

# **Clearing Permit Decision Report**

# 1. Application details

1.1. Permit application details

Permit application No.: 6500/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: BHP Billiton Iron Ore Pty Ltd

1.3. Property details

Property: Iron Ore (Mount Newman) Agreement Act 1964, Mineral Lease 244SA (AML 70/244)

Local Government Area: Shire of East Pilbara

Colloquial name: Wheelara Hill North Project

1.4. Application

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

219.85 Mechanical Removal Waste Rock Storage and Associated Infrastructure

1.5. Decision on application

**Decision on Permit Application:** 

**Decision Date:** 

#### 2. Site Information

#### 2.1. Existing environment and information

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

#### **Vegetation Description**

Beard vegetation associations have been mapped for the whole of Western Australia. One Beard vegetation associations has been mapped within the application area (GIS Database):

82: Hummock grasslands, low tree steppe; snappy gum over Triodia wiseana.

Onshore Environmental (2014) conducted a flora survey of the application area and surrounding areas between 24 to 30 April 2014, and described eight vegetation communities of the application area:

#### Acacia Woodland

2a: Low Woodland of Acacia aptaneura, Acacia ? pteraneura and Acacia pruinocarpa over Open Hummock Grassland of Triodia epactia and Triodia sp. Shovelanna Hill (S.van Leeuwen 3835) with Shrubland of Acacia wanyu, Acacia tetragonophylla and Senna stricta;

### Acacia High Shrubland

4a: High Shrubland of Acacia monticola, Rulingia luteiflora and Gossypium robinsonii with Low Woodland of Corymbia hamersleyana, Eucalyptus victrix and Eucalyptus leucophloia subsp. leucophloia over Very Open Tussock Grassland of Themeda triandra, \*Cenchrus ciliaris and Cymbopogon procerus;

#### Triodia Hummock Grassland

5a: Hummock Grassland of *Triodia brizoides*, *Triodia epactia* and *Triodia angusta* with Open Shrubland of *Acacia tetragonophylla* and *Acacia synchronicia* with Very Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Acacia pteraneura* (hybrid?);

5b: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) with Low Open Shrubland of *Acacia hilliana, Acacia adoxa var. adoxa* and *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* and *Acacia pruinocarpa*;

5d: Hummock Grassland of *Triodia brizoides*, *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835) and *Triodia epactia* with Open Shrubland of *Acacia tetragonophylla*, *Eremophila fraseri* subsp. *fraseri* and *Senna glutinosa* subsp. *Pruinosa*;

5g: Hummock Grassland of *Triodia epactia, Triodia brizoides* and *Triodia* sp. Shovelanna Hill (S.van Leeuwen 3835), with Low Open Woodland of *Acacia aptaneura, Eucalyptus leucophloia* subsp. *Ieucophloia* and *Acacia pruinocarpa* over Scattered Shrubs of *Acacia tetragonophylla, Scaevola acacioides* and *Acacia wanyu,* 

5h: Hummock Grassland of *Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835), *Triodia epactia* and *Triodia brizoides* with High Open Shrubland of *Acacia bivenosa* and *Acacia tetragonophylla* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *Ieucophloia* and *Acacia aptaneura*;

#### Triodia Open Hummock Grassland

6d: Hummock Grassland of *Triodia brizoides* and *Triodia pungens* with High Open Shrubland of *Acacia bivenosa* over Open Shrubland of *Senna glutinosa* subsp. x *Iuerssenii* over *Senna artemisioides* subsp. helmsii on hillslopes and footslopes.

**Clearing Description** 

Wheelara Hill North Project.

BHP Billiton Iron Ore Pty Ltd proposes to clear up to 219.85 hectares of native vegetation within a total boundary area of approximately 219.85 hectares for the purposes of Waste Rock Storage and Associated Infrastructure. The proposal is located approximately 40 kilometres east of Newman in the Shire of East Pilbara.

**Vegetation Condition** 

Pristine: No obvious signs of disturbance (Keighery, 1994);

To

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

Comment

The vegetation condition was assessed by botanists from Onshore Environmental (2014).

#### 3. Assessment of application against clearing principles

#### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

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

The application area is situated within the Hamersley subregion (PIL03) of the Pilbara bioregion as described in the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This subregion is characterised by mountainous areas of Proterozoic sedimentary ranges and plateaux, dissected by gorges (CALM, 2002). Mulga low woodland occurs over bunch grasses on fine textured soils in valley floors, with *Eucalyptus leucophloia* occurring over *Triodia brizoides* on the skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area consists of Beard vegetation association 82, which is common and widespread throughout the Pilbara bioregion with approximately 99% of the pre-European vegetation extent remaining (Shepherd, 2009; GIS Database). A search of the Department of Parks and Wildlife Declared Rare and Priority Flora databases revealed that no Declared Rare Flora (DRF) species and four Priority species may potentially occur within a 20 kilometre radius of the application area (DPAW, 2015).

