



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8401/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Ronald William and Carolyn Joy Brown

1.3. Property details

Property: Mining Lease 77/1245
Local Government Area: Shire of Kondinin
Colloquial name: North Pit Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.253		Mechanical Removal	Sand Extraction and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 2 May 2019

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 the following Beard vegetation association:

519: Shrublands; mallee scrub, *Eucalyptus eremophila* (GIS Database).

A flora and vegetation survey has been undertaken over the application area by PEK Enviro (2011). This survey identified the following vegetation groups:

- Mallee low woodland; *Eucalyptus olivine* over mixed heath
- Sandplain heath; *Eremaea pauciflora*/*Acacia sphacelata* subsp. *sphacelata* with emergent *Eucalyptus scyphocalyx*.

Clearing Description North Pit Project.
Ronald William and Carolyn Joy Brown (Brown) propose to clear up to 2.253 hectares of native vegetation within a boundary of approximately 102 hectares, for the purpose of sand extraction and associated activities. The project is located approximately 110 kilometres east of Hyden, within the Shire of Kondinin.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment The vegetation condition was derived from a vegetation survey conducted by PEK Enviro (2011).

The proposed clearing is for establishing a pit, stockpile area and haul road associated with sand extraction activities. The permit boundary and purpose of the clearing is the same as expired clearing permit CPS 5934/1 for Brown. The amount of clearing authorised has reduced from 4 hectares in CPS 5934/1 to 2.253 hectares to account for the 1.747 hectares that was cleared under the former permit.

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 clearing permit application area is located within the Southern Cross subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Coolgardie Bioregion (GIS Database). At a broad scale, vegetation can be described as *Eucalyptus* woodlands rich in endemic eucalypts around chains of playa-lakes, *Borya constricta* with stands of *Acacia accuminata* and *Eucalyptus loxophleba* on mid-levels of granite

basement outcrops with mallees and scrubheaths on the uplands (CALM, 2002).

A flora and vegetation survey of the application area by PEK Enviro (2011) recorded two vegetation types that are more broadly represented in the local area. No Threatened or Priority Ecological Communities have been recorded within the application area (PEK Enviro, 2011; GIS Database).

One Threatened Flora species, *Calectasia pignattiana*, has been recorded within the application area with a large population that extends outside the application area (PEK Enviro, 2011, 2012). While this contributes to the biological diversity of the application area, only a limited number of plants will be impacted by the proposed clearing.

Weed species have the potential to outcompete native species and result in a reduction in biodiversity of the area. No weed species were recorded during the flora and vegetation survey (PEK Enviro, 2011). Potential impacts from weeds may be minimised by the implementation of a weed management condition.

A fauna survey has not been undertaken over the application area. A desktop search of the NatureMap database for the application area and a 20 kilometre buffer recorded two amphibian, 37 bird, 6 mammal and 25 reptile species (DBCA, 2007-).

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

Methodology CALM (2002)
DBCA (2007-)
PEK Enviro (2011)
PEK Enviro (2012)

GIS Database:
- IBRA Australia
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(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 may be at variance to this Principle**
A fauna survey has not been undertaken over the application area.

The vegetation types identified within the application area are common to the area (PEK Enviro, 2011), therefore it is likely that the associated broad fauna habitat types are common to the area. Given the small scale of the proposed clearing, it is considered unlikely that the proposed clearing will have a significant impact on the fauna habitat types present.

A desktop search of NatureMap identified records of two conservation significant fauna species occurring within 20 kilometres of the application area. Malleefowl (*Leipoa ocellata* – Vulnerable) were recorded along a nearby road with the most recent siting being in 2014 (DBCA, 2007 -). Malleefowl habitat is generally arid and semi-arid woodland dominated by mallee Eucalypts on sandy soils (DEC, 2010). The vegetation types within the application area are Mallee low woodland and sandplain heath (PEK Enviro, 2011). While no Malleefowl have been recorded within the application area, it does provide potential Malleefowl habitat. Areas should be inspected prior to clearing to ensure no Malleefowl mounds have been constructed. Potential impacts to Malleefowl may be minimised by the implementation of a Malleefowl management condition.

