Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2956/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: Mining Lease 52/10
Local Government Area: Shire of Meekatharra
Colloquial name: Coobina Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
100		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

The vegetation of the application area is broadly mapped as Beard Vegetation Association 216: low woodland; mulga (with spinifex) on rises (GIS Database).

A flora and vegetation survey was conducted over the application area by Brian Morgan in May 2008 (Morgan, 2008). Seven broad vegetation associations were recorded in the application area:

1. *Eucalyptus leucophloia*; hill slopes and hill crests.
2. *Eucalyptus socialis*; mallee hillslopes.
3. Mulga woodland.
4. Shrubland; hill slopes and crests.
5. Other woodland vegetation.
6. Rehabilitation.
7. Drainage line vegetation.

Clearing Description

Pilbara Chromite Pty Ltd (Pilbara Chromite) have applied to clear up to 100 hectares of native vegetation, within a purpose permit boundary totalling approximately 144 hectares within Mining Lease 52/10 (MBS Environmental, 2008).

The proposed clearing is for mineral production as a continuation of the existing mining activities at the Pilbara Chromite operation. Clearing is proposed to be conducted mechanically with a lowered blade in accordance with methods already in practice at the mine site (MBS Environmental, 2008).

Vegetation Condition

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

To

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994.)

Comment

The vegetation condition of the application area has been derived from the vegetation description provided by MBS Environmental (2008). In addition the assessing officer conducted a site visit in November 2008.

During meetings between the assessing officer and Pilbara Chromite staff, the assessing officer raised issues regarding the large nature of the proposed clearing and the need to excise any areas which had already been cleared from the application area. The assessing officer raised concerns that Pilbara Chromite needs to focus the application area into locations where they plan to mine over the next five years. Pilbara Chromite reduced the proposed clearing footprint from 144 hectares to 100 hectares. The purpose permit boundary was also reduced from 262 hectares to 144 hectares.

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 is situated approximately 56 kilometres east-south-east of Newman, within the Augustus subregion of the of the Gascoyne Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database).

Desmond et al. (2001) summarised the biodiversity values of the Augustus subregion as; Mulga woodland with Triodia occurring on shallow stony loams on rises, while the shallow earthy loams over hardpan on the plains are covered by Mulga parkland. The subregion has a desert climate with bimodal rainfall (Desmond et al. 2001).

A flora and vegetation assessment by Morgan (2008) described the type and distribution of vegetation units of the application area. A total of 165 native flowering plant taxa and one native fern were recorded from the survey area. The vegetation of the application area is similar to vegetation outside the application area and in the immediate locality of the south-eastern part of the Fortescue Botanical District (MBS Environmental, 2008). No Declared Rare or Priority Flora species were recorded during the survey of the application area (Morgan, 2008), nor in previous surveys in the Coobina area (Morgan, 2008). There were no other plant species recorded in the application area that were considered to be of conservation significance.

No Threatened Ecological Communities (TEC's) or Priority Ecological Communities (PEC's) were identified in the survey area or in proximity to the application area.

Three weed species were recorded in the application area; *Bidens bipinnata* (Bipinnate Beggartick), *Cenchrus ciliaris* (Buffel Grass) and *Malvastrum americanum* (Spiked Malvastrum) (Morgan, 2008). Should a clearing permit be granted, it is recommended that appropriate conditions be imposed to minimise the risk of clearing operations spreading or introducing weeds to non-infested areas.

A Level 1 fauna survey was undertaken by Western Wildlife (2008) in May 2008. Four fauna habitats were found to occur within the application area and all are considered to be common in the Gascoyne, Pilbara and other extensive arid regions of Australia (Western Wildlife, 2008).

Western Wildlife (2008) determined that 23 species of conservation significance had the potential to occur within the application area. Of these 14 had a low likelihood of occurrence, six had a medium likelihood of occurrence and two had a high likelihood of occurrence (Western Wildlife, 2008). However, it was concluded that no fauna species is likely to be unique to the study area and all habitat types extend outside the application area (Western Wildlife, 2008).

The vegetation and habitats present within the project area are well represented on a regional scale outside the application area (MBS Environmental, 2008). It is considered unlikely that there will be a significant impact on the conservation status of relevant flora and fauna species, though there are likely to be impacts from loss and fragmentation of habitat (MBS Environmental, 2008).

