

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 9211/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Kairos Minerals Limited

1.3. Property details

Property: Exploration Licence 47/3523

Local Government Area: Town of Port Hedland

Colloquial name: Croydon Gold Exploration Project

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of: 24 Mechanical Removal Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 1 April 2021

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: 626: Hummock grasslands, shrub-steppe; kanji over soft spinifex & *Triodia brizoides* (GIS Database).

A flora and vegetation survey was conducted over the application area by Phoenix Environmental Sciences (Phoenix) on 30 September to 5 October 2020. The following vegetation types were recorded within the application area (Phoenix, 2021):

AiSmTw

Isolated mid shrubs frequently Acacia inaequilatera, Acacia pyrifolia var. pyrifolia and Acacia ancistrocarpa over isolated low shrubs frequently Streptoglossa macrocephala and Corchorus tectus over low Triodia wiseana hummock grassland.

ApSmTe

Isolated shrubs to mid open *Acacia pyrifolia* var. *pyrifolia* shrubland over isolated low *Streptoglossa macrocephala* shrubs over low to mid *Triodia epactia* hummock grassland.

ChAiTw

Isolated low Corymbia hamersleyana trees occasionally with Eucalyptus leucophloia subsp. leucophloia over isolated shrubs to mid open shrubland frequently with Acacia inaequilatera, Acacia ancistrocarpa and Acacia pyrifolia var. pyrifolia over low to mid open Triodia wiseana hummock grassland occasionally with Triodia epactia.

ChAaTe

Isolated low Corymbia hamersleyana trees over low open Acacia ancistrocarpa and Acacia maitlandii shrubland over low sparse Triodia epactia hummock grassland.

ChCtTw

Isolated low trees to low open *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* woodland over isolated shrubs to low open *Corchorus tectus* shrubland over low open *Triodia wiseana* hummock grassland occasionally with *Triodia epactia*.

EIAmTb

Isolated low Eucalyptus leucophloia subsp. leucophloia trees over low open Acacia monticola shrubland over low open Triodia basedowii hummock grassland.

Clearing Description

Croydon Gold Exploration Project.

Kairos Minerals Limited proposes to clear up to 24 hectares of native vegetation within a boundary of approximately 48.51 hectares, for the purpose of mineral exploration. The project is located approximately 123 kilometres southwest of Port Hedland, within the Town of Port Hedland

Vegetation Condition

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

The vegetation condition was derived from a vegetation survey conducted by Phoenix (2021).

The proposed clearing is for the Tierra Drilling Program as part of the Croydon Gold Exploration Project.

3. Assessment of application against Clearing Principles

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

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

The clearing permit application area is located within the Chichester subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (GIS Database). The Chichester subregion is characterised by Archaean granite and basalt plains supporting shrub steppe and hummock grasslands (*Acacia inaequilatera* over *Triodia wiseana*) (CALM, 2002). *Eucalyptus leucophloia* tree steppes occur on ranges (CALM, 2002).

A reconnaissance flora and vegetation survey was conducted over the application area and surrounds by Phoenix (2021) on 30 September to 5 October 2020. The vegetation of the application area was dominated by *Acacia* shrubland, trees of *Corymbia* and *Eucalyptus*, and *Triodia* hummock grasslands (Phoenix, 2021). No Threatened or Priority Ecological Communities were identified as potentially occurring within the application area and none of the vegetation types mapped and described are listed as Threatened or Priority Ecological Communities (Phoenix, 2021; MBS, 2021).

A total of 159 flora species from 84 genera and 35 families were recorded within the application area and surrounds, including six introduced species (Phoenix, 2021). No Threatened or Priority flora were recorded within the application area (Phoenix, 2021). A desktop assessment identified two Priority flora species as potentially occurring within the application area due to suitable habitat present (Phoenix, 2021). *Euphorbia clementii* (P3) and *Gomphrena leptophylla* (P3) were not recorded during the field assessment, and there is suitable habitat well beyond the application area for these species (Phoenix, 2021).

Heliotropium muticum (P3) was recorded outside the application area in multiple locations, and has the potential to occur within the application area due to suitable habitat present (Phoenix, 2021). The recorded locations for Heliotropium muticum do not represent a range extension. There is substantial suitable habitat for Heliotropium muticum in the surrounding landscape (Phoenix, 2021). The new records within the surrounds of the application area suggest that the species is more widespread in the broader landscape than currently recorded (Phoenix, 2021). The proposed clearing is unlikely to have a significant impact on the conservation status of Priority flora potentially present.

