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

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4914/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Hamersley Iron Pty Ltd**

1.3. Property details

Property: *Iron Ore (Yandicoogina) Agreement Act 1996*, Mining Lease 274SA (AM 70/274)
Local Government Area: Shire of East Pilbara
Colloquial name: Yandi Ridge Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1		Mechanical Removal	Pipeline and Associated Infrastructure

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 April 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. The following Beard vegetation association is located within the application area (GIS Database):

29: Sparse low woodland; mulga, discontinuous in scattered groups.

A vegetation survey was not conducted within the application area. Vegetation units were inferred from two Biota Environmental Sciences (Biota) flora and vegetation surveys conducted 500 metres to the south west (2,434 hectare area) (Biota, 2004) and 1.7 kilometres to the south east (1,515 hectare area) (Biota, 2009) of the application area. The following two vegetation units were inferred (Rio Tinto Iron Ore (RTIO), 2012):

1. 3d (from Biota, 2004): *Eucalyptus camaldulensis* and *E. victrix* scattered trees over scattered mixed shrubs, sedges, tussock grasses and *Triodia pungens*.

2. EvAciAprAThCEc (from Biota, 2009): *Eucalyptus victrix* open woodland over *Acacia citrinoviridis, A. pruinocarpa, Atalaya hemiglauca* low woodland over **Cenchrus ciliaris* tussock grassland.

* Introduced species

Clearing Description

Hamersley Iron Pty Ltd has applied to clear one hectare within an application area of approximately three hectares (GIS Database). The application area is located approximately 80 kilometres north west of Newman (RTIO, 2012). Aerial photography shows the application area is approximately five kilometres south west of the Yandicoogina mine site (GIS Database).

The purpose of the application is for the installation of a pipeline and discharge manifold for the Yandi Ridge North Borefield Pipeline. This is part of RTIO's relocation of dewatering discharge outlets from RTIO's Yandi mining operation (licensed for discharge of dewatering at points along Marillana Creek). Clearing will be by bulldozer. Vegetation will be stockpiled for use in rehabilitation.

Vegetation Condition

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

Comment

Vegetation condition was derived from Biota (2004) and Biota (2005).

The botanical assessment was predominantly desktop based, with a site visit undertaken in August 2011 to determine the presence of threatened and priority flora.

The assessment of fauna and fauna habitat was based on a desktop review only (RTIO, 2012).

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 Fortescue Plains subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This subregion is characterised by alluvial plains and river frontages (CALM, 2002). River Gum (*Eucalyptus camaldulensis*) woodlands fringe the drainage lines and it is the northern limit of Mulga (CALM, 2002).

Based on the Biota surveys (2004 and 2009), vegetation unit's 3d (from Biota, 2004) and EvAciAprAThCEc (from Biota, 2009) were inferred to occur within the application area (RTIO, 2012). Vegetation unit 3d was mapped in association with the creek bed and was noted as having high conservation significance (RTIO, 2012). Vegetation unit EvAciAprAThCEc was mapped over the remainder of the area and was noted as having moderate conservation significance (RTIO, 2012). According to RTIO (2012), the floristic composition and structure of the vegetation types is not considered to be geographically unique or restricted.

RTIO (2012) notes these vegetation units were degraded to some extent by cattle and weeds (Biota, 2004 and 2009) with introduced species Buffel Grass (*Cenchrus ciliaris*), Mexican Poppy (*Argemone ochroleuca*) and Ruby Dock (*Acetosa vesicaria*) occurring within the application area. Potential impacts from weeds as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

According to RTIO (2012), the vegetation surveys recorded 247 taxa from 105 genera belonging to 42 families (Biota, 2009) and 319 taxa from 150 genera belonging to 53 families (Biota, 2004). RTIO (2012) considered the number of flora species recorded in these surveys to be within the expected range for the size of the respective study areas and added that the families and genera represented on the species lists are characteristic of the flora of the Pilbara region.

According to available databases (GIS Database) and RTIO (2012), no Threatened Flora or Threatened or Priority Ecological Communities are located within the application area. Biota (2004) identified two species, *Sida* sp. Barlee Range and *Themeda* sp. Hamersley Station, currently listed as Priority 3 Flora species, however, no priority flora species were recorded during the site visit by the RTIO botanist (RTIO, 2012).

A search by the assessing officer of the Department of Environment and Conservation's (DEC's) NatureMap within a 20 kilometre radius of the application area returned records of four amphibian species, 33 mammals, 101 birds and 106 reptile species (DEC, 2012). This indicates the area supports high fauna diversity. The desktop review identified creekline habitat as the main fauna habitat within the application area (RTIO, 2012). Given the small size of the application area (three hectares) and the occurence of one broad habitat type, it is unlikely the application area has higher fauna diversity than the surrounding areas.

