



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4203/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Dampier Salt Limited**

1.3. Property details

Property: *Evaporites (Lake MacLeod) Agreement Act 1967, Mineral Lease 245SA (AML 70/245)*
Local Government Area: Shire of Carnarvon
Colloquial name: Lake MacLeod Operations

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
45		Mechanical Removal	Borrow Pits

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 March 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. The following Beard vegetation associations have been mapped within the application area (GIS Database):</p> <p>95: Hummock grasslands, shrub steppe; <i>Acacia</i> and <i>Grevillea</i> over <i>Triodia basedowii</i>; and</p> <p>328: Succulent steppe with scrub; waterwood & <i>Acacia sclerosperma</i> over saltbush & samphire.</p> <p>A Level 1 flora and vegetation survey of the application area was conducted by Outback Ecology Services in September 2010. The following three vegetation communities were identified within the application area:</p> <p>1. AspFp: Scattered Shrubland of <i>Acacia spp.</i> over Low Open Shrubland of <i>Atriplex codonocarpa</i> and <i>Frankenia pauciflora</i> over Scattered Grassland of *<i>Cenchrus ciliaris</i>;</p> <p>2. FpMp: Low Open Shrubland of <i>Frankenia pauciflora</i>, <i>Maireana polypterygia</i> and <i>Ptilotus obovatus</i> over Scattered Grassland of *<i>Cenchrus ciliaris</i>;</p> <p>3. AtsPm: Tall Shrubland of <i>Acacia tetragonophylla</i> and <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> over Shrubland of <i>Pimelea microcephala</i> subsp. <i>microcephala</i>, <i>Rhagodia eremaea</i> and <i>Eremophila ?maculata</i> over Scattered Grassland of *<i>Cenchrus ciliaris</i>.</p>	<p>Dampier Salt Ltd has applied to clear up to 45 hectares within an application area of 97 hectares (GIS Database). The application area is located approximately 60 kilometres north of Carnarvon (GIS Database).</p> <p>The proposed clearing is for the construction of borrow pits to be used for the repair of levees that had been damaged during recent flooding.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).</p> <p>to</p> <p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).</p>	<p>The vegetation condition was assessed by botanists from Outback Ecology Services (2011).</p> <p>Three weed species have been recorded within the application area; Mediterranean Turnip (<i>Brassica tournefortii</i>), Buffel Grass (<i>Cenchrus ciliaris</i>) and Common Sowthistle (<i>Sonchus oleraceus</i>) (Outback Ecology Services, 2011).</p>

There was also areas mapped as 'Cleared' which had no vegetation or regenerating vegetation.

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 flora and vegetation survey of the application area recorded three different vegetation communities along with areas mapped as 'Cleared' (Outback Ecology Services, 2011). The vegetation condition ranged from 'good' to 'very good'. This was due to impacts by invasive flora species and grazing from feral and native animals (Outback Ecology Services, 2011).

There has been no Threatened or Priority Ecological Communities recorded within the application area (Outback Ecology Services, 2011; GIS Database). There has also been no Declared Rare or Priority Flora species recorded within the application area (Outback Ecology Services, 2011; GIS Database). The Priority 3 Flora species *Lepidium biplicatum* and *Stackhousia clementii* have both been recorded nearby but are not expected to occur within the application area due to differences in habitat preference (Outback Ecology Services, 2011).

A total of 44 flora taxa from 20 families and 33 genera were recorded within the application area (Outback Ecology Services, 2011). Compared to previous surveys in the Lake MacLeod area the application area is representative of an area of low species diversity (Outback Ecology Services, 2011).

Lake MacLeod is a major migration stop over for a number of shorebirds. Over 70 waterbird species have been recorded at Lake MacLeod (Australian Government, 2011). Given the impacts from grazing and the present fauna habitats widespread distribution, the application area is not likely to support large numbers of waterbirds or other fauna species.

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

Methodology Australian Government (2011)
Outback Ecology Services (2011)
GIS Database:
- Declared Rare and Priority Flora List
- 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**
There has been five fauna habitats identified within the application area (Outback Ecology Services, 2011):

- Mudflat;
- Samphire Low Shrublands;
- Saltbush/Frankenia Low Shrublands on sandy plains;
- Frankenia Low Shrublands on calcrete; and
- Acacia Tall Shrubland on calcrete.

