



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	9418/2
Permit type:	Purpose Permit
Applicant name:	Agnew Gold Mining Company Pty Ltd
Application received:	19 September 2022
Application area:	45 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases M36/27, M36/55, M36/150, M36/313, M36/695
Location (LGA area/s):	Shire of Leonora
Colloquial name:	Barren Lands Project

1.2. Description of clearing activities

Agnew Gold Mining Company Pty Ltd proposes to clear up to 45 hectares of native vegetation within a boundary of approximately 463.37 hectares, for the purpose of mineral production and associated activities. The project is located approximately 19 kilometres south-west of Leinster, within the Shire of Leonora.

The application is to allow for the expansion of mining activities.

Clearing permit CPS 9418/1 was granted by the Department of Mines, Industry Regulation and Safety on 4 November 2021 and was valid from 27 November 2021 to 31 August 2026. The permit authorised the clearing of up to 40 hectares of native vegetation within a boundary of approximately 463.37 hectares, for the purpose of mineral production and associated activities.

On 19 September 2022, the Permit Holder applied to amend CPS 9418/2 to increase the amount of approved clearing by five hectares. The permit boundary remains unchanged.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	24 November 2022
Decision area:	45 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 19 September 2022. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), the clearing principles set out in Schedule 5 of the EP Act (**Error! Reference source not found.**), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- potential impacts to an ephemeral drainage line, and consequently on surface water flow.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to have adverse impacts on the conservation of significant flora and fauna and the impacts of clearing can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds; and
- avoid impacts to riparian vegetation and maintain surface water flow.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

No evidence of avoidance or mitigation measures was provided to support the application.

3.2. Assessment of impacts on environmental values

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with standard avoid and minimise, hygiene and watercourse management conditions.

3.2.1. Biological values

Assessment

A flora, vegetation and fauna habitat survey was conducted by 360 Environmental Pty Ltd during August, 2019 (360 Environmental, 2021). A total of 82 flora species from 42 genera, and 21 families were recorded within the application area (94% were native species). The most dominant families were *Fabaceae* (22 species), *Crophulariaceae* (10 species) and *Chenopodiaceae* (nine species) and the most dominant genera were *Acacia* (15 species) and *Eremophila* (10 species). No Threatened flora, Threatened Ecological Communities or Priority Ecological Communities have been recorded within the application area (GIS Database), and none were found during the flora and vegetation survey (360 Environmental, 2021).

The following two Priority flora species were identified as potentially occurring within the application area based on a desktop assessment of suitable landscape features and soil types:

- *Eremophila pungens* (P4)
- *Grevillea inconspicua* (P4)

None of these species have previously been recorded within the application area (360 Environmental Consulting, 2021; GIS Database). The majority of the application area has previously been disturbed for mining operations under the former clearing permit. The remaining sections to be cleared present large portions of open areas with scattered vegetation cover (GIS Database). In addition, 360 Environmental Consulting (2021) did not identify these species during the field survey.

Six weed species were recorded within the application area during the flora survey (360 Environmental, 2021). No Declared Pests sectioned under the *Biosecurity and Agriculture Management Act 2007* or Weeds of National Significance were recorded within the application area (360 Environmental, 2021). Weeds have the potential to out-compete native species and reduce the biodiversity of an area, and care should be taken to prevent the introduction and spread of weeds to the application area and surrounding areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by maintaining the weed management condition.

Conclusion

Based on the above assessment, the increase in the area proposed to clear is unlikely to have impacts on the above Priority flora species. The proposal can be managed to be environmentally acceptable with avoid and minimise, and hygiene management conditions.

Conditions

- Maintain the weed management condition on the permit.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 7 October 2022 by the Department of Mines, Industry Regulation and Safety 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, 2022). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2022). 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.

Other relevant authorisations required for the proposed land use include:

- A Mining Proposal / Mine Closure Plan approved under the *Mining Act 1978*.