Given the small size of the application area and vegetation is not considered to be geographically unique or restricted, it is unlikely that the application area comprises a higher level of biological diversity than surrounding areas.

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

Methodology

Biota (2004)
Biota (2009)
CALM (2002)
DEC (2012)
RTIO (2012)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- Threatened and Priority Flora
- 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

RTIO conducted a desktop review of fauna and fauna habitat within the application area with fauna habitat information sourced from the two Biota flora and vegetation surveys and the RTIO August 2011 site visit (RTIO, 2012).

The application area was characterised as one broad fauna habitat type described as creekline habitat supporting *Eucalyptus camaldulensis* and *E. victrix* scattered trees over *Acacia citrinoviridis*, *A. pruinocarpa*, *Atalaya hemiglauca* low woodland over Buffel Grass tussock grassland (RTIO, 2012). Based on the Biota 2004 and 2009 surveys, this habitat is considered to have moderate to high conservation value (RTIO, 2012). RTIO (2012) states that where possible, clearing of the creekline vegetation will be avoided.

Several conservation significant species were identified as having the potential to occur within the application area (RTIO, 2012). However, the application area is unlikely to represent significant habitat for these species

for one or more reasons including a lack of preferred or core habitat, the availability and ability to access suitable habitat in the surrounding area, widespread species distribution and the application area being outside the species recorded distribution range (RTIO, 2012). Of these species, RTIO (2012) considered two species, the Western Pebble-mound Mouse (*Pseudomys chapmani*) (Priority 4) and Pilbara Olive Python (*Liasis olivaceus barroni*) (Vulnerable; Schedule 1), as potentially being impacted at a local level. Both these species are considered endemic to and relatively widespread in the Pilbara bioregion, with the nearest record being the Pilbara Olive Python between three and four kilometres from the application area (DEC, 2012). Given the proposed clearing is for one hectare and these two species are relatively widespread in the bioregion, it is unlikely the proposed clearing will have a significant impact on these species.

Given its small size and the existence of riparian vegetation in the surrounding area, it is unlikely that the application area represents significant habitat.

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

Methodology DEC (2012)
RTIO (2012)

(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, there are no records of Threatened Flora within the application area (GIS Database). The nearest record of Threatened Flora is located approximately 5.5 kilometres west of the application area (GIS Database).

No Threatened Flora were recorded during the site visit undertaken in August 2011 to determine the presence of threatened and priority flora (RTIO, 2012).

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

Methodology RTIO (2012)
GIS Database:
- Threatened and Priority Flora

(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 known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is approximately 70 kilometres south east of the application area (GIS Database).

RTIO (2012) states there are no DEC or Commonwealth listed Threatened Ecological Communities within the application area.

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

Methodology RTIO (2012)
GIS Database:
- Threatened Ecological Sites Buffered

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

Comments

Proposal is not at variance to this Principle

The application area falls within the Pilbara Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.89% of the pre-European vegetation remains (see table) (GIS Database; Shepherd, 2009).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

29: Sparse low woodland; mulga, discontinuous in scattered groups.

According to Shepherd (2009), approximately 100% of this Beard vegetation association remains at both a state and bioregional level. Therefore the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,193	17,785,001	~99.89	Least Concern	~6.32
Beard vegetation associations - State					
29	7,903,991	7,903,991	~100	Least Concern	~0.29
Beard vegetation associations - Pilbara Bioregion					
29	1,133,220	1,133,220	~100	Least Concern	~1.91

* Shepherd (2009)
** 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 (2009)
GIS Database:
- IBRA WA (Regions – Sub Regions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is at variance to this Principle

The northern portion of the application area is located within Marillana Creek, a major non-perennial watercourse (GIS Database). According to RTIO (2012), Marillana Creek is a seasonally flowing major creekline which has been somewhat modified through dewatering from mine operations. A minor non-perennial watercourse also intersects the south western portion of the application area (GIS Database). There are numerous non-perennial watercourses in the vicinity of the application area (GIS Database).

Vegetation within the application area is growing in association with Marillana Creek. Vegetation unit 3d was mapped in association with the creek bed and was noted as having high conservation significance (RTIO, 2012). Vegetation unit EvAciAprAThCEc was mapped over the remainder of the area and was noted as having moderate conservation significance (RTIO, 2012). Weeds were observed within both vegetation units.