A desktop assessment identified a total of 40 vertebrate fauna species that may occur within the application area and surrounds (Phoenix, 2021). This comprised of two reptiles, 19 birds and 19 mammals (including nine introduced) (Phoenix, 2021). A total of 40 vertebrate species, comprising of 11 mammals (9 native and two introduced), 23 birds, and six reptiles were recorded during the field assessment of the application area and surrounds (Phoenix, 2021). Evidence of northern quoll (*Dasyurus hallucatus*, EN federal and state level) was recorded within the application area (Phoenix, 2021). Presence of northern quoll was recorded from secondary evidence (scat) at one location within the application area (Phoenix, 2021).

The vegetation association, fauna habitat and landform types present within the application area, are well represented in surrounding areas (Phoenix, 2021; MBS, 2021; GIS Database). The application area is adjacent to Mungaroona Range Nature Reserve, a large nature reserve that is known to support a diverse assemblage of flora and fauna (Phoenix, 2021; GIS Database). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, including Mungaroona Range Nature Reserve, in either a local or regional context.

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

Methodology

CALM (2002) MBS (2021) Phoenix (2021)

GIS Database:

- IBRA Australia
- Pre-European Vegetation
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers
- Threatened and Priority Flora
- Threatened Fauna

(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.

Comments Proposal may be at variance to this Principle

The following fauna habitat has been recorded within the application area (Phoenix, 2021; MBS, 2021):

Triodia grassland: undulating plain of red-orange sandy clay and rocks.

The fauna assessment surveyed a total of 974.3 hectares, including the application area (Phoenix, 2021). The *Triodia* grassland habitat covered 95% of the 974.3 hectares (Phoenix, 2021). The *Triodia* grassland habitat is not restricted to the application area, is well represented in the surrounds, and is common and widespread throughout the region (Phoenix, 2021).

Northern quoll (*Dasyurus hallucatus*, EN federal and state level) was identified at one location within the application area from secondary evidence (scat) (Phoenix, 2021). The fauna assessment identified northern quolls within the surrounds from camera traps and scats (Phoenix, 2021). All records outside the application area were located within creekline open woodland habitat and associated rocky scree slopes, which is the preferred denning/shelter habitat for northern quolls, and is absent from the application area (Phoenix, 2021). The creekline open woodland habitat occurs principally in the Mungaroona Range Nature Reserve area that was surveyed during the field assessment (Phoenix, 2021).

Pilbara olive python (*Liasis olivaceus barroni*, VU federal and state level) and spectacled hare-wallaby (*Lagorchestes conspicillatus leichardti*, P4) were recorded outside the application area within creekline open woodland habitat or within *Triodia* grassland in close proximity to the creekline (Phoenix, 2021). Records of both these species were located within the Mungaroona Range Nature Reserve surrounding the application area (Phoenix, 2021; GIS Database).

The presence of northern quoll, Pilbara olive python and spectacled hare-wallaby is influenced by the creekline that bisects the surrounding areas (Phoenix, 2021). The preferred habitat for northern quoll and Pilbara olive python is absent from the application area (Phoenix, 2021). The application area may represent foraging habitat for these species, particularly for northern quoll, as it has records within the application area.

The Mungaroona Range Nature Reserve spans approximately 105,821.654 hectares, and the proposed clearing of 24 hectares is unlikely to cause significant habitat loss for any fauna species (GIS Database). The fauna habitat located within the application area is well represented within the surrounds and is locally protected within the nature reserve. The proposed clearing is unlikely to cause habitat fragmentation for any fauna species, and is unlikely to be necessary for any conservation significant fauna species.

Based on the above, the proposed clearing may be at variance to this Principle. However, impacts are expected to be minimal.

Methodology

MBS (2021) Phoenix (2021)

GIS Database:

- DPaW Tenure
- Imagery
- Pre-European Vegetation
- Threatened Fauna

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

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

There are no known records of Threatened flora within the application area (GIS Database). Flora surveys of the application area did not record any species of Threatened flora (Phoenix, 2021).

The vegetation association within the application area is common and widespread within the region (Phoenix, 2021; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of Threatened flora.

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

Methodology Phoenix (2021)

GIS Database:

- Pre-European Vegetation
- 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 (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 (Phoenix, 2021; MBS, 2021).

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

Methodology MBS (2021)

Phoenix (2021)

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 Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Pilbara Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation association 626: Hummock grasslands, shrub-steppe; kanji over soft spinifex & *Triodia brizoides* (GIS Database). Approximately 99% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2019).

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 – Pilbara	17,808,657	17,731,764	~99	Least Concern	10.12
Beard vegetation associations – WA					
626	117,724	117,198	~99	Least Concern	15.59
Beard vegetation associations – Pilbara Bioregion					
626	117,724	117,198	~99	Least Concern	15.59

^{*} Government of Western Australia (2019)

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 (2019)

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 at variance to this Principle

There are no permanent watercourses or wetlands within the area proposed to clear (MBS, 2021; GIS Database). Numerous drainage lines pass through the application area (GIS Database). Drainage lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall (MBS, 2021).

