



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 3168/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: **Epic Energy (Pilbara Pipeline) Pty Ltd**

### 1.3. Property details

Property: Pipeline Licence 82 (PL 82)  
Local Government Area: Shire of Roebourne  
Colloquial name: Karratha Pipeline Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.6		Mechanical Removal	Gas pipeline, maintenance road and associated activities

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

##### Vegetation Description

Vegetation within the application area has been mapped at a 1:250,000 scale as the following Beard vegetation associations (Shepherd, 2007; GIS Database);

- **157:** Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*; and

- **589:** Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex.

ENV Australia conducted a flora and vegetation survey of the application area on 22 and 23 October 2008, and 13 March 2009 (ENV Australia, 2009). Five vegetation communities were mapped within the application area (ENV Australia, 2009).

1. ChAcEb (drainage line): *Corymbia hamersleyana* low open woodland over *Acacia* shrubland over *Eriachne benthamii* and *Eulalia aurea* tussock grassland.

2. ChAmTe (low hill): *Corymbia hamersleyana* low scattered trees over *Acacia maitlandii* and *Acacia ancistrocarpa* high open shrubland over *Triodia* hummock grassland.

3. AaAsTe (low rise): Tall *Acacia arida* shrubland scattered over low mixed *Acacia* shrubland over *Triodia* hummock grasslands.

4. CcCf (grassland): *Cenchrus ciliaris*, *Chrysopogon fallax* and *Eragrostis xerophila* tussock grassland.

5. Ai/AbAsTe (undulating plain): *Acacia inaequilatera*, *A. bivenosa* and *A. stellaticeps* shrubland over *Triodia wiseana* and *T. epactia* hummock grassland.

##### Clearing Description

Epic Energy Pty Ltd has applied to clear up to 7.6 hectares of native vegetation within an application area of approximately 50 hectares for the construction of a gas pipeline, maintenance road and associated activities.

The proposed clearing will occur within an application area that is 5 kilometres in length and 100 metres wide. The maximum width of the vegetation clearing will be between 12 to 20 metres to allow for vehicle and equipment access, trenching, stockpiling and includes using existing cleared roadside areas where possible.

The vegetation will be cleared using blade down clearing techniques. Topsoil and vegetative material will be stockpiled within the application area. Rehabilitation of the cleared area will involve the re-establishment of the previous landform, respreading topsoil and larger vegetative materials, and vegetation regeneration from the provenance seed bank.

##### 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

Vegetation condition was assessed by ENV Australia (2009). Disturbances observed included edge effects from nearby roads and tracks, grading, clearing and introduced flora 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**  
ENV Australia (2009) recorded a total of 162 flora taxa from 90 genera and 34 families from five vegetation communities during the flora surveys of the application area. No Declared Rare Flora or Priority Flora species were recorded (ENV Australia, 2009). The condition of the vegetation communities ranged from 'Very Good' to 'Completely Degraded', and disturbances included edge effects from nearby roads and tracks, grading, clearing and introduced flora (weed) species (ENV Australia, 2009).

Shepherd (2007) reports that approximately 99.9% of the pre-european vegetation remains within the Pilbara bioregion, and the five vegetation communities recorded within the application area are considered common throughout the local and regional area. Given the availability of similar landforms and vegetation types, the vegetation within the application area is not considered to represent an area of high biodiversity when compared to similar and higher quality vegetation communities in the local and regional area.

Five introduced (weed) species were recorded in the application area: *Aerva javanica*, *Cenchrus ciliaris*, *Portulaca oleracea*, *Stylosanthes hamata* and *Vachellia farnesiana*. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. The disturbance of soil may promote weed growth, and there is a risk that the movement of contaminated soil and clearing equipment throughout the project areas may cause the spread of weed species. The assessing officer recommends that should the permit be granted, conditions be imposed on the permit for the purpose of weed management.

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

**Methodology**      ENV Australia (2009)  
Shepherd (2007)

#### (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**  
Based on the landforms and vegetation communities, three main fauna habitats exist within the application area: minor drainage line, low hills and plain/floodplains (ENV Australia, 2009). Whilst fauna may utilise the vegetation within the application from time to time, the fauna habitats are not considered rare or restricted to the application area. The narrow and linear nature of the proposed clearing activities will have negligible impact given that the fauna habitats within the application area are well represented elsewhere throughout the local and regional area (ENV Australia, 2009).

The vegetation to be cleared does not represent a fauna corridor, and as a result the proposed clearing will not remove an ecological linkage that is necessary for the maintenance of fauna.

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

**Methodology**      ENV Australia (2009)

#### (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

**Comments**      **Proposal is not likely to be at variance to this Principle**  
According to available datasets there are no records of Declared Rare Flora or Priority Flora species within the application area (GIS Database). There are no records of Declared Rare Flora or Priority Flora species within 10 kilometres of the application area (GIS Database).

