



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6656/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Holcim (Australia) Pty Ltd

1.3. Property details

Property: Mining Lease 70/1248
Mining Lease 70/1250
Local Government Area: City of Waneroo
Colloquial name: Jandabup Sand Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
409.05		Mechanical Removal	Sand Mining

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 17 March 2016

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

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

Beard vegetation association 949: Low woodland; banksia (GIS Database).

A preliminary biological survey of the application area and immediate area surrounding the application area was undertaken by EnviroWorks Consulting (EnviroWorks) on 12 May 2015. The application area sits within cleared pine plantation. EnviroWorks (2015) described the native vegetation within the application area as consisting of self-sown scattered individual plants of *Nuytsia floribunda*, *Xanthorrhoea preissii*, *Jacksonia* spp. and low woody shrubs (e.g. *Acacia puchella*, *Hibbertia subvaginata*). The ground layer typically consists of annual herbs (e.g. *Podothea* spp.) and geophytes (e.g. species of Cyperaceae, Restionaceae).

Clearing Description Holcim (Australia) Pty Ltd proposes to clear up to 409.05 hectares of native vegetation for the purpose of sand mining. The project is located approximately 5 kilometres north-east of Wanneroo, in the City of Wanneroo.

Vegetation Condition Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);

To:

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).

Comment The application area is a cleared Pine (*Pinus pinaster*) plantation, where the native vegetation was cleared over 50 years ago to establish the plantation. The regrowth of native vegetation within the application area has occurred after the Forest Products Commission began harvesting the pines progressively between 2006 and 2013.

3. Assessment of application against clearing principles

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

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

The application area occurs within the Perth (SWA2) Interim Biogeographical Regionalisation of Australia subregion (GIS Database). This subregion is comprised of colluvial and Aeolian sands, alluvial river flats, and coastal limestone. It is characterised by Heath and/or Tuart woodlands on limestone, Banksia and Jarrah-Banksia woodlands on Quaternary marine dunes of various ages, and Marri on colluvial and alluvials (CALM, 2002).

The vegetation that occurs within the application area is regrowth from a Pine (*Pinus pinaster*) plantation that had been cleared progressively from 2006 to 2013. The original native vegetation was cleared over 50 years ago to establish the Gngangara Pine Plantation (EnviroWorks, 2015). A flora and vegetation survey was

undertaken over the application by EnviroWorks (2015) on 12 May 2015. No vegetation units within the application area were considered to be of high conservation significance and habitat diversity was very low within the application area despite being within the Gngangara-Moore River State Forest (EnviroWorks, 2015; GIS Database).

No Threatened Flora, Priority Flora, Threatened Ecological Communities or Priority Ecological Communities were recorded during the botanical survey or have previously been recorded within the application area (EnviroWorks, 2015; GIS Database).

The condition of the vegetation within the application area ranged from 'degraded' to 'completely degraded' (Keighery, 1994). The assessing officer conducted a site inspection on 20 January 2016 and noted that the application area is abundant in dumped litter (broken glass, furniture, rubbish), infested with weeds and has evidence of dieback (*Phytophthora cinnamomi*). Weeds and dieback have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed and dieback management condition.

Faunal habitats within the application area are limited due to the lack of vegetative cover and landform features, and the existing level of disturbance (EnviroWorks, 2015; GIS Database). The application area is not likely to support a high level of faunal diversity.

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

Methodology CALM (2002)
EnviroWorks (2015)
Keighery (1994)

GIS Database:
- DPaW Tenure
- IBRA Australia
- Imagery
- 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 is not likely to be at variance to this Principle

No fauna survey has been conducted over the application area. The application area is almost completely degraded and unlikely to provide habitat or a food source specific for any conservation significant fauna (EnviroWorks, 2015). Aerial imagery identified nearby vegetation in the local area that is in significantly healthier condition in which fauna species are more likely to inhabit (GIS Database).

Fauna habitat within the application area is limited due to the sparse nature of the understorey and small stature of the re-growth/rehabilitated vegetation (GIS Database). There is one conservation significant species listed as Threatened under the *Environment Protection and Biodiversity Conservation Act 1999* or protected under Western Australian legislation (*Wildlife Conservation Act, 1950*), that may potentially occur within the application area; Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (EPBC Act - Endangered; WC Act - Schedule 1) (GIS Database). The vegetation within the application area comprises of regrowth that is approximately 3 to 10 years old and is not considered mature enough or in a suitable condition to provide significant habitat for faunal species (GIS Database). There is a small area (<1 hectare) that comprises of a heavily weed-infested, physically damaged Banksia woodland (EnviroWorks, 2015). This vegetation is highly degraded and unlikely to provide any significant faunal habitat. The ecological values of the potential fauna habitats are therefore considered to be low. The proposed clearing of 409.05 hectares of native vegetation is not likely to impact critical feeding or breeding habitat for any conservation significant fauna species as the application area does not contain significant faunal habitats.

