Western Australia. One Beard Vegetation Association has been mapped within the application area (GIS Database; Shepherd et al., 2001). 400: Succulent steppe with open low woodland; mulga over bluebush The application area was surveyed by Alexander Holm and Associates staff in August 2006 (Saracen Gold Mines Pty Ltd, 2008). The following vegetation types were identified within the application area. **Sago Bush Low Shrublands (PSAS):** Occur on alluvial plains with red earths or duplex soils on hardpan and characterised by the dominance of *Maireana pyramidata*. PSAS generally consists of a dominant scattered low shrub stratum with occasional mid shrubs, tall shrubs and very occasionally trees. This vegetation type is dominated by; *Acacia aneura, A*. sp. (spiny Snakewood), *Hakea preissii, Maireana pyramidata* and *M. sedifolia* (Saracen Gold Mines Pty Ltd, 2008; Pringle et al., 1994). **Mulga Shrublands with Claypan Grass Understoreys (CPMG):** Frequently occurs in claypans in the lower sectors of alluvial systems, in large drainage foci and in drainage tracts receiving concentrated run-on and is often surrounded by plains with sandy soils which support a different suite of perennial grasses. This vegetation type is dominated by; *Acacia aneura, A. tetragonophylla*, *Cassia nemophila, Eremophila forrestii, E. foliosissima, Rhagodia eremaea, Cratystylis subspinescens, Maireana villosa, Muehlenbechia cunninghamii, Ptilotus obovatus* and *Eriachne flaccida* (Saracen Gold Mines Pty Ltd, 2008; Pringle et al., 1994).	Saracen Gold Mines Pty Ltd has applied to clear up to 24 hectares of native vegetation within a boundary of approximately 58 hectares for the purposes of developing the Enterprise open pit mine and associated infrastructure (Saracen Gold Mines Pty Ltd, 2008). Saracen Gold Mines Pty Ltd intend to clear using bulldozers and graders and the topsoil and vegetation is to be stockpiled for use in rehabilitation.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).	The vegetation condition was derived from a vegetation survey conducted by Alexander Holm and Associates (Saracen Gold Mines Pty Ltd, 2008).

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 Eastern Murchison (MUR1) sub-region of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) (GIS Database). This sub-region is characterised by internal drainage, and extensive areas of elevated red desert sand plains with minimal dune development (CALM, 2002). It contains salt-lake systems associated with the occluded Paleodrainage system (CALM, 2002). This sub-region has broad plains of red-brown soils and breakaway complexes as well as red sand plains (CALM, 2002). The vegetation is dominated by *Mulga* woodlands often rich in ephemerals, hummock grasslands, saltbush shrub lands and *Halosarcia* shrub lands (CALM, 2002). The vegetation described within the application area (Saracen Gold Mines Pty Ltd, 2008) is typical of the bioregion.

A vegetation survey of the application area and surrounding vegetation identified 43 native flora species belonging to 32 genera from 19 families (Saracen Gold Mines Pty Ltd, 2008). This is not considered to be biologically diverse. Two alien weed species were recorded within the vegetation survey area (Saracen Gold Mines Pty Ltd, 2008). These were Spiked Malvastrum (*Malvastrum americanum*) and Vervain (*Salvia verbenaca*) (Saracen Gold Mines Pty Ltd, 2008). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. These species are not listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food (DAFWA). Should the permit be granted, it is recommended that appropriate conditions be imposed on the permit for the purpose of weed management.

An area search of the Western Australian Museum's Faunabase conducted by the assessing officer suggests that the application area is diverse in reptile species, particularly Skinks (18) (Western Australian Museum, 2009). The database search found 37 reptile species from 7 families as potentially occurring within the application area, or within a 50 kilometre radius of the application area. From a faunal perspective, no detailed surveys have been undertaken to measure the species richness of the proposed clearing area, however the application area is contiguous with the surrounding landscape and is not an isolated landscape feature where fauna could have become restricted over time.

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

Methodology

CALM (2002)
Saracen Gold Mines Pty Ltd (2008)
Western Australian Museum (2009)
GIS Database
- Interim Biogeographic Regionalisation of Australia

(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

The assessing officer has conducted a search of the Western Australian Museum's online fauna database between the co-ordinates 122.8413°E, 29.3173°S and 121.7909°E, 30.2429°S, representing a 50 kilometre radius around the application area.