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

Methodology

Desmond et al. (2001)
MBS Environmental (2008)
Morgan (2008)
Western Wildlife (2008)
GIS Database:
- Interim Biogeographic Regionalisation of Australia
- Interim Biogeographic Regionalisation of Australia (subregions)

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

A Level 1 fauna survey was undertaken by Western Wildlife (2008) over the application area in May 2008. This survey incorporated a site visit and desktop studies including searches of the Department of Environment and Conservation's Threatened and Priority Fauna Database and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* Protected Matters Database (Western Wildlife, 2008).

The following fauna habitats were identified within the application area (Western Wildlife, 2008):

- Rocky hills and ridges with scattered shrubs over Spinifex;
- Scree slopes with sparse Spinifex;
- Mulga woodlands and shrub thickets on rocky slopes;
- Creeklines with dense shrubs.

Western Wildlife (2008) determined that the fauna habitats within the application area are well represented in the local and regional landscape. The areas of rocky hills (which make up most of the fauna habitats) extend outside of the Mining Lease 52/10 which contains the application area. All the fauna species which are present in the application area are likely to also occur nearby, outside of the application area (Western Wildlife, 2008). Clearing associated with this proposal will result in some habitat loss for fauna, including for fauna of conservation significance, but no fauna species are likely to be unique to the study area (Western Wildlife, 2008).

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

Methodology Western Wildlife (2008)

(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**

Brian Morgan, a qualified Plant Biologist, conducted a flora and vegetation survey over the application area in May 2008 (Morgan, 2008).

The flora and vegetation survey consisted of recording vegetation descriptions at sites located in representative areas of vegetation units and mapping the boundaries of the vegetation units (Morgan, 2008). The flora and vegetation recording sites were quadrats, releves, opportunistic sightings or mapping notes (Morgan, 2008).

There were no Declared Rare, Priority or other flora species of conservation significance recorded during the survey (Morgan, 2008).

The vegetation associations within the application area are common and widespread within the Pilbara bioregion (Morgan, 2008), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of rare flora (Morgan, 2008).

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

Methodology Morgan (2008)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

According to available databases there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC's are located approximately 45 kilometres to the north-west (GIS Database).

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

Methodology 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 Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS database). Shepherd et al. (2001) report that approximately 99.9% of the pre-European vegetation still exists in this Bioregion. The vegetation in the application area is recorded as Beard Vegetation Associations 216: low woodland; mulga (with spinifex) on rises (GIS Database; Shepherd et al., 2001). According to Shepherd et al. (2001) there is approximately 100% of this vegetation type remaining in the State and the bioregion (see table below).

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

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	% of Pre-European area in IUCN Class I-IV Reserves (and current %)
IBRA Bioregion – Pilbara	17,804,163	17,794,650	~ 99.9	Least Concern	6.3 (6.3)
Beard veg assoc. – State					
216	280,760	280,760	~ 100	Least Concern	0 (0)
Beard veg assoc. – Bioregion					
216	26,669	26,669	~ 100	Least Concern	0 (0)

* Shepherd et al., (2001) updated 2005

** 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).
Shepherd et al. (2001).
GIS Database
- Interim Biogeographic Regionalisation for Australia
- 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 several non-perennial drainage lines located within the application area (GIS Database). No wetlands or major water courses are situated within the application area (MBS Environmental, 2008).

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

The drainage lines present within the application area are dry for most of the year, only flowing briefly immediately following significant rainfall (MBS Environmental, 2008). Small non-perennial drainage lines and the vegetation associated with them are common within the Pilbara bioregion (MBS Environmental, 2008).

Methodology MBS Environmental (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 is not likely to be at variance to this Principle

Land system mapping by the Department of Agriculture Western Australia has mapped a variety of land systems for the Pilbara bioregion. Land systems are mapped based on biophysical features such as soil and landform type, geology, geomorphology and vegetation type (Van Vreeswyk et al., 2004). The proposed clearing area consists of one land system (GIS Database). A broad description of this land system is given below:

1. Telga Land System; hill tracts and ridges on basalt, greenstone, schist, other metamorphics and chert with rocky rounded crests and ridge tops extending for many kilometres. The system is prospective and localised areas have been disturbed by exploration and mining activities. This system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The proposed land clearing is for the purpose of mine development including mine pits, roads and waste rock dumps. Should a clearing permit be granted it is recommended that conditions be placed on the permit for the purpose of rehabilitation.

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
- 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

There are no conservation areas in the vicinity of the application area. The nearest Department of Environment and Conservation managed land is the Collier Range National Park, approximately 120 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:
- 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

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

The area receives an average rainfall of approximately 300 millimetres per year (Bureau of Meteorology, 2009) and experiences a pan evaporation rate of 3600 millimetres per year (GIS database). Therefore, there is likely to be little surface water flow during normal seasonal rains. Sedimentation or turbidity of waterbodies is not likely as there are no permanent water bodies within the application area or its vicinity (GIS Database).