All of these fauna habitats are widespread and well represented in the Lake MacLeod locality (Outback Ecology Services, 2011). These habitats had all suffered some degradation from invasive weeds and grazing by native and introduced fauna (Outback Ecology Services, 2011). Grazing by introduced species (goats, sheep and rabbits) had the heaviest impact on vegetation and it is likely the grazing was exacerbated by the presence of a watering point 350 metres west of the study area (Outback Ecology Services, 2011).

A desktop search of DEC databases and nearby studies was conducted to identify conservation significant fauna that have the potential to occur within the application area. Of the potential fauna species identified, only two; the Peregrine Falcon (*Falco peregrinus* – Schedule 4) and the Australian Bustard (*Ardeotis australis* – Priority 4) are considered likely to occur in the application area (Outback Ecology Services, 2011). Whilst these birds may inhabit the application area, based on the habitats present it is not likely that the application area represents significant habitat for these species.

Given that the fauna habitats present are common throughout the local area and have been impacted by grazing, the application area is not likely to represent significant habitat for indigenous fauna species.

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

Methodology Outback Ecology Services (2011)

(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 Declared Rare Flora (DRF) within the application area (GIS Database). A flora survey was conducted over the application area by Outback Ecology Service

between 3 and 10 September 2010. This flora survey did not record any DRF (Outback Ecology Services, 2011).

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

Methodology Outback Ecology Services (2011)
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 databases, there are no records of any Threatened Ecological Communities (TECs) within the application area (GIS Database). A vegetation survey over the application area was conducted by Outback Ecology Services between 3 and 10 September 2010. This survey did not record any TECs (Outback Ecology Services, 2011).

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

Methodology Outback Ecology Services (2011)
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 Carnarvon Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.8% 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 associations (GIS Database):

95: Hummock grasslands, shrub steppe; Acacia and Grevillea over *Triodia basedowii*; and
328: Succulent steppe with scrub; waterwood & *Acacia sclerosperma* over saltbush & samphire.

According to Shepherd (2009) approximately 100% of these Beard vegetation associations 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 – Carnarvon	8,382,606	8,368,970	~99.84	Least Concern	3.62
Beard veg assoc. – State					
95	1,224,625	1,223,637	~99.9	Least Concern	1.5
328	10,237	10,237	~100	Least Concern	No data available
Beard veg assoc. – Bioregion					
95	390,079	389,986	~99.97	Least Concern	0
328	10,237	10,237	~100	Least Concern	No data available

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct	Probably no longer present in the bioregion
Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

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 not likely to be at variance to this Principle

There are no watercourses or wetlands present within the application area (GIS Database). The application area is located within 400 metres of the western shore of Lake MacLeod, a non-perennial salt lake (GIS Database). Lake MacLeod covers an area of 220,000 hectares of which permanent water covers approximately 6,000 hectares (Ellison & Simmonds, 2003). This area of permanent water is located in the north-west of the lake and is fed by a subterranean connection to the ocean (DEC, 2009). It is highly significant as it supports the world's largest inland community of mangroves and associated fauna (Ellison & Simmonds, 2003). Lake MacLeod is also a major migration stopover for migratory birds and in particular, the lake has supported significant populations of Curlew Sandpiper, Banded Stilt, Red-necked Avocet, Red-capped Plover, Red-necked Stint and Red Knot (DEC, 2009). Lake MacLeod is listed on the Register of National Estate and is also recognised by the Directory of Important Wetlands in Australia (GIS Database).

The proposed clearing is in the southern portion of the lake and will not impact on the permanent water ponds or mangrove areas. The application area is also not likely to provide significant habitat or breeding grounds for any migratory birds that would utilise the lake. As the lake covers 220,000 hectares the proposed clearing of 45 hectares represents a small portion of the total extent of vegetation surrounding the lake. Given this, the proposed clearing is not likely to impact the natural lake processes including periodic flooding.

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

Methodology DEC (2009)
Ellison & Simmonds (2003)
GIS Database
- ANCA Wetlands
- Hydrology, linear
- Register of National Estate

(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 Warroora and Cardabia Land Systems (GIS Database). The Warroora Land System makes up over 95% of the application area. This Land System has considerable drought durability and is not usually susceptible to erosion (Payne et al., 1987). The longitudinal dunes unit of the Cardabia Land System is highly susceptible to erosion if adequate cover is removed, however, this unit is not represented within the application area (Payne et al., 1987).