The application area overlays limestone therefore consideration needs to be given to subterranean fauna such as Stygofauna and Troglifauna species. Stygofauna are obligate aquatic subterranean animals that live within fresh or saline groundwater systems associated with karst (limestone caves/fissures) (Humphreys, 2006). Troglifauna are obligate fauna that live in air chambers in caves and/or rock fissures above such systems (Humphreys, 2006). Although the clearing of native vegetation may not directly impact subterranean fauna, the removal of trees may have a detrimental impact on Stygofauna and Troglifauna if the tree roots had been utilised as a food source (Humphreys, 2006).

Given the extent of previous clearing that has occurred within the application area and the degraded condition of the majority of the application area, the proposed clearing is not likely to impact critical feeding or breeding habitat for any native fauna species.

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

Methodology EnviroWorks (2015)
Humphreys (2006)
Keighery (1994)

GIS Database:
 - Imagery
 - Pre-European Vegetaion

(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 known records of Threatened flora within the application area (GIS Database). A search of the Department of Parks and Wildlife's Threatened and Priority Flora databases identified no known records of the Threatened flora species occurring within a 10 kilometre radius of the application area (DPaW, 2016).

EnviroWorks (2015) conducted a flora survey of the application area on 12 May 2015. No Threatened flora was recorded within the survey area.

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

Methodology DPaW (2016)
 EnviroWorks (2015)

GIS Database:
 - Threatened and Priority Flora

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

Comments **Proposal is not likely to be at variance to this Principle**
 According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest known TEC is approximately 4.5 kilometres north-west of the application area.

Based on flora and vegetation surveys conducted by EnviroWorks (2015), no TEC's were recorded within the application area.

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

Methodology EnviroWorks (2015)

GIS Database:
 - 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 likely to be at variance to this Principle**
 The application area falls within the Swan Coastal Plain IBRA bioregion (GIS Database). The vegetation within the application area is recorded as:

Beard vegetation association 949: Low woodland; banksia (GIS Database).

Beard vegetation association 949 retains approximately 54% of its pre-European extent which is more than the 30% threshold level recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). According to the Government of Western Australia (2014), Beard vegetation association 949 retains approximately 57% of its pre-European extent in the Swan Coastal Plain bioregion and Perth subregion.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in DPaW Managed Land (and post clearing %)
IBRA Bioregion - Swan Coastal Plain	1,501,222	580,697	~38.68	Depleted	17.52 (37.35)
IBRA Subregion - Perth	1,117,757	467,146	~41.79	Depleted	19.95 (38.06)

Local Government - City of Wanneroo	67,516	30,382	~45.00	Depleted	47.57 (52.66)
Beard vegetation associations - State					
949	218,194	123,249	~54.49	Least Concern	42.05 (55.74)
Beard vegetation associations - Bioregion					
949	209,983	120,390	~57.33	Least Concern	43.28 (56.37)
Beard vegetation associations - subregion					
949	184,476	104,232	~56.50	Least Concern	45.65 (58.95)

* Government of Western Australia (2014)

** Department of Natural Resources and Environment (2002)

Assessment of aerial imagery and supporting information (EnviroWorks, 2015; GIS Database) confirms that the proposed clearing is within a highly degraded area and that the clearing of native vegetation will be predominately regrowth. Further clearing will not reduce the ecological linkages within the local area, and is unlikely to impact the conservation significance of the pre-European vegetation remaining within the local and regional area.

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

Methodology Commonwealth of Australia (2001)
Department of Natural Resources and Environment (2002)
EnviroWorks (2015)
Government of Western Australia (2014)

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**
According to available databases, there are no permanent watercourses or wetlands within the application area (GIS Database). EnviroWorks (2015) did not identify any riparian vegetation within the application area.

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

Methodology EnviroWorks (2015)

GIS Database
- Hydrology, linear

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

Comments **Proposal may be at variance to this Principle**
The application area is associated with subdued dune-swale terrain with limestone at depth (Northcote et al, 1968; GIS Database). Chief soils are white sandy soils (Northcote et al, 1968). Generally, these soils have a high risk of wind erosion and a low risk of water erosion due to the high infiltration rates associated with sands. The majority of the area under application has a low risk of salinity.

The proposed clearing has a high risk of causing wind erosion, given the the sandy soils, and may cause appreciable land degradation. Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

The application area intercepts areas categorised as 'low' to 'moderate' Acid Sulphate Soil (ASS) risk (GIS Database). ASS are likely to occur at depths of three metres or greater. The soil exposed from clearing native vegetation is not likely to form acid on exposure to air. Phoenix (2015b) state that the application area does not contain site characteristics that are conducive to ASS.

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

Methodology Northcote et al (1960 - 986)
Phoenix (2015b)

GIS Database:
- Acid Sulphate Soil Risk Map, Swan Coastal Plain
- 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

The application area is located within the Gnangara-Moore River State Forest which is managed by the Department of Parks and Wildlife (GIS Database). The Gnangara-Moore River State Forest encompasses an area in excess of 70,000 hectares; however a large portion of this State Forest is covered by pine plantation (GIS Database). The application area is a cleared Pine (*Pinus pinaster*) plantation, where the native vegetation was historically cleared to establish the plantation (GIS Database). The degraded condition of the native vegetation is due to the high numbers of weeds, rubbish and historical clearing (GIS Database). Given this, the proposed clearing is not likely to provide a significant ecological linkage and is not likely to impact the environmental values of the conservation area.