A vegetation survey by Onshore Environmental (2014) of the application area and surrounding vegetation was undertaken between 24 to 30 April 2014. This survey identified 411 species of flora taxa, from 145 genera, belonging to 49 families for the Wheelarra Hill North study. Onshore Environmental (2014) identified eight vegetation communities within the application area, with the condition of these vegetation types ranging from 'pristine' to 'very good' (Keighery, 1994). Onshore Environmental (2014) identified no DRF or Priority flora species within the application area.

No Threatened Ecological Communities or Priority Ecological Communities were recorded or identified within the application area (GIS Database). The nearest Threatened or Priority Ecological Community is the Ethel Gorge Aquifer Stygobiont community (TEC 18), which is located approximately 22 kilometres to the west of the application area (BHP Billiton Iron Ore, 2015).

Eight weed species were identified during the Wheelarra Hill North survey: *Acetosa vesicaria, Bidens bipinnata, Cenchrus ciliaris, Cucumis melo, Cucumis myriocarpus, Eragrostis cilianensis, Malvastrum americanum and Portulaca oleracea.* (BHP Billiton, 2015). None of these species are listed by the Western Australian Department of Agriculture and Food as Declared Plants. Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The fauna survey of the greater Wheelarra Hill North area recorded a total of 139 vertebrate fauna species including two amphibian, 55 reptile, 59 bird and 23 mammal species (ENV Australia, 2012). The totals of reptile and bird species recorded are within the frequency commonly recorded within the Pilbara during Level 2 surveys suggesting that the overall species richness recorded during the survey is typical of the region (ENV Australia, 2012). The habitat type present within the application area is widespread through the Pilbara region (ENV Australia, 2012).

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

Methodology

BHP Billiton Iron Ore (2015)

CALM (2002) DPAW (2015) ENV Australia (2012) Keighery (1994)

Onshore Environmental (2014)

Shepherd (2009) GIS Database:

- IBRA WA (Regions Sub Regions)
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

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

A Level 2 fauna survey was undertaken over the larger Wheelarra Hill North area which includes the application area in April and October 2011 (ENV Australia, 2012). This survey identified one broad fauna habitat type for the application area (BHP Billiton, 2015):

- Hill Crest/Slope

This habitat type is widespread throughout the Pilbara and is considered to be of moderate habitat value (ENV Australia, 2012). Habitat diversity of the Hill Crest/Slope habitat is considered low, however, extensive rock cover and *Triodia* are important resources for reptile fauna (ENV Australia, 2012). No significant fauna have been recorded within the application area (BHP Billiton, 2015).

No conservation significant species were recorded during the Level 2 fauna survey (ENV Australia, 2012). Based on the results of previous surveys in the application area, a review of regional surveys, and database searches, it was determined that 13 species of conservation significance have the potential to occur in the application area (DPAW, 2015; ENV Australia, 2012):

- Australian Bustard Ardeotis australis Department of Parks and Wildlife (DPaW) Priority 4;
- Bush Stone-curlew Burhinus grallarius DPaW Priority 4;
- Cattle Egret Ardea ibis Environmental Protection and Biodiversity Conservation (EPBC) Act Migratory, Wildlife Conservation (WC) Act Schedule 3;
- Common Sandpiper Actitis hypoleucos EPBC Act Migratory, WC Act Schedule 3;
- Eastern Great Egret Ardea modesta EPBC Act Migratory, WC Act Schedule 3;
- Fork-tailed Swift Apus pacificus EPBC Act Migratory, WC Act Schedule 3;
- Ghost Bat Macroderma gigas DPaW Priority 4;
- Oriental Plover Charadrius veredus EPBC Act Migratory, WC Act Schedule 3;
- Pilbara Leaf-nosed Bat Rhinonicteris aurantia EPBC Act Vulnerable, WC Act Schedule 1;
- Rainbow Bee-eater Merops ornatus EPBC Act Migratory, WC Act Schedule 3;
- Star Finch Neochmia ruficauda subclarescens DPaW Priority 4;
- Pilbara Flat-headed Blind Snake Anilios ganei DPaW Priority 1; and
- Western Pebble-mound Mouse Pseudomys chapmani DPaW Priority 4.