Based on the above, the proposed clearing is at variance to this Principle. However the vegetation survey of the application area did not identify any riparian vegetation (MBS, 2021; Phoenix, 2021), and impacts from the proposed clearing to vegetation growing in association with watercourses is likely to be minimal.

Methodology

MBS (2021)

Phoenix (2021)

GIS Database:

- Hydrography, Lakes

^{**} Department of Natural Resources and Environment (2002)

- 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 application area lies within the Rocklea, Capricorn, and Macroy land systems (GIS Database). These land systems have been mapped and described in technical bulletins produced by the former Department of Agriculture (now the Department of Primary Industries and Regional Development).

The Rocklea land system consists of basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands (Van Vreeswyk et al., 2004). This land system is not generally susceptible to erosion (Van Vreeswyk et al., 2004).

The Capricorn land system consists of hills and ridges of sandstone and dolomite supporting shrubby hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). This land system is resistant to erosion (Van Vreeswyk et al., 2004).

The Macroy land system is described as stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands (Van Vreeswyk et al., 2004). This land system is not generally susceptible to erosion (Van Vreeswyk et al., 2004).

The proposed clearing is unlikely to cause appreciable land degradation.

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

Methodology Van Vreeswyk et al. (2004)

GIS Database:

- Landsystem Rangelands

(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 not located within a conservation area. The nearest DBCA (formerly DPaW) managed land is the Mungaroona Range Nature Reserve which is located directly adjacent to the application area in the southeast and approximately 4.5 kilometres to the west (GIS Database). The application area is not representative of an ecological linkage and the proposed clearing will not cause habitat fragmentation to the nature reserve (MBS, 2021). The proposed clearing is unlikely to impact on the environmental values of any conservation area. Potential impacts to the Mungaroona Range Nature Reserve as a result of the introduction of weeds may be minimised by the implementation of a weed management condition.

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

Methodology MBS (2021)

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 Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Drainage lines in the region are dry for most of the year, intense rainfall events are common within the region and are likely to temporarily increase surface run-off (MBS, 2021). The proposed clearing is unlikely to result in significant changes to surface water flows.

The proposed clearing is unlikely to cause deterioration in the quality of underground water.

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

Methodology MBS (2021)

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, with an average rainfall of approximately 319.2 millimetres per year (BoM, 2021). There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events (MBS, 2021). However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.

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

Methodology

BoM (2021) MBS (2021)

GIS Database:

- Hydrography, linear

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

Comments

The clearing permit application was advertised on 8 March 2021 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 are no native title claims over the area under application (DPLH, 2021).

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2021). 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 (2021)

4. References

- BoM (2021) Bureau of Meteorology Website Climate Data Online, Port Hedland Airport. Bureau of Meteorology. http://www.bom.gov.au/climate/data/ (Accessed 24 March 2021).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
- DPLH (2021) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS (Accessed 24 March 2021).
- 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 (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. 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.
- MBS (2021) Native Vegetation Clearing Permit. Croydon Exploration Project. Tierra Drilling Program. Prepared for Kairos Minerals Limited, by MBS Environmental, February 2021.
- Phoenix (2021) Reconnaissance flora and vegetation survey and fauna survey for the Croydon Gold Project. Prepared for Kairos Minerals Limited, by Phoenix Environmental Services, January 2021.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia. Technical Bulletin No. 92. Department of Agriculture, South Perth, Western Australia.

5. Glossary

Acronyms:

BC Act Biodiversity Conservation Act 2016, Western Australia

BoM Bureau of Meteorology, Australian Government

DAADepartment of Aboriginal Affairs, Western Australia (now DPLH)DAFWADepartment of Agriculture and Food, Western Australia (now DPIRD)

DAWE
Department of Agriculture, Water and the Environment, Australian Government
DBCA
Department of Biodiversity, Conservation and Attractions, Western Australia
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)

Dobe Department of the Environment and Energy (now DAWE)
Dow Department of Water, Western Australia (now DWER)

DPaW Department of Parks and Wildlife, Western Australia (now DBCA)

DPIRD Department of Primary Industries and Regional Development, Western Australia

DPLH Department of Planning, Lands and Heritage, Western Australia

DRF Declared Rare Flora (now known as Threatened Flora)

DWER Department of Water and Environmental Regulation, Western Australia

EPAEnvironmental Protection Act 1986, Western Australia

Environmental Protection Authority, 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

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

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.