RTIO (2012) states that where possible, clearing of the creekline vegetation will be avoided and given the small scale of clearing proposed, there is anticipated to be no substantial negative impact to these habitats.

Given the small scale of proposed clearing and extent of riparian vegetation in the surrounding area, it is unlikely the proposed clearing will result in significant impact to watercourses within the application area.

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

Methodology RTIO (2012)
GIS Database:
- Hydrography, linear
- Rivers

(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 application area has been mapped as occurring on the River land system (GIS Database). The River land system is described as active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands (Van Vreeswyk et al., 2004). This system is largely stabilised by buffel and spinifex and accelerated erosion is uncommon, however, susceptibility to erosion is high or very high if vegetative cover is removed (Van Vreeswyk et al., 2004). Although this system is susceptible to erosion if cleared, it is unlikely the proposed clearing of one hectare would lead to appreciable land degradation.

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

The application area does not lie within any conservation areas or Department of Environment and Conservation (DEC) managed lands (GIS Database). The nearest conservation reserve is Karijini National Park, located approximately 70 kilometres west of the application area (GIS Database). Based on the distance between the application area and Karijini National Park, the proposed clearing is not likely to impact the environmental values of any conservation area.

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). There are no permanent waterbodies or watercourses within the application area, however, Marillana Creek, a major non-perennial watercourse, and a minor non-perennial watercourse pass through the application area (GIS Database). According to RTIO (2012), the creekline would only flow during seasonal flood events and has been somewhat modified through dewatering from mine operations.

The annual average rainfall for the application area is 400 millimetres and the average annual evaporation rate is approximately 3,400 - 3,600 millimetres (GIS Database). Therefore, during normal rainfall events surface water within the application area is likely to evaporate quickly. However, substantial rainfall events create surface sheet flow which is likely to have a higher level of sediments. During normal rainfall events, the proposed clearing would not likely lead to an increase in sedimentation of watercourses within the application area.

Groundwater within the application area has low salinity levels of between 500 to 1,000 milligrams per litre Total Dissolved Solids (TDS) (GIS Database). Given the small scale of the proposed clearing, it is not likely to cause salinity levels within the application area to alter significantly.

RTIO (2012) states that given the relatively small scale of clearing, there is no reason to expect that surface or groundwater quality in the area would be affected.

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

Methodology

RTIO (2012)
GIS Database:
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- Rainfall, mean annual

(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 the Fortescue River catchment area (GIS Database). Given the size of the area to be cleared (one hectare) in relation to the size of the catchment area (2,975,192 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

The application area experiences a semi-desert tropical climate with rainfall falling mainly in summer cyclonic events (CALM, 2002). Based on an annual average rainfall of approximately 400 millimetres and an average annual evaporation rate of 3,400 - 3,600 millimetres (GIS Database), there is likely to be little surface flow during normal seasonal rains. Whilst large rainfall events may result in flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.

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

Methodology

CALM (2002)
GIS Database:
- Evaporation Isopleths
- Hydrographic Catchments – Catchments
- Rainfall, mean annual

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

Comments

There is one native title claim over the area under application: WC11/6 (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. 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.*

According to available databases, there are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

The clearing permit application was advertised on 12 March 2012 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology

GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

Biota (2004) Yandi Expansion Vegetation and Flora Survey. Unpublished report prepared for Hamersley Iron Pty Ltd.

Biota (2009) A Flora and Vegetation Survey of the Billiards Deposit, near Yandi. Unpublished report prepared for Rio Tinto Iron Ore.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 2 (PIL2 - Fortescue Plains subregion). Department of Conservation and Land Management, Western Australia.

DEC (2012) NatureMap - Mapping Western Australia Biodiversity, Department of Environment and Conservation. http://naturemap.dec.wa.gov.au/default.aspx, viewed 10 April 2012.

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.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

RTIO (2012) Statement Addressing the 10 Clearing Principles Yandi Ridge North Borefield Pipeline RTIO-HSE-0136512. Unpublished report dated February 2012.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Van Vreeswyk, A.M.E., & Payne, A.L. & Leighton, K.A. &. Hennig, P (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
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union

RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

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

P1 **Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P2 **Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P3 **Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.

P4 **Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.

R **Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

X **Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

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

Schedule 1 **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.

Schedule 2 **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.

Schedule 3 **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.

Schedule 4 **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

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

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

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

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:

(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or

(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

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

EN **Endangered:** A native species which:

(a) is not critically endangered; and

(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:

(a) is not critically endangered or endangered; and

(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

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