



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6565/1
 Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Pilbara Manganese Pty Ltd**

1.3. Property details

Property: Mineral Lease 45/429
 Mineral Lease 45/639
 Local Government Area: Shire of East Pilbara
 Colloquial name: SatNat Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
 Decision Date: 25 June 2015

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
<p>Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation association is located within the application area (GIS Database):</p> <p>Beard vegetation association 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & <i>Triodia wiseana</i> on basalt</p> <p>MBS Environmental (2015;2010) conducted a desktop review, infill vegetation mapping and a level 1 flora and vegetation survey over the application area and identified the following vegetation types:</p> <ol style="list-style-type: none"> 1) Woodland of <i>Eucalyptus camaldulensis</i> var. <i>obtusa</i> over <i>Acacia trachycarpa</i>, <i>Acacia inaequilatera</i> and <i>Ficus brachypoda</i> over *<i>Cenchrus ciliaris</i> along major water courses; 2) Scrub or Thicket of <i>Carissa lanceolata</i>, <i>Petalostylis labicheoides</i>, <i>Acacia bivenosa</i> and <i>Acacia ancistrocarpa</i> over <i>Triodia pungens</i>, <i>Triodia basedowii</i>, *<i>Cenchrus ciliaris</i> and <i>Chrysopogon fallax</i> along minor watercourses; 3) Scrub or Low Shrubland of <i>Acacia ancistrocarpa</i>, <i>Acacia arida</i>, <i>Acacia acradenia</i>, <i>Petalostylis labicheoides</i>, <i>Gossypium australe</i>, <i>Acacia synchronicia</i> and <i>Acacia inaequilatera</i> over <i>Triodia longiceps</i> and <i>Triodia wiseana</i> with patches of *<i>Cenchrus ciliaris</i> on flats, often associated with major watercourses; 4) Open Low Shrubland of <i>Acacia arida</i> and <i>Acacia hilliana</i> over <i>Triodia wiseana</i> and <i>Dampiera candidans</i> on slopes and hilltops; 5) Hummock Grassland of <i>Triodia longiceps</i> with scattered <i>Acacia bivenosa</i>, <i>Acacia synchronicia</i> 	<p>SatNat Project.</p> <p>Pilbara Manganese Pty Ltd proposes to clear up to 38.43 hectares of native vegetation within a total boundary of approximately 332.825 hectares, for the purpose of mining operations and associated activities. The project is located approximately 100 kilometres east of Nullagine in the Shire of East Pilbara</p>	<p>Completely degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).</p> <p>To</p> <p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).</p> <p>Note: The majority of the vegetation under application is considered to be in a 'Good' condition (Consolidated Minerals, 2015).</p>	<p>Vegetation condition was derived from a flora and vegetation assessment conducted by MBS Environmental (2015; 2010) and information provided by the proponent (Consolidated Minerals, 2015). The proposed clearing will allow for the construction of a single open cut pit, waste dump, haul and access roads, Run of Mine pad (ROM), go line, topsoil stockpile area and surface water diversion drain (Consolidated Minerals, 2015).</p>

and *Acacia ptychophylla* on flats and lower slopes;

- 6) Hummock Grassland of *Triodia longiceps* and *Triodia wiseana* with occasional *Grevillea wickhamii* subsp. *hispidula* on flats and lower slopes;
- 7) Closed Bunch Grassland of **Cenchrus ciliaris* and *Triodia longiceps* with scattered *Acacia bivenosa* and *Acacia trachycarpa* shrubs on red sandy flats;
- 8) Open Scrub of *Senna artemisioides* subsp. *oligophylla*, *Hakea lorea* subsp. *lorea* and *Atalaya hemiglauca* over mixed shrubs, herbs and grasses on rocky slopes; and
- 9) Cleared areas, areas devoid of vegetation or with vegetation condition classified as Completely Degraded.

Note: *indicates introduced species

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 Chichester subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by plains supporting a shrub steppe of *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

A total of 19 flora and vegetation surveys have been conducted across the Woodie Woodie tenements, through which, a total of 335 taxa from 136 genera and 48 families have been recorded (Consolidated Minerals, 2015). The application area is located within an area that has experience disturbance from previous mining activities. As a result there are areas of significant disturbance, however the majority of the vegetation under application is considered to be in 'Good' condition (Consolidated Minerals, 2015). During a level 1 flora and vegetation survey (which included the application area), three Priority flora species were recorded: *Aristida jerichoensis* var. *subspinulifera* (P1), *Lepidium amelum* (P1) and *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) (P3). A fourth priority species, *Euphorbia clementii* (P2) was not found during the field surveys, but is known from the area (DPaW, 2014). No Priority listed or Threatened flora species have been recorded within the application area (Consolidated Minerals, 2015).