This search identified 1 Fish, 2 Avian, 3 Amphibian, 13 Mammalian and 37 Reptilian species that may occur within the application area (Western Australian Museum, 2009). No species of conservation significance have previously been recorded within the search area (Western Australian Museum, 2009).

Saracen Gold Mines Pty Ltd (2008) conducted a desktop search of the Department of Environment and Conservation's (DEC) Threatened and Priority Fauna database and the Department of the Environment, Water, Heritage and the Arts (DEWHA) Protected Matters Search Tool to identify species of conservation significance that had been recorded within the area specified. The following fauna species of conservation significance were identified through these database searches:

Peregrine Falcon (*Falco peregrinus*), Slender-billed Thornbill (*Acanthiza iredalei iredalei*), Alexandra's Parrot (*Polytelis alexandrae*), Malleefowl (*Leipoa ocellata*), Rainbow Bee-eater (*Merops ornatus*), Cattle Egret (*Ardea ibis*), Great Egret (*Ardea alba*), Fork-tailed Swift (*Apus pacificus*), Oriental Plover (*Charadrius veredus*), Thick-billed Grass-wren (*Amytornis textilis textilis*), Hooded Plover (*Charadrius rubricollis*), *Branchinella apophysata*, Mulgara (*Dasycercus cristicauda*), Southern Marsupial Mole (*Notoryctes typhiops*), Greater Bilby (*Macrotis lagotis*), Sandhill Dunnart (*Sminthiopsis psammophila*) and the Great Desert Skink (*Egernia kintorei*).

Based on habitat requirements, the following species are most likely to occur within the application area:

Malleefowl (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*) are largely confined to arid and semi-arid woodland that is dominated by mallee eucalypts on sandy soils, with less than 430 millimetres of rainfall annually (DEC, 2009a). However, they can

also occur in habitats of *Acacia*, paperbark, *Sheoak* and other scrubs, as well as *Eucalypt* woodland and coastal heaths with an abundant layer of leaf litter for use in nest mounds (Garnett and Crowley, 2000). It is possible that the Malleefowl may inhabit the application area, as there have been unconfirmed sightings within the general area, however no nesting sites have been found within the application area and so it is unlikely that the application area would provide significant habitat for this species.

The Slender-billed Thronbill (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*) occurs in arid and semi-arid regions of southern Western Australia (DEWHA, 2009). This species usually occurs in chenopod shrublands dominated by samphires or *Mairena* and *Atriplex* associations but occasionally occurs in Acacia shrublands and mangroves adjacent to more preferred habitat (DEWHA, 2009). The application area may contain vegetation that provides suitable habitat for this species, however given that the vegetation types that comprise its habitat are well represented throughout the bioregion, and the small area proposed to clear (24 hectares) in relation to the size of the sub-region (7,847,996 hectares) it is unlikely that the application area contains significant habitat for this species.

Sandhill Dunnarts (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*) have been recorded from the Eyre Peninsula (South Australia) and the Great Victoria Desert (South Australia and Western Australia) (Northern Territory Government, 2009). Sandhill Dunnarts occur in sandy environments, with vegetation consisting of low woodland or low open woodland with a diverse shrub understorey and a ground cover of at least 20% Spinifex hummocks (Northern Territory Government, 2009). The vegetation within the application area provides suitable habitat for this species, however given that the vegetation types are well represented throughout the bioregion and the small area proposed to clear (24 hectares) in relation to the size of the sub-region (7,847,996 hectares) it is not likely to be significant habitat.

The Bilby (Schedule 1 - Fauna that is rare or likely to become extinct, *Wildlife Conservation (Specially Protected Fauna) Notice, 2008*) is a nocturnal marsupial, formerly known to occupy habitats ranging from Eucalyptus and Acacia woodlands in the wheatbelt of Western Australia to Triodia grasslands in the desert regions (DEC, 2009b). Bilbies require sandy or loamy soil in which to burrow, with the major habitats they now occupy being mulga scrub and hummock grasslands on sandplains or along drainage or salt lake systems (DEC, 2009b). During a previous reconaissance survey no burrows were recorded indicating that the application area does not contain significant habitat for this species.