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

Methodology DBCA (2007 -)
DEC (2010)
PEK Enviro (2011)

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

Comments **Proposal is at variance to this Principle**
The flora and vegetation survey conducted by PEK Enviro in September 2011 identified one Threatened Flora species, *Calectasia pignattiana*. PEK Enviro (2011) recommended detailed survey work be undertaken to better determine the location and extent of *C. pignattiana* and this was undertaken by PEK Enviro in November 2012.

Approximately 625 *C. pignattiana* plants were recorded within the application area (PEK Enviro, 2012). Brown (2013) advised that the total number of *C. pignattiana* impacted by the North Pit development would be 30 plants. Since the project started in 2014, approximately half the individuals have been cleared under

authorisation from a previous Permit to Take by DBCA and clearing permit CPS 5934/1. This proposed clearing of 2.253 hectares of native vegetation will impact the remaining of the 30 plants (Brown, 2019).

A further 247 *C. pignattiana* plants were recorded outside the application area during the targeted survey (PEK Enviro, 2012). PEK Enviro (2012) also extrapolated the potential population for local areas beyond the survey. Based on the 2.1 kilometre traverse, PEK Enviro estimate that the species occurs at a density of approximately 0.2 plants/m² in the search area. Areas interpreted as being likely habitat for *C. pignattiana* have been estimated at 153 hectares. Therefore PEK Enviro (2011) has put forward that this species is potentially widespread in the region.

Advice was received from the Species and Communities Branch of the Department of Biodiversity, Conservation and Attractions (DBCA), formerly the Department of Parks and Wildlife (DPaW). According to DPaW (2014) and confirmed by DBCA (2019), this is the most eastern and largest population recorded, making the population both locally and regionally significant. Based on the information provided, DPaW (2014) estimate that 3.4 percent of the local population and 2.1 percent of the total known number of individuals will be impacted. DPaW (2014) and DBCA (2019) do not consider this level of impact likely to be significant with respect to conservation of this species.

An Authorisation to take Threatened Flora under the *Biodiversity Conservation Act 2016* will be issued by the DBCA limiting the number of *C. pignattiana* plants that can be taken.

Based on the above, the proposed clearing is at variance to this Principle. However, the proposed clearing will only impact a small number of *C. pignattiana* plants and is not likely to threaten the viability of this population or the species.

Methodology Brown (2013)
Brown (2019)
DBCA (2019)
DPaW (2014)
PEK Enviro (2011)
PEK Enviro (2012)

(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

There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).

A flora and vegetation survey of the application area did not identify any TECs (PEK Enviro, 2011).

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

Methodology PEK Enviro (2011)

GIS Database:

- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

(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 Coolgardie Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 97% of the pre-European vegetation still exists in the IBRA Coolgardie Bioregion (Government of Western Australia, 2018). The application area is broadly mapped as Beard vegetation association 519: Shrublands; mallee scrub, *Eucalyptus eremophila* (GIS Database). Approximately 61% and 99% of the pre-European extent of this vegetation association remains uncleared at the state and bioregional level, respectively (Government of Western Australia, 2018).

Therefore, the application area does not represent a significant remnant of native vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DBCA managed lands
IBRA Bioregion – Coolgardie	12,912,204	12,648,491	~97	Least Concern	16.39
Beard vegetation associations – WA					
519	2,333,414	1,440,062	~61	Least Concern	10.54
Beard vegetation associations – Coolgardie Bioregion					
519	147,579	146,944	~99	Least Concern	10.67

* Government of Western Australia (2018)

** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
Government of Western Australia (2018)

GIS Database:

- IBRA 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 not at variance to this Principle**

There are no watercourses or wetlands within the area proposed to clear (GIS Database).

The flora and vegetation survey by PEK Environmental (2011) did not record any vegetation growing in association with a watercourse or wetland.

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

Methodology PEK Environmental (2011)

GIS Database:

- Hydrography, Lakes
- Hydrography, Linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

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

The soil within the application area has been broadly mapped as AC1 (GIS Database). Northcote (1960 – 1968) describes this soil type as follows:

AC1: Gently sloping to gently undulating plateau areas, or uplands, on granites, gneisses, and allied rocks, with long gentle slopes and, in places, abrupt erosional scarps, some granitic bosses, and tors; and irregularly traversed by narrow shallow valleys and flats: chief soils are yellow earthy sands and sandy yellow earths on depositional sites, and ironstone gravels together with ironstone gravels on erosional sites where they are underlain by hardened mottled-zone material. Soil dominance varies locally.