The groundwater of the Coobina region has been characterised as predominantly neutral in pH, Brackish and hard, with elevated fluorine (MBS Environmental, 2008). MBS Environmental (2008) state that due to the arid, rocky nature of the application area, the proposed clearing will not greatly alter the runoff characteristics of the catchment. Therefore alterations to groundwater recharge are not expected.

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

Methodology

MBS Environmental (2008)
GIS Database
- Groundwater Salinity, Statewide
- Groundwater Province
- Hydrography, linear
- Public Drinking Water Source Area

(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

Geoscience Australia (2008) attributes four major factors which influence inland flooding. These include:

- Intensity and duration of rainfall over a catchment area;
- The capacity of the watercourses to network and convey runoff;
- The percentage of vegetation cover; and
- The topography.

Based on the four factors listed above, clearing within the application area is unlikely to exacerbate or increase the incidence or intensity of flooding for the following reasons:

- The application area has a climate with a summer predominant rainfall pattern averaging approximately 300 millimetres per annum (GIS Database), and a high average annual evaporation rate exceeding the average annual rainfall by twelve times (approximately 3,600 millimetres) (GIS Database);
- The application area stretches over the Fortesue River catchment. This catchments totals 2,975,192 hectares (GIS Database). Although the application area is relatively large (100 hectares), when compared in relation to the large size of the catchment, it is unlikely to result in an appreciable increase in runoff.
- Vegetation cover immediately surrounding the application area is high, with nearly 99 % of the pre-European vegetation remaining (Shepherd et al., 2001), thereby slowing water movements to lower lying areas; and
- The application area is located on top of a hill ridge (MBS Environmental, 2008). Due to the arid, rocky

nature of the application area clearing will not greatly alter the runoff characteristics of the catchment, and therefore is unlikely to cause an incremental increase in intensity or duration of floods (MBS Environmental, 2008).

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

Methodology Geoscience Australia (2008)
MBS Environmental (2008)
Shepherd et al. (2001)
GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments
- Rainfall, Mean Annual
- Topography Contours, Statewide

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

Comments

The clearing permit application was advertised on 9 February 2009 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the application area. This claim (WC99-004) has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenement has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (ie. 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 known Aboriginal Sites of Significance within the application area (Site ID 6209) (GIS Database). The proponents attention has been drawn to this by the assessing officer. 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 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.

During meetings between the assessing officer and Pilbara Chromite staff, the assessing officer raised issues regarding the large nature of the proposed clearing and the need to excise any areas which had already been cleared from the application area. The assessing officer raised concerns that Pilbara Chromite needs to focus the application area into locations where they plan to mine over the next five years. Pilbara Chromite reduced the proposed clearing footprint from 144 hectares to 100 hectares. The purpose permit boundary was also reduced from 262 hectares to 144 hectares.

Methodology GIS Databases:
- Aboriginal Sites of Significance
- Native Title Claims

4. Assessor's comments

Comment

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

Should the permit be granted, it is recommended that conditions be imposed on the permit for the purposes of record keeping, weed management, rehabilitation and permit reporting.

5. References

Bureau of Meteorology (2008) Climate statistics for Australian locations; summary statistics Newman http://www.bom.gov.au/climate/averages/tables/cw_007151.shtml.

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.

Desmond, A. Kendrick P. and Alanna Chant (2001) Gascoyne 3 (GAS3 – Augustus subregion) in A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002. Report published by CALM, Perth, Western Australia

Geoscience Australia (2008) What Causes Floods, Electronic source of information, viewed 15 September 2008, http://www.ga.gov.au/hazards/flood/causes.jsp.

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 (2008) Purpose Permit Applicaiotn: Coobina Chromite Operations, Mining Lease 52/10, Pilbara Western Australia. Native Vegetation Management Plan and Assessment of Clearing Principles. Unpublished report West Perth, Western Australia.
Morgan B. (2008) A flora and Vegetation Survey of Mining Lease 52/10: Coobina. Unpublished report prepared for MBS Environmental, Perth, Western Australia.
Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
Western Wildlife (2008) Tenement M52/10, Pilbara Chromite; Fauna Assessment 2008. Unpublished report prepared for MBS Environmental Pty Ltd.
Van Vreeswyk, A.M, Payne, A.L, Leighton, K.A & Hennig, P (2004) Technical Bulletin No. 92: An inventory and condition survey of the Pilbara region, Western Australia. Department of Agriculture, South Perth, Western Australia.

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, Western Australia.
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.