Based on the occurrence of the habitat type and conservation significant fauna species previously recorded in the vicinity, all the above species are found in other areas of the Pilbara region and do not exclusively depend on any habitat type or feature within the application area (BHP Billiton, 2015). Therefore, the proposed clearing area is expected to have a low impact on fauna species as:

- fauna species would not be reliant on the habitats within the application area; and
- similar habitat in similar condition is located in the vicinity of the application area.

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

#### Methodology

BHP Billiton (2015) DPAW (2015) ENV Australia (2012)

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

#### Comments

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

According to available databases, there are no records of any Threatened Flora species within the application area (DPaW, 2015; GIS Database). None of the flora surveys conducted recorded any Threatened Flora species within the application area (Onshore Environmental, 2014).

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

# Methodology

DPAW (2015)

Onshore Environmental (2014)

GIS Database:

- Threatened and Priority Flora

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

#### Comments

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

There are no known Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is the 'Ethel Gorge Aquifer Stygobiont community (TEC 18)' located approximately 22

kilometres west of the application area (GIS Database).

Surveys of the application area did not identify any Threatened Ecological Communities (Onshore Environmental, 2014).

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

#### Methodology

Onshore Environmental (2014)

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 lies within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.6% of the pre-European vegetation remains (see table) (Government of Western Australia, 2013; GIS Database).

The vegetation of the application area has been broadly mapped as Beard vegetation association 82. This vegetation association has not been extensively cleared as over 99% remains at both a State and bioregional level (see table) (Government of Western Australia, 2013). There has not been extensive clearing in the local region and the vegetation within the application area is not a remnant nor does it form part of any remnants within the local area (GIS Database).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPAW Managed Lands
IBRA Bioregion - Pilbara	17,808,657	17,733,583	~99.6	Least Concern	8.37
Beard vegetation associations - State					
82	2,565,901	2,553,217	~99.5	Least Concern	10.51
Beard vegetation associations - Bioregion					
82	2,563,583	2,550,898	~99.5	Least Concern	10.52

<sup>\*</sup> Government of Western Australia (2013)

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 (2013)

GIS Database:

- IBRA WA (regions subregions)
- 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

According to available GIS Databases, there are no permanent watercourses within the application area, however, there are two minor, non-perennial watercourses within the application area (BHP Billiton, 2015; GIS Database). One of the minor ephemeral drainage lines traverses the application area south to north and acts as a minor tributary to Jimblebar Creek (BHP Billiton, 2015; GIS Database).

Based on vegetation mapping by Onshore Environmental (2014), there is one vegetation type associated with a watercourse:

#### Acacia High Shrubland

4a: High Shrubland of Acacia monticola, Rulingia luteiflora and Gossypium robinsonii with Low Woodland of Corymbia hamersleyana, Eucalyptus victrix and Eucalyptus leucophloia subsp. leucophloia over Very Open Tussock Grassland of Themeda triandra, \*Cenchrus ciliaris and Cymbopogon procerus.

This vegetation association has been recorded from other vegetation surveys in the local area and is noted as being widespread locally (Syrinx Environmental, 2012). Given the proposed clearing is spread over a large area, it is not anticipated that it will have a significant impact on minor drainage lines within the application

<sup>\*\*</sup> Department of Natural Resources and Environment (2002)

area.

Given that this clearing proposal involves clearing of vegetation growing in, or in association with, an environment associated with a watercourse or wetland, the proposed clearing is at variance to this Principle. However, the vegetation associations of these drainage lines are well represented locally and in the Pilbara region, therefore, it is unlikely the proposed clearing will significantly reduce the overall distrubition of these vegetation associations.

#### Methodology BHP Billiton (2015)

Onshore Environmental (2014) Syrinx Environmental (2012) 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 available databases, the application area is comprised of the Newman land system (GIS Database). This land system is characterised by rugged jaspilite plateaux, ridges and montains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). The Newman land system is generally not prone to erosion (Van Vreeswyk et al., 2004).

The average annual evaporation rate is over eleven times the annual average rainfall so there is a low probability of the proposed clearing causing increased groundwater recharge resulting in rising saline water tables (BoM, 2015; GIS Database).

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

#### Methodology BoM (2015)

Van Vreeswyk et al. (2004)

GIS Database:

- Rangeland Land System Mapping

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

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

The application area does not lie within any conservation areas or DEC managed lands (GIS Database). The nearest conservation area is Karijini National Park which is located approximately 155 kilometres west of the application area (GIS Database). At this distance the proposed clearing is not likely to have any impacts on the environmental values of Karijini National Park.