PEK Enviro (2011) considers the application area to be comprised of silt and sand, consistent with the Norseman soil landscape zone as described by Tille (2006).

Considering the sandy nature of the application area, the clearing of native vegetation may increase the risk of wind erosion. However, this increase is not likely to be significant considering the proposed clearing is for 2.253 hectares within an application area of approximately 102 hectares.

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

Methodology Northcote (1960 – 1968)
PEK Enviro (2011)
Tille (2006)

GIS Database:
- Soils, Statewide

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

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

There are no conservation areas in the vicinity of the application area. The nearest DBCA (formerly DPaW) managed land is the Lake Cronin Nature Reserve which is located approximately 20 kilometres south-west of the application area (GIS Database). The proposed clearing is unlikely to impact on 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:
- DPaW 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

There are no watercourses or wetlands within the area proposed to clear (GIS Database).

There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database).

The small scale of the proposed clearing means it is unlikely to cause deterioration in the quality of surface or underground water.

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

Methodology GIS Database:
- Hydrography, Linear
- Public Drinking Water Source Areas

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

The climate of the region is semi-arid, warm Mediterranean, with an average rainfall of approximately 341.0 millimetres per year (BoM, 2019). The area under application is located on sandy dune system (Tille, 2006). During rainfall events, water is likely to move through the soil profile rather than flow along the surface or collect and flood (PEK Enviro, 2011).

The clearing of 2.253 hectares within an application area of 102 hectares is not considered likely to increase the incidence or severity of flooding.

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

Methodology BoM (2019)
PEK Enviro (2001)
Tille (2006)

Planning Instrument, Native Title, previous EPA decision or other matter.

Comments

The clearing permit application was advertised on 18 March 2019 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2017/007) over the area under application (DPLH, 2019). This claim has been registered with the National 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*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2019). 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 Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

Methodology DPLH (2019)

4. References

- BoM (2019) Bureau of Meteorology Website – Climate Data Online, Hyden. Bureau of Meteorology.
<http://www.bom.gov.au/climate/data/> (Accessed 30 April 2019).
- Brown (2013) Additional information for clearing permit application - M77/1245 North Pit. Unpublished report prepared by Ronald and Carolyn Brown.
- Brown (2019) Information for Extension of DRF Permit 94-1314: Threatened & Priority Report Form. Email from Carolyn Brown to the Department of Biodiversity, Conservation and Attractions.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DBCA (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions.
<https://naturemap.dbca.wa.gov.au/default.aspx> (Accessed 24 April 2019).
- DBCA (2019) Advice received in relation to Clearing Permit Application CPS 8401/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, April 2019.
- DEC (2010) Fauna Species Profiles – Malleefowl *Leipoa ocellata* (Gould, 1840). Department of Environment and Conservation.
- DPaW (2014) Advice received in relation to Clearing Permit Application 5934/1. Species and Communities Branch, Department of Parks and Wildlife, Western Australia, January 2014.
- DPLH (2019) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage.
<http://maps.daa.wa.gov.au/AHIS/> (Accessed 1 May 2019).
- 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.
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.
<https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- PEK Enviro (2011) Level 1 Vegetation and Flora Survey. Report prepared for Ronald and Carolyn Brown by PEK Enviro.
- PEK Enviro (2012) Threatened Flora and Reconnaissance Search Report. Report prepared for Ronald and Carolyn Brown by PEK Enviro.
- Tille, P. (2006) *Soil-landscapes of Western Australia's Rangelands and Arid Interior*. Resource Management Technical Report 313. Department of Agriculture and Food. Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)

DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEC	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
DEE	Department of the Environment and Energy, Australian Government
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora
DoE	Department of the Environment, Australian Government (now DEE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities (now DEE)
DWER	Department of Water and Environmental Regulation, Western Australia
EPA	Environmental Protection Authority, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T Threatened species:

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species

Threatened species considered to be “*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU Vulnerable species

Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

EX Extinct species

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species:

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species

require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 Priority One - Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 Priority Two - Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 Priority Three - Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4 Priority Four - Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.