No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) are known within the local area (GIS Database; Consolidated Minerals, 2015). The closest of which (a PEC) is located some 50 kilometres from the application area.

The vegetation communities mapped over the application area are well represented throughout the region and are not thought to be regionally or locally significant (Consolidated Minerals, 2015). The habitat types present within the application area are common on both a local and regional scale and large amounts of undisturbed habitat remains in the local area (Consolidated Minerals, 2015). The application area is unlikely to have greater biodiversity than other undisturbed areas in the locality.

Ten introduced flora species were recorded within the Woodie Woodie tenements. Weed presence was generally low with Kapok Bush (*Aerva javanica*) impacting some areas (MBS Environmental, 2010; Consolidated Minerals, 2015). Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. 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 above, the proposed clearing is not likely to be at variance to this Principle.

- Methodology**
- CALM (2002)
 - DPaW (2014)
 - Consolidated Minerals (2015)
 - GIS Database:
 - IBRA WA (Regions - Sub Regions)
 - Pre-European vegetation
 - Threatened Ecological Sites Buffered 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 local area has been well surveyed, with Western Wildlife undertaking three Level 2 and two Level 1 fauna surveys across all Woodie Woodie tenements (Consolidated Minerals, 2015). No comprehensive fauna survey (Level 2) has occurred over the application area; however a Level 2 fauna survey has been conducted over an adjacent area (Consolidated Minerals, 2015).

Five fauna habitats have been identified within the application area (Consolidated Minerals, 2015):

- *Acacia sp.* dominated minor drainage lines;
- *Eucalyptus* and *Melaleuca* fringes creeklines;
- *Troodia sp.* hummock grassland dominated plains;
- Low Gorges; and
- Small caves within low gorges.

The Sat Nat project area is described as mostly a rocky hillslope with spinifex cover. The tops of some hills are comprised of steep rock faces with one large overhang and some small gaps and caves between boulders. The hills have some sparse cover of shrubs to 2 metres. The area also includes a small drainage with dense *Acacia* to 2m and rocky creeks with scattered *Eucalypts* to 10 metres. The habitat is generally in good condition (Western Wildlife, 2006).

The following species of conservation significance listed as either threatened species under the *Environment Protection and Biodiversity Conservation Act (EPBC) 1999* or protected under Western Australian legislation (*Wildlife Conservation Act 1950 (WC)*) have been recorded or are likely to occur within the local area (DPaW 2014; Western Wildlife, 2006):

- Pilbara Olive Python (*Liasis olivaceus subsp. barroni* – EPBC Act and WC Act Vulnerable);
- Northern Quoll (*Dasyurus hallucatus* – EPBC Act and WC Act Endangered);
- Orange Leaf-nosed Bat (*Rhinonictes aurantia* – EPBC Act Vulnerable);
- Mulgara (*Dasyercus cristicauda* – EPBC Act and WC Act Vulnerable);
- Peregrine Falcon (*Falco peregrinus* – WC Act Schedule 4);
- Common Sandpiper (*Actitis hypoleucos* - EPBC Act Marine; Migratory);
- Wood Sandpiper (*Tringa glareola* - EPBC Act Marine; Migratory);
- Fork Tailed Swift (*Apus pacificus* - EPBC Act Marine; Migratory);
- Greater Bilby (*Macrotis lagotis* – EPBC Act and WC Act Vulnerable); and
- Rainbow Bee-eater (*Merops ornatus* - EPBC Act Marine; Migratory);

Priority listed species, recognised by the Department of Parks and Wildlife (DPaW) as being of conservation significance, that have been recorded within the local area include the Australian Bustard (*Ardeotis australis* – P4) Western Star Finch (*Neochmia ruficauda subclarescens* – P4), Western Pebble-mound Mouse (*Pseudomys chapmani* – P4) and the Barking Owl (*Ninox connivens subsp. connivens* – P2) (Western Wildlife, 2010; Consolidated Minerals, 2015; DPaW, 2014).

The Peregrine Falcon, Common Sandpiper, Wood Sandpiper, Fork Tailed Swift, Greater Bilby, Mulgara, Rainbow Bee-eater, Australian Bustard, Western Star Finch and Barking Owl are not likely to be significantly impacted by the proposed clearing due to their migratory or mobile nature, large home range or habitat preferences (Consolidated Minerals, 2015; Western Wildlife, 2010).