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

#### Methodology GIS Database:

- DEC Tenure

# (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

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

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

There are numerous minor non-perennial watercourses within the application area (GIS Database). The majority of the surface water within the application area is likely to occur as sheet flow following heavy rains. With an annual evaporation rate over eleven times the average annual rainfall any surface water is likely to evaporate quickly (BoM, 2015; GIS Database).

The groundwater within the application area is between 500 – 1,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. It would not be expected that the proposed clearing would cause salinity levels within the application or surrounding area to alter.

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

#### Methodology BoM (2015)

GIS Database:

- Evaporation Isopleths
- Groundwater Salinity, Satewide
- 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 321.3 millimetres and an average annual evaporation rate of 3,600 millimetres there is likely to be little surface flow during normal seasonal rains (BoM, 2015; 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 (2015)

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 (WC05/6) has been registered with the 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 are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation, Department of Parks and Wildlife 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 30 March 2015 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

#### Methodology

GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Registered with the NNTT
- Native Title Claims Filed at the Federal Court
- Native Title Claims Determined by the Federal Court

### 4. References

- BHP Billiton (2015) Wheelarra Hill North OSA. Native Vegetation Clearing Permit Application. Unpublished Report prepared by BHP Billiton Iron Ore Pty Ltd.
- BoM (2015) Climate Statistics for Australian Locations. A Search for Climate Statistics for Leinster, Australian Government Bureau of Meteorology, viewed 30 March 2015, <a href="http://www.bom.gov.au/climate/data/">http://www.bom.gov.au/climate/data/</a>.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Department of Conservation and Land Management, 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.
- DPAW (2015) NatureMap Mapping Western Australia Biodiversity, Department of Parks and Wildlife, viewed 24 April 2015, < <a href="http://naturemap.dpaw.wa.gov.au/default.aspx">http://naturemap.dpaw.wa.gov.au/default.aspx</a>>.
- ENV Australia (2012) Wheelarra Hill North Fauna Assessment. Unpublished Report for BHP Billiton Iron Ore Pty Ltd.
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Onshore Environmental (2014) Orebody 31 Targeted Significant Flora Survey. Unpublished Report prepared for BHP Billiton Iron Ore Pty Ltd.
- 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.
- Syrinx Environmental (2012) Wheelarra Hill North Level 2 Flora and Vegetation Assessment. Unpublished Report prepared for BHP Billiton Iron Ore Pty Ltd.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, Western Australia.

# 5. Glossary

### Acronyms:

BoMBureau of Meteorology, Australian GovernmentDAADepartment of Aboriginal Affairs, Western AustraliaDAFWADepartment of Agriculture and Food, Western Australia

DEC Department of Environment and Conservation, Western Australia (now DPaW and DER)

DER Department of Environment Regulation, Western Australia
DMP Department of Mines and Petroleum, Western Australia

**DRF** Declared Rare Flora

**DotE** Department of the Environment, Australian Government

**DoW** Department of Water, Western Australia

**DPaW** Department of Parks and Wildlife, Western Australia

**DSEWPaC** Department of Sustainability, Environment, Water, Population and Communities (now DotE)

EPA Environmental Protection Authority, Western Australia
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

PEC Priority Ecological Community, Western Australia

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:**

{DPaW (2013) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

#### T Threatened species:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna or the Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened Fauna and Flora are further recognised by the Department according to their level of threat using IUCN Red List criteria. For example Carnaby's Cockatoo *Calyptorynchus latirostris* is specially protected under the *Wildlife Conservation Act 1950* as a threatened species with a ranking of Endangered.

#### Rankings:

CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.

EN: Endangered - considered to be facing a very high risk of extinction in the wild.

VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

#### X Presumed Extinct species:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora (which may also be referred to as Declared Rare Flora).

#### IA Migratory birds protected under an international agreement:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice.

Birds that are subject to an agreement between governments of Australia and Japan, China and The Republic of Korea relating to the protection of migratory birds and birds in danger of extinction.

#### S Other specially protected fauna:

Specially protected under the *Wildlife Conservation Act 1950*, listed under Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice.

# P1 Priority One - Poorly-known species:

Species that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, rail reserves and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.

# P2 Priority Two - Poorly-known species:

Species that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc. Species may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.

#### P3 Priority Three - Poorly-known species:

Species that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities 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 localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.

# 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 do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

#### P5 Priority Five - Conservation Dependent species:

Species that are not threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.