ENV Australia conducted a flora and vegetation survey of the application area on 22 and 23 October 2008, and 13 March 2009 (ENV Australia, 2009). No DRF or Priority Flora was recorded within the application area (ENV Australia, 2009).

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

**Methodology**      ENV Australia (2009)  
GIS Database:  
- Declared Rare and Priority Flora List

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

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

According to available datasets no Threatened Ecological Communities (TEC's) have been recorded within the application area (GIS Database). The nearest TEC is recorded approximately 92 kilometres south, south-east of the application area (GIS Database).

One vegetation community within the application area mapped as CcCf (grassland) is representative of the Roebourne Plains Coastal Grassland Priority Ecological Community (PEC) (ENV Australia, 2009). This vegetation occurs across the southern section of the application area and was characterised by cracking clay soils and key species including *Eragrostis xerophila*, *Astrelba pectinata*, *Eriachne benthamii*, *Chrysopogon fallax* and *Panicum decompositum* (ENV Australia, 2009). ENV Australia (2009) infer from field observations that large expanses of the PEC occur adjacent to the application area and in the local area. The Department of Environment and Conservation (2009) confirm that the proposed clearing will have a negligible impact on the PEC.

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

**Methodology** Department of Environment and Conservation (2009)  
 ENV Australia (2009)  
 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 clearing application area is located within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). According to Shepherd, (2007), approximately 99.9% of the pre-European vegetation remains (see table).

The vegetation of the clearing application area has been mapped as Beard vegetation associations 157: Hummock grasslands, grass steppe; hard spinifex, *Triodia wiseana*, and 589: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database, Shepherd, 2007).

According to Shepherd (2007) in excess of 99% of Beard vegetation associations 157 and 589 remain at both the state and bioregional level (see table).

According to the Bioregional Conservation Status of Ecological Vegetation Classes, the conservation status for the Pilbara IBRA bioregion and Beard Vegetation Associations 157 and 589 is of "Least Concern" (see table) (Department of Natural Resources and Environment, 2002).

Only a small percentage of Beard vegetation associations 157 and 589 are protected within conservation reserves within the Pilbara bioregion, however, the bioregion remains largely uncleared. As a result, the conservation of the Beard vegetation associations 157 and 589 is not likely to be impacted on by this proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-european % in IUCN Class I-IV Reserves
IBRA bioregion – Pilbara	17,804,188	17,794,647	~99.9	Least Concern	6.32
Beard veg assoc. – State					
157	502,729	501,514	~99.8	Least Concern	17.9
589	809,754	809,637	~100	Least Concern	1.6
Beard veg assoc. – Bioregion					
157	198,633	198,518	~99.9	Least Concern	5.7
589	730,718	730,683	~100	Least Concern	21.0

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

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

**Methodology** Department of Natural Resources and Environment (2002)  
Shepherd (2007)  
GIS Database:  
- Interim Biogeographic Regionalisation of 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 no permanent watercourses or wetlands within the application area (GIS Database). Geographic Information System (GIS) hydrography data indicates that six minor, non-perennial watercourses occur within the application area (GIS Database). Worley Parsons (2009) state that four of these drainage lines were identified by the Department of Water as requiring assessment for a beds and banks permit.

Based on the above, the proposed clearing is at variance to this Principle. However, these watercourses are minor, natural drainage channels that are widespread across the Pilbara region (GIS database). The vegetation communities growing in association with these watercourses are not unique and are considered common and widespread throughout the Pilbara bioregion (Shepherd, 2007; GIS Database).

**Methodology** Shepherd (2007)  
Worley Parsons (2009)  
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**

According to Geographic Information System (GIS) Rangeland Mapping, the application area is comprised of the Horseflat, Ruth and Macroy land systems.

The Horseflat Land System comprises of gilgaied clay plains supporting tussock grasslands and minor grassy snakewood shrublands (Van Vreeswyk et al., 2004). Analysis of aerial imagery and land system information indicates this portion of the application area occurs on the landform unit 'Gilgaied plains' (Van Vreeswyk et al., 2004). Surface mantles may vary from nil to abundant pebbles of ironstone, basalt and other rocks, and as a result this portion of the application area is moderately to highly susceptible to erosion ((Van Vreeswyk et al., 2004). However, the proposed clearing for the gas pipeline will be restricted to a narrow and linear corridor thereby reducing disturbance to this land system, and intact vegetation will remain either side of the proposed corridor. The proposed clearing is not likely to cause appreciable land degradation to the Horseflat Land System.