It is possible that the Peregrine Falcon (Schedule 4 - Other Specially Protected Fauna of the *Wildlife Conservation Fauna Notice, 2008*) may use habitat within the proposed clearing area, this species is wide ranging and mobile (Birds in Backyards, 2009) and it is therefore unlikely that the proposed clearing will result in a loss of significant habitat for this species.

Alexandra's Parrot (P4 - DEC Priority Fauna List) is confined to the arid regions of Western Australia, the Northern territory and South Australia (Environment, 2009). This species inhabits sand dunes and sand flats in the arid zone of western and central Australia, preferring open savanna woodlands and shrublands that usually consist of scattered stands of *Eucalyptus, Casuarina* or *Allocasuarina* trees, an understorey of shrubs such as *Acacia* (especially *A. aneura*), *Cassia, Eremophila, Grevillea, Hakea* and *Senna* and a ground cover dominated by *Triodia* species (Environment, 2009). It is possible that Alexandra's Parrot may inhabit the application area, however given that the vegetation types are well represented throughout the bioregion and the small area proposed to clear (24 hectares) in relation to the size of the Eastern Murchison sub-region (7,847,996 hectares) it is unlikely that the application area contains significant habitat for this species.

The Rainbow Bee-Eater (migratory - JAMBA International Agreement) occurs mainly in open forests, woodlands and shrublands but also occurs in inland and coastal sand dune systems and mangroves in Northern Australia (Western Australian Museum, 2009). This species is an opportunist and is known to inhabit a wide range of habitats (Pizzey and Knight, 1997). This species is likely to occur within the application area, however given that this species does not have a restricted range and the vegetation types that comprise its habitat are well represented throughout the bioregion it is unlikely that the application area contains significant habitat for this species.

The application area is not within a defined fauna refuge area (creek line, breakaway, dampland etc) and is within common and widespread vegetation associations (Saracen Gold Mines Pty Ltd, 2008). However, the vegetation associated with the drainage channel is likely to be a fauna refuge and as such disturbance to this area should be kept to a minimum.

Based on the above, the proposed clearing may be at variance to this Principle. Should a permit be granted, it is recommended that a condition be imposed on the permit for the purpose of watercourse management thereby preventing the clearing of native vegetation within 50 metres of the riparian vegetation of any watercourse within the application area.

Methodology

Birds in Backyards (2009)
DEC (2009a)
DEC (2009b)
DEWHA (2009)
Environment (2009)

Garnett and Crowley (2000)
Northern Territory Government (2009)
Saracen Gold Mines Pty Ltd (2008)
Western Australian Museum (2009)

(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, no Declared Rare Flora (DRF) or Priority Flora species occur within the application area (GIS Database).

Prior to a flora survey being undertaken a desktop database search of The Department of Environment and Conservation's (DEC) Threatened (Declared Rare) Flora Database was carried out by Saracen Gold Mines Pty Ltd (2008). According to these searches three species of DRF and 19 Priority flora species may occur within the application area (Saracen Gold Mines, 2008). These are:

DRF - *Conospermum toddii, Eucalyptus articulata* and *Thryptomene wittweri;*
P1 - *Eremophila annosocaulis, E. eversa, Grevillea phillipsiana, Tecticornia flabelliformis, Tecticornia mellaria* and *Ptilotus tetrandrus;*
P2 - *Micromyrtus serrulata, Olearia mucronata* and *Thryptomene eremaea;*
P3 - *Acacia eremophila, Calytrix praecipua, Eucalyptus pimpiniana, Gunniopsis propinqua* and *Hybanthus floribundus* subsp*. chloroxanthus*; and
P4 - *Eucalyptus kruseana, E. nigrifunda, E. x brachyphylla, Hemigenia exilis* and *Lepidobolus deserti (*Saracen Gold Mines Pty Ltd, 2008).

A flora survey was conducted over the application area by Alexander Holm & Associates on 24 August, 2006 which followed followed a reasonable winter season and there was a reasonable cover of annual species (Saracen Gold Mines Pty Ltd, 2008). This survey involved 15 grid points distributed across the application area being located by GPS. At each grid point all flora species present within a 20-30 metre radius were identified and each grid point was allocated to a relevant land unit (Saracen Gold Mines Pty Ltd, 2008). On-foot traverses bewteen the grid points completed the flora survey of the application area and the vegetation associations were examined for the presence or absence of any DRF and Priority Flora species (Saracen Gold Mines Pty Ltd, 2008).