The Pilbara Olive Python may pass through the application area, however adjacent areas provide more suitable habitat (Western Areas, 2010). The Northern Quoll may be present in rocky areas (Western Wildlife, 2010) but after multiple surveys, has not been recorded at any sites within the Woodie Woodie tenements. The caves present within the application area are not suitable for the Orange Leaf-nosed Bat, which is known to forage in the area, although there is the potential for roost sites to occur within the application area but none have been located to date (Western Wildlife, 2010). If present, roost sites should be avoided. The proponent has developed and will implement management practises to minimise potential impacts to local fauna species (Consolidated Minerals, 2015).

No mounds of the Western Pebble-mound Mouse have been found within the application area. Inactive mounds have been found throughout the Woodie Woodie tenements, indicating that suitable habitat is widely available (Consolidated Minerals, 2015). No active mounds have been found (Consolidated Minerals, 2015).

Due to its proximity to existing mining areas, the application area has been subjected to disturbance. Large amounts of undisturbed suitable habitat remains and the habitats within the application area are common on both a local and regional scale (Consolidated Minerals, 2015), therefore they are not considered to represent significant fauna habitat for local species, including any conservation significant species.

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

Methodology DPaW (2014)
Consolidated Minerals (2015)

Western Wildlife (2006)
 Western Wildlife (2010)
 GIS Database
 - Imagery

(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

A total of 19 flora and vegetation surveys have been conducted across the Woodie Woodie tenements. No Threatened flora species have been found within the application area or within the entire Woodie Woodie tenement area (Consolidated Minerals, 2015; MBS Environmental, 2015; 2010).

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

Methodology MBS Environmental (2015)
 MBS Environmental (2010)
 Consolidated Minerals (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 at variance to this Principle

There are no known Threatened Ecological Communities within the application area (GIS Database). Of the 17 plant communities mapped within all Woodie Woodie tenements, none have been found to resemble TECs (Consolidated Minerals, 2015).

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

Methodology Consolidated Minerals (2015)
 GIS Database:
 - Threatened Ecological Sites Buffered
 - 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 application area occurs within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, in which approximately 99.6% of the pre-European vegetation remains (see table below) (GIS Database; Government of Western Australia, 2013).

The vegetation within the application area has been mapped as Beard vegetation association 173. Approximately 99.72% of Beard vegetation association 173 remains at a state and bioregional level respectively (Government of Western Australia, 2013). Given the amount of vegetation remaining in the local area and bioregion, the 38.43 hectares of vegetation under application is not considered to be significant as a remnant within an extensively cleared area.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Lands
IBRA Bioregion - Pilbara	17,808,657	17,733,584	99.6	Least Concern	~ 8.4
Beard veg assoc. - State					
173	1,753,104	1,748,261	99.7	Least Concern	~ 13.6
Beard veg assoc. - Bioregion					
173	1,752,521	1,747,677	99.7	Least Concern	~ 13.6

* Government of Western Australia (2013)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
 Government of Western Australia (2013)
 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 within the application area, however, there are several mapped ephemeral drainage lines which intersect the application area (Consolidated Minerals, 2015; GIS Database).

Two plant communities have been recorded along drainage lines within the application area (Consolidated Minerals, 2015). Both communities (and the ephemeral drainage lines with which they are associated) are common throughout the Woodie Woodie tenements (Consolidated Minerals, 2015).

Based on the above, the proposed clearing is at variance to this Principle, however, given that the plant communities recorded growing along drainage lines are widespread and that the proponent has committed to management measures, the proposed clearing of native vegetation growing in association with a watercourse or wetland is unlikely to result in significant environmental impacts. Potential impacts to vegetation growing in association with watercourses as a result of the proposed clearing may be minimised by the implementation of watercourse management condition.

Methodology Consolidated Minerals (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 is not likely to be at variance to this Principle

The soils of the application area are skeletal and derived mainly from the parent materials of chert and dolomite. There is also a thin discontinuous cover of laterite, colluvium and alluvium, especially along drainage lines and in the depressions of valleys and plains. Red / brown loams with a gibber surface are common on the undulating plains and low hills. The application area falls within the Coongimah land system which has a very low erosion risk (Van Vreeswyk *et al.* 2004), however, in the short term there is a risk of wind and water erosion if any susceptible areas are left cleared for long periods of time. Potential impacts of erosion as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

Methodology Van Vreeswyk *et al.* (2004)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- Soils, statewide

(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 clearing is not located within a conservation reserve (GIS Database). The nearest conservation area is the ex-Meentheena pastoral lease, a former leasehold proposed for conservation, which is located approximately 45 kilometres 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 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). The groundwater salinity within the application area is between 500 – 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Groundwater recharge is by rainwater infiltration through the overlying unsaturated rocks and sediments. Recharge has been estimated using a combination of methods to be about 15 percent of annual rainfall. The quality of the groundwater (fresh to brackish) is indicative of the basin receiving rapid recharge from infiltrating rainwater (Consolidated Minerals, 2015). The proposed clearing is unlikely to result in any significant adverse impacts to groundwater quality.