The application area adjacent to Bush Forever Sites No. 141, 324 and 326 (GIS Database). The proponent has applied a minimum 50 metre buffer between the application area and the bush forever sites to mitigate impacts that may arise from the proposed clearing. Potential land degradation impacts as a result of the proposed clearing may be minimised by the implementation of a staged clearing condition.

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

The application area is located within the Priority One Gnangara Public Drinking Water Source Area and is within the area covered by the *Environmental Protection (Gnangara Mound Crown Land) Policy 1992* (GIS Database). The Department of Water (DoW) has considered the proposal and stated that there are Well Head Protection Zones (WHPZ) within the area proposed to be cleared and that a suitable buffer to the bore infrastructure must be implemented (DoW, 2015). The buffer will be agreed upon between the proponent and the Department of Water. The application area is located within the proclaimed Swan River groundwater area under the *Rights in Water and Irrigation Act 1914* (GIS Database). Any groundwater extraction and/or taking or diversion of surface water for purposes other than domestic and/or stock watering is subject to licence by the DoW.

There are no permanent or ephemeral water bodies located within the application area (GIS Database). The application area has a groundwater salinity that is fresh (<500 milligrams/Litre Total Dissolved solids (TDS)) (GIS Database). Although the proposed clearing may increase the amount of rainwater that infiltrates to the groundwater, given the nature of the overlying materials (ie. limestone ridges overlain by yellow or brown sand), the proposed clearing is not likely to adversely impact the quality of groundwater. The proposed clearing is unlikely to deteriorate the quality of underground water (GIS Database).

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

Methodology DoW (2015)

GIS Database:
- Groundwater Salinity, Statewide
- 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

There are no watercourses or wetlands within the application area (GIS Database).

The vegetation is not growing in association with any low lying areas which may be prone to seasonal inundation (GIS Database). The application area is predominately comprised of leached Bassendean sands, which are generally considered to have high infiltration rates and therefore a low risk of water logging (Churchward & McArthur, 1980). Given the soils are well drained and that average annual evaporation rate (1,800 - 2,000 millimetres) is well above the annual rate of rainfall (775.1 millimetres), the risk of flooding is low (BoM, 2016).

Given the size of the area to be cleared (409.05 hectares) compared to the size of the Swan Avon catchment area (396,685 hectares) (GIS Database) it is not likely that the proposed clearing will lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.

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

Methodology BoM (2016)
Churchward & McArthur (1980)

GIS Database:
- Hydrographic Catchments - Catchments
- Hydrography, linear
- Topographic Contours, Statewide

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

Comments

There are no Native Title claims over the area under application (Department of Aboriginal Affairs, 2016). 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 (Department of Aboriginal Affairs, 2016). 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 27 July 2015 by the Department of Mines and Petroleum inviting submissions from the public. One submission was received stating that the application was considered premature at this time, as there had been no Development Application submitted to local government.

Methodology Department of Aboriginal Affairs (2016)

4. References

- BoM (2016) Bureau of Meteorology Website - Climate statistics for Australian locations, Perth Metro. Available online at: http://www.bom.gov.au/climate/averages/tables/cw_009225.shtml Accessed on 28 January 2016.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Swan Coastal Plain 2 (SWA2 - Perth subregion) Department of Conservation and Land Management, Western Australia.
- Churchward H. M. & McArthur W.M (1980) 'Landforms and Soils of the Darling System' in Atlas of Natural Resources, Darling System, Western Australia. Government of Western Australia.
- Commonwealth of Australia (2001) National objectives and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra, ACT.
- Department of Aboriginal Affairs (2016) Aboriginal Heritage Enquiry System. Government of Western Australia, <http://maps.dia.wa.gov.au/AHIS2/>. (Accessed 6 January 2016).
- 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.
- DoW (2015) Advice received in relation to Clearing Permit Application CPS 6656/1. Department of Water, Western Australia, August 2015.
- DPaW (2016) NatureMap Department of Parks and Wildlife, <http://naturemap.dec.wa.gov.au>. (Accessed 6 January 2016).
- EnviroWorks (2015) Preliminary Flora Assessment for Tenements M7001248 and M7001250, Jandabup, 2015. Report prepared for Holcim (Australia) Pty Ltd by EnvironWorks Consulting, May 2015.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Humphreys, W.F (2006) Aquifers: The ultimate groundwater-dependent ecosystems, *Australian Journal of Botany*, no. 54, pp. 115-132.
- 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., 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.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia
DAFWA	Department 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	<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:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T	Threatened species: Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora). Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act. Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act. 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. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
EN	Endangered species Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
VU	Vulnerable species Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.
EX	Presumed extinct species Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the <i>Wildlife Conservation Act 1950</i> , in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.
IA	Migratory birds protected under an international agreement

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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

- CD Conservation dependent fauna**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- OS Other specially protected fauna**
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.
- P Priority species**
Species which are poorly known; or
Species that are adequately known, are rare but not threatened, and 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.