No species of DRF or Priority flora were recorded during the flora survey (Saracen Gold Mines Pty Ltd, 2008).

The Assessing Officer carried out a search for *Micromyrtus serrulata* and *Olearia mucronata* on FloraBase on 6 April 2009 which noted that the conservation status of Micromyrtus serrulata and Olearia mucronata have been altered from P2 to P3 (Western Australian Herbarium, 2009).

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

Methodology

Saracen Gold Mines Pty Ltd (2008)
Western Australian Herbarium (2009)
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 available databases reveals that there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). There are no TEC's located within the East Murchison IBRA sub-region (CALM, 2002).

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

Methodology

CALM (2002)
GIS Database
- Threatened Ecological Communities

(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 IBRA Murchison Bioregion (GIS Database). Shepherd et al. (2001) report that approximately 100% of the pre-European vegetation still exists in this Bioregion. The vegetation in the application area is recorded as Beard Vegetation Association 400: Succulent steppe with open low woodland; mulga over bluebush (GIS Database; Shepherd et al., 2001). According to Shepherd et al., (2001)

approximately 100% of Beard Vegetation Association 400 remains 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	28,120,558	28,120,558	~100.0%	Least Concern	~1.1%
Beard veg assoc. – State					
400	190,824	190,824	~100.0%	Least Concern	~0.0%
Beard veg assoc. – Bioregion					
400	190,824	190,824	~100.0%	Least Concern	~0.0%

* Shepherd et al. (2001) updated 2005
** Department of Natural Resources and Environment (2002)

Therefore the vegetation within the application area is not a significant remnant of native vegetation within an area that has been extensively cleared.

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd et al. (2001) updated 2005
GIS Database
- Pre-European Vegetation
- Interim Biogeographic Regionalisation for Australia

(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**
According to available GIS datasets, there are no known permanent watercourses or water bodies within the application area (GIS Database). However, there is a drainage channel which intersects the north-western corner of the application area (Saracen Gold Mines Pty Ltd, 2008). Vegetation mapping of the application area by Saracen Gold Mines Pty Ltd (2008) indicates that approximately 10% of the native vegetation within the application area is riparian vegetation. The vegetation associated with the drainage channel is likely to be a fauna refuge and as such disturbance to this area should be kept to a minimum.

Based on the above, the proposed clearing is at variance to this Principle. Should a permit be granted, it is recommended that a condition be imposed on the permit for the purpose of watercourse management thereby preventing the clearing of native vegetation within 50 metres of the riparian vegetation of any watercourse within the application area.

Methodology Saracen Gold Mines Pty Ltd (2008)
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 application area has been surveyed by the Department of Agriculture and Food (Van Vreeswyk et al., 1994). The application area is comprised of the following land system (GIS Database);

Gundockerta Land System

The Gundockerta Land System is described as extensive, gently undulating, calcareous, stony plains, supporting bluebush shrublands (Van Vreeswyk et al., 1994). The Gundockerta land system is comprised of six land units (Van Vreeswyk et al, 2004). These are:

- Low rises;
- Saline stony plains;
- Stony plains;
- Drainage zones;

- Alluvial plains; and
- Hardpan plains (Van Vreeswyk et al, 1994).

An analysis of GIS databases for the application area reveals the application area is most likely to fall within the 'drainage zones' and 'alluvial plains' land units. Soils were generally described as sandy surfaced, saline duplex soils (Van Vreeswyk et al., 1994). The saline plains and adjacent lower alluvial tracts of the Gundockerta Land System, where not protected by a stony mantle are susceptible to water erosion, particularly in areas where perennial shrub cover is substantially reduced and/or the soil surface is disturbed (Van Vreeswyk et al., 1994).

Based on the above, the proposed clearing may be at variance to this Principle. It is recommended that should a permit be granted, a condition be imposed on the permit with regard to stockpiling of all cleared topsoil and vegetation for use in rehabilitation.