The water table in the clearing permit application area is sufficiently deep so that clearing of vegetation will not cause a major rise in the water table to result in soil salinity (Consolidated Minerals, 2015). There are no permanent wetlands or watercourses within the application area (GIS Database). It is therefore considered

unlikely that the proposed clearing will impact on the quality of any surface water.

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

Methodology Consolidated Minerals (2015)
GIS Database:
- Groundwater Salinity, Statewide
- 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 application area is located within an arid region where the average annual evaporation rate greatly exceeds the average annual rainfall (Consolidated Minerals, 2015; BOM, 2015). There are no permanent watercourses within the application area; however, several ephemeral drainage lines dissect the proposed clearing areas (GIS Database). These drainage lines are expected to be dry for most of the year, and would likely only flow briefly immediately following significant rainfall.

Natural flood events do occur in the Pilbara region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of such events given the size of the area to be cleared (38.43 hectares) in relation to the Oakover River catchment area (2,001,756 hectares) (GIS Database).

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

Methodology BoM (2015)
Consolidated Minerals (2015)
GIS Database:
- Hydrographic Catchments – Catchments

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

Comments

There is one native title claim over the application area (WC1999/008) (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 is one registered Sites of Aboriginal Significance located in the area applied to clear (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 18 May 2015 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received. Concerns related to the cumulative impacts of clearing. These have been addressed within the relevant clearing principles.

Methodology DAA (2015)
GIS Database:
- Aboriginal Sites of Significance

4. References

- BoM (2015) Climate Statistics for Australian Locations. A Search for Climate Statistics for Marble Bar, Australian Government Bureau of Meteorology,
< <http://www.bom.gov.au>
<<http://www.bom.gov.au/watl/evaporation/>>.
- 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 < <http://maps.dia.wa.gov.au/AHIS2/>>.
- 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 (2014) NatureMap, Department of Parks and Wildlife <<http://naturemap.dec.wa.gov.au>>.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report) Current as of October 2012. 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.
- MBS Environmental (2010) Site Wide Flora and Vegetation Report. Woodie Woodie Manganese Operation. Unpublished report prepared for Pilbara Manganese Pty Ltd. Martinick Bosch Sell Pty Ltd, West Perth, Western Australia.
- MBS Environmental (2015) Infill Vegetation Mapping of the Sat Nat Project Area. Woodie Woodie Manganese Operations. Martinick Bosch Sell Pty Ltd, West Perth, Western Australia.
- Consolidated Minerals (2015) Satnat Clearing Permit (Purpose Permit), Woodie Woodie Manganese Operations, Department of Mines and Petroleum, Native Vegetation Management Plan & Assessment of Clearing Principles. Consolidated Minerals Pty Ltd.
- Western Wildlife (2006) Desktop fauna assessment of future expansion areas at Woodie Woodie. 9 May 2006. Unpublished Report for Consolidated Minerals.
- Western Wildlife (2010) Woodie Woodie Prospect Areas: Homestead, Parrot, Lucy Mack North, Canyon and Sardine. Level 1 Fauna Survey May 2010. Prepared by Western Wildlife for MBS Environmental, June 2010.
- Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia, Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DPaW and DER)
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DoW	Department of Water, Western Australia
DPaW	Department of Parks and Wildlife, Western Australia
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DotE)
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<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
s.17	Section 17 of the <i>Environment Protection Act 1986</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T	<p>Threatened species: Specially protected under the <i>Wildlife Conservation Act 1950</i>, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).</p> <p>Threatened Fauna and Flora are further recognised by the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo <i>Calyptorhynchus latirostris</i> is specially protected under the <i>Wildlife Conservation Act 1950</i> as a threatened species with a ranking of Endangered.</p> <p><u>Rankings:</u> CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild. EN: Endangered - considered to be facing a very high risk of extinction in the wild. VU: Vulnerable - considered to be facing a high risk of extinction in the wild.</p>
X	<p>Presumed Extinct species: Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).</p>
IA	<p>Migratory birds protected under an international agreement: Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice. Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.</p>

- S** **Other specially protected fauna:**
Specially protected under the Wildlife Conservation Act 1950, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P1** **Priority One - Poorly-known species:**
Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
- P2** **Priority Two - Poorly-known species:**
Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
- P3** **Priority Three - Poorly-known species:**
Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities 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 localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
- 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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.
- P5** **Priority Five - Conservation Dependent species:**
Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.