The Ruth Land System is characterised by hills and ridges of volcanic and other rocks supporting hard spinifex (occasionally soft spinifex) grasslands (Van Vreeswyk et al., 2004). Analysis of aerial imagery and land system information indicates this portion of the application area occurs on the landform unit 'Hills, ridges and upper slopes' (Van Vreeswyk et al., 2004). Surface mantles comprise abundant pebbles and cobbles of volcanic rocks, shales or chert (Van Vreeswyk et al., 2004). This land system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The Macroy Land System is characterised by stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). Only a small portion in the south of the application area intercepts this land system (GIS Database). The Macroy Land System has low or very low erosion hazard (Vreeswyk et al., 2004).

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 Department of Environment and Conservation (DEC) managed conservation areas within or adjoining 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**

There are no permanent wetlands or watercourses within or adjacent to the application area (GIS Database). Numerous non-perennial watercourses are distributed across the landscape, however, these are responsible for quickly dispersing floodwaters after significant rainfall events. The proposed clearing is unlikely to cause deterioration in the quality of surface water in the local area.

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest (PDWSA) is Harding Dam Catchment Area which is located approximately 31 kilometres south-west of the application area. Given the distance separating the application area and the nearest PDWSA, the proposed clearing is unlikely to impact on the water quality of the Harding Dam Catchment Area.

Groundwater salinities in the local area have been measured in the range between 1,000 to 3,000 milligrams per litre Total Dissolved Solids (GIS Database). The existing vegetation is predominately shallow rooted grass and shrub species, and as a result the proposed clearing is not likely to significantly impact groundwater levels or quality.

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

**Methodology** GIS Database:  
- Groundwater Salinity, Statewide  
- Hydrography, linear  
- Public Drinking Water Source Areas (PDWSAs)

**(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 Port Hedland Coast catchment area which covers an area of approximately 744,301 hectares (GIS Database). Up to 7.6 hectares of native vegetation will be cleared within an application area that is approximately 5 kilometres in length and 100 metres in width (50 hectares in size) (GIS Database). The proposed clearing is not likely to form a catchment area sufficiently large enough to increase the incidence of flooding, or impact on the drainage characteristics of the local catchment area.

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

**Methodology** GIS Database:  
- Clearing Instruments  
- Hydrographic Catchments – Catchments

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

**Comments**

There is one registered Site of Aboriginal Significance within 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. Worley Parsons (2009) have confirmed that archaeological and/or ethnographic Aboriginal heritage studies are being undertaken within the application area to satisfy the requirements of the *Aboriginal Heritage Act 1972*.

There are three native title claims over the area under application; (WC9/014, WC96/089 and WC98/040) (GIS Database). These claims have been registered with the National Native Title Tribunal on behalf of the claimant groups (GIS Database). However, the petroleum title 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*.

No public submissions were received in relation to the proposal.

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 licence or approvals are required for the proposed works.

- Methodology** GIS Database:
- Aboriginal Sites of Significance
  - Native Title Claims

#### 4. Assessor's comments

##### Comment

The proposal has been assessed against the Clearing Principles and the proposed clearing 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 variance to Principle (e).

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

#### 5. References

- Department of Environment and Conservation (2009). Application to Clear Native Vegetation CPS 3168/1, Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum, received 23 July 2009, Pilbara Region, Department of Environment and Conservation.
- 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.
- ENV Australia (2009). Karratha Lateral Gas Pipeline Flora and Fauna Assessment, Job No: 08.340, Report No: RP001, prepared for Worley Parsons Services Pty Ltd, prepared by Env Australia, 3 April 2009.
- Keighery, B.J. (1994). Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Van Vreeswyk A.M.E., Payne A.L., Leighton K.A. and Hennig P. (2004). Technical Bulletin - An inventory and condition survey of rangelands in Pilbara Region, Western Australia, No 92, Department of Agriculture, Government of Western Australia, Perth, Western Australia.
- Worley Parsons (2009). Native Vegetation Clearing Permit Supporting Information, Karratha Pipeline Project, License Application 3P/08-9, prepared for Epic Energy Pty Ltd, prepared by Worley Parsons, May 2009.

#### 6. Glossary

##### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government.
<b>CALM</b>	Department of Conservation and Land Management, Western Australia.
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia.
<b>DA</b>	Department of Agriculture, Western Australia.
<b>DEC</b>	Department of Environment and Conservation
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DoE), Western Australia.
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia.
<b>DMP</b>	Department of Mines and Petroleum, Western Australia.
<b>DoE</b>	Department of Environment, Western Australia.
<b>DoIR</b>	Department of Industry and Resources, Western Australia.
<b>DOLA</b>	Department of Land Administration, Western Australia.
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environment Protection Act 1986, Western Australia.
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System.
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia.
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI</b>	Rights in Water and Irrigation Act 1914, Western Australia.
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia.
<b>TECs</b>	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.