Methodology
Saracen Gold Mines Pty Ltd (2008)
Van Vreeswyk et al. (1994)
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 application area is located approximately 58 kilometres to the east-north-east of Goongarrie National Park (GIS Database). At this distance it is not likely that the vegetation within the application area provides a buffer to a conservation area, or is an important ecological linkage to a conservation area. The vegetation types within the application area are well replicated in other land systems within the Murchison region. Consequently, their conservation status is under no threat.

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

Methodology
GIS Database
- CALM Managed Lands and Waters

(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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

There are no permanent water bodies or watercourses within the application area (GIS Database). The application area is located in an arid region, with mainly winter rainfall (CALM, 2002). With an average rainfall of approximately 232.4 millimetres/year (BoM, 2009) and an average annual pan evaporation rate of 2,800 millimetres (BoM, 2009), there is little surface flow during normal seasonal rains. The application area has no incised drainage and all water movement is by overland sheet flow which is collected by a drainage channel to the north and west of the site (Saracen Gold Mines Pty Ltd, 2008). The proposed clearing is not likely to cause the quality of surface water to deteriorate.

The groundwater tables within the application area exist at 30-100 metres below the surface, with groundwater salinity varying between 3,000-7,000 milligrams/Litre Total Dissolved Solids (TDS) (GIS Database; Saracen Gold Mines Pty Ltd, 2008). The proposed open pit mining will require de-watering, however it is unlikely that vegetation within the application area is dependent on groundwater due to the high salinity levels and so is unlikely to be affected (Saracen Gold Mines Pty Ltd, 2008).

The application area is located within the Yilgarn-Goldfields Groundwater Province (GIS Database). Given the size of the area to be cleared (24 hectares) compared to the size of the Yilgarn-Goldfields Groundwater Province (29,644,595 hectares) (GIS Database), the proposed clearing is not likely to cause salinity levels within the application area to alter significantly.

There are no known groundwater dependent ecosystems within the application area (GIS Database).

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

Methodology
BoM (2009)
CALM (2002)
Saracen Gold Mines Pty Ltd (2008)
- Public Drinking Water Source Area
- Groundwater - Provinces
- Groundwater Salinity

- Potential Groundwater Dependent Ecosystems

(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 is located within an arid environment, with mainly winter rainfall (CALM, 2002). Low annual rainfall (approximately 232.4 millimetres) (BoM, 2009), high evaporation rates (2800 millimetres/year) (BoM, 2009) and the absence of permanent water bodies and watercourses in the application area (GIS Database) would suggest that this area is not prone to flooding under normal rainfall conditions. The application area has no incised drainage and all water movement is by overland sheet flow which is collected by a drainage channel to the north and west of the application area (Saracen Gold Mines Pty Ltd, 2008).

The application area is located within the Raeside-Ponton catchment area (GIS Database). The size of the area to be cleared (24 hectares) in relation to the size of the Raeside-Ponton catchment area (11,589,532 hectares) is not likely to lead to an increase in flood height or duration (GIS Database).

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

Methodology

BoM (2009)
CALM (2002)
Saracen Gold Mines Pty Ltd (2008)
GIS Database
- Hydrographic Catchments - Catchments

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

Comments

There is one native title claim (WC99/001) over the area under application. This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the tenements have 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 known Aboriginal sites of significance within the application area, however there are two known Aboriginal sites of significance (ID_2324 and ID_2327) within close proximity of 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.

No public submissions were received in regard to this Clearing Permit application.

Methodology

GIS Database
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles, and the proposal is at variance to Principle (f), may be at variance to Principles (b) and (g), is not likely to be at variance to Principles (a), (c), (d), (h), (i) and (j) and is not at variance to Principle (e).

It is recommended that should a permit be granted, conditions be imposed on the permit for the purpose of weed management, stockpiling of all cleared topsoil and vegetation, watercourse management, record keeping and permit reporting.

5. References

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Western Australian Museum (2009) Faunabase - Western Australian Museum, Queensland Museum and Museum and Art Gallery of NT Collections Databases. http://www.museum.wa.gov.au/faunabase/prod/index.htm. Accessed 2 April 2009. Western Australian Museum

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), Western Australia.
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia.
DMP	Department of Mines and Petroleum
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
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	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

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.