At a broad scale the surface soil pH of the application area ranges from 5.5 to 7.0 (CSIRO, 2009). The application area has been identified as having a high probability of acid sulphate soils occurring (CSIRO, 2009). Provided the proposed clearing does not expose the subsoil, then environmental acidity is not expected to rise. The application area is relatively flat, so there is not likely to be an increase in runoff leading to water erosion (GIS Database). Potential impacts of erosion may be minimised by the implementation of a rehabilitation condition.

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

Methodology CSIRO (2009)
Payne et al. (1987)
GIS Database:
- Rangeland Land System Mapping
- Topographic Contours, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

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

The application area does not lie within any conservation areas or DEC managed tenure (GIS Database). The nearest conservation area is the ex Booloogooro pastoral lease located approximately 22 kilometres east of the application area (GIS Database). At this distance the proposed clearing is not likely to have any impact.

The application area is located adjacent to Lake MacLeod. Lake MacLeod is listed on the Register of National Estate (GIS Database). The most significant part of the lake is the permanent pools and inland mangroves located over 40 kilometres north of the application area (GIS Database). Given the scale of the proposed clearing (45 hectares) in relation to the size of Lake MacLeod (approximately 220,000 hectares), the proposed clearing is not expected to impact on other environmental values such as migratory bird habitat or periodic flooding.

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

Methodology GIS Database:
- DEC Tenure
- Hydrography, linear
- Register of National Estate

(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 any Public Drinking Water Source Areas (PDWSAs) (GIS Database). There are no watercourses within the application area (GIS Database). It is however, located adjacent to the ephemeral salt lake, Lake MacLeod. The permanent water pools within Lake MacLeod have similar properties to sea water (DEC, 2009). The other major water input into the lake system is from a number of creeks and rivers on the eastern side of the lake (DEC, 2009). As the application area is on the western side of the lake, it is not likely to impact these freshwater sources into the lake system.

Groundwater within the application area is brackish to saline and salinity levels range from 3,000 to 7,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). Groundwater salinity in the vicinity of Lake MacLeod itself is over 35,000 milligrams per litre TDS which is hypersaline (GIS Database). With the exception of intensive rainfall events and above average seasonal rainfall, there is likely to be little surface flow during normal seasonal rains and recharge into regional groundwater would be minimal. The quality of groundwater is not likely to be impacted on and the clearing is not expected to alter water tables or cause changes to pH or increase salinity.

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

Methodology DEC (2009)
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

With an average annual rainfall of 229.4 millimetres and an average annual evaporation rate of 2,600 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2011; GIS Database). Whilst large rainfall events may result in the 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 BoM (2011)
GIS Database:
- Evaporation Isopleths

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

Comments

There is one native title claim over the area under application (GIS Database). This claim (WC97/28) has been registered with the National Native Title Tribunal on behalf of the claimant group (GIS Database). 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 is no registered Aboriginal Site 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 21 February 2011 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 - Registered with the NNTT

4. References

- Australian Government (2011) Caring for Country: Protecting critical aquatic ecosystems - Site Investment Guide: Lake MacLeod. Available online at <http://www.nrm.gov.au/business-plan/10-11/priorities/coastal/aquatic/site-11.html> Accessed on 8 March 2011.
- Bureau of Meteorology (2011) BOM Website - Climate statistics for Australian locations, Averages for Carnarvon Airport. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_006011.shtml Accessed on 8 March 2011.
- Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available online at: http://www.asris.csiro.au/index_ie.html Accessed on 8 March 2011.
- DEC (2009) Resource Condition Report for a Significant Western Australian Wetland: Lake MacLeod System. Department of Environment and Conservation, Perth, Western Australia.
- 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.
- Ellison, J.C. & Simmonds, S (2003) Structure and productivity of inland mangrove stands at Lake MacLeod, Western Australia. *Journal of the Royal Society of Western Australia*, 86:25-30.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Outback Ecology Services (2011) Native Vegetation Clearing Permit Report. Unpublished report for Dampier Salt Limited, dated February 2011.
- Payne, A.L., Curry, P.J. and Spencer, G.F. (1987) An Inventory and Condition Survey of Rangelands in the Carnarvon Basin, Western Australia. Department of Agriculture, Western Australia.
- 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.

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.