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.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The project is located approximately 19 kilometres south-west of Leinster, within the Shire of Leonora in the extensive land use zone (GIS Database). The predominant land use in the region is grazing of native pastures, conservation, mining activity and urban development.
Ecological linkage & Conservation areas	The nearest conservation area is the Wanjarri Nature Reserve which is located approximately 60 kilometres north, north-east of the application area (GIS Database). As the application area is part of an existing mine and is to allow for the expansion of mining activities, it is not considered to be an ecological linkage to other areas of vegetation.
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <p>18: Low woodland; mulga (<i>Acacia aneura</i>); and</p> <p>39: Shrublands; mulga scrub (GIS Database).</p> <p>A flora and vegetation survey was conducted over the application area by 360 Environmental Consulting during August, 2019. The following vegetation associations were recorded within the application area (360 Environmental Consulting, 2021):</p> <ul style="list-style-type: none"> • AcMpSe - <i>Acacia craspedocarpa</i> open shrubland; • Aspp.Espp.Saxs - mixed <i>Acacia</i> spp. open shrubland over mixed <i>Eremophila</i> spp. And <i>Senna artemisioides-sturtii</i> shrubland; • Aspp.SaxsEspp. - open shrubland of <i>Acacia papyrocarpa</i> or <i>Acacia mulganeura</i> over <i>Senna artemisioides-sturtii</i> shrubland; • Aspp.Espp.Ps - open shrubland of <i>Acacia mulganeura</i> and <i>Acacia paraneura</i> over open shrubland of <i>Eremophila</i> spp.; and • ArEffPo - open shrubland of <i>Acacia resinimarginea</i> over sparse shrubland of <i>Eremophila forrestii</i> subsp. <i>Forrestii</i>.
Vegetation condition	<p>The vegetation survey (360 Environmental Consulting, 2021) indicates the vegetation within the proposed clearing area is in Good to a Completely Degraded condition (Trudgen, 1991) condition, described as</p> <ul style="list-style-type: none"> • Good - More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds. • Completely Degraded - Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs. <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>
Climate and landform	The application area is mapped within elevations of 580 – 500 meters AHD (GIS Database). The climate of the region is arid, with an annual rainfall average of approximately 251.6 millimetres (BoM, 2022).
Soil description and land degradation risk	The application area is located within the Salinaland Plains Zone (DPIRD, 2022). This zone is characterised by sandplains (with hardpan wash plains and some mesas, stony plains and salt lakes) on granitic rocks of the Yilgarn Craton with red sandy earths, red deep sands, red shallow loams (sometimes with hardpans) and red loamy earths (DPIRD, 2022). A large part of the application area has been previously disturbed by mining and exploration activities.
Hydrogeography and waterbodies	There are no permanent waterbodies or watercourses within the application area, however, there are several minor non-perennial watercourse present (GIS Database). The application area is located within the Goldfields Groundwater Area (RIWI Act); however, it is not within a Public Drinking Water Source Area (GIS Database).
Flora	<p>There are records of 13 Priority flora species within 40 kilometres of the application area (360 Environmental Consulting, 2021). None of these records are within the application area (GIS Database). A flora survey undertaken by 360 Environmental Consulting (2021) in 2019 did not record any Threatened or Priority flora species within the application area. Of the 13 Priority species identified in the desktop assessment, two were considered to have a medium likelihood of occurrence:</p> <ul style="list-style-type: none"> • <i>Eremophila pungens</i> (P4); and • <i>Grevillea inconspicua</i> (P4).

Characteristic	Details
Ecological communities	There are no mapped Threatened or Priority Ecological Communities (TEC/PEC) within the application area or within a 10 kilometres radius (GIS Database).
Fauna	No conservation significant fauna species have previously been recorded within the application area (GIS Database). 360 Environmental Consulting (2021) conducted a fauna survey over the application area in August 2019.

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable soil type? [Y/N]	Radius of search (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Eremophila pungens</i>	P4	Y	N	20	0	Y
<i>Grevillea inconspicua</i>	P4	N	Y	20	4	Y

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>A flora and vegetation survey was conducted by 360 Environmental Pty Ltd during August, 2019 (360 Environmental, 2021). A total of 82 flora species from 42 genera, and 21 families were recorded within the application area (94% were native species).</p> <p>There are no known Threatened flora, Threatened or Priority Ecological Communities within the permit area (360 Environmental, 2021; GIS Database). No Priority flora have been recorded within the application area, however two Priority flora species have been identified as potentially occurring (360 Environmental, 2021).</p> <p>Six weed species were recorded within the application area during the flora survey (360 Environmental, 2021). No Declared Pests sectioned under the <i>Biosecurity and Agriculture Management Act 2007</i> or Weeds of National Significance were recorded within the application area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.</p> <p>No conservation significant fauna have been recorded within the application area (360 Environmental, 2021; GIS Database).</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> "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."</p> <p><u>Assessment:</u></p> <p>A desktop search identified a total of 19 conservation significant vertebrate fauna species (including Priority species) from 13 families as potentially occurring within the application area (DBCA, 2007-).</p> <p>A fauna survey was undertaken over the application area during August, 2019 (360 Environmental, 2021). A total of 48 fauna habitat assessments were undertaken during the field survey. Three fauna habitat types were identified:</p> <ul style="list-style-type: none"> • Acacia shrubland/rocky plain • Ironstone/greenstone hill • Drainage line <p>These habitat types are all widespread and common in the region, and the application area did not contain any locally restricted habitat types (360 Environmental, 2021). No fauna species of conservation significance (Threatened or Priority), or evidence such</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>as tracks, scats, nest or direct sightings were recorded within the application area (360 Environmental 2021).</p> <p>In addition, the application area is surrounded by existing disturbance for mining related infrastructure (GIS Database).</p>		
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>There are no known records of Threatened flora within the application area (GIS Database). A flora survey of the application area did not record any species of Threatened flora (360 Environmental, 2021).</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (GIS Database).</p> <p>A flora and vegetation survey of the application area did not identify any TECs (360 Environmental, 2021).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). Approximately 99% of the pre-European vegetation still exists in the Murchison Bioregion (Government of Western Australia, 2019).</p> <p>The application area is broadly mapped as Beard vegetation association 18 (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). The permit area does not contain any remnants nor does it form part of any remnants in the local area (GIS Database).</p>	Not at variance	No
<p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are no conservation areas in the vicinity of the application area. The nearest DBCA managed land is the Wanjarri Nature Reserve which is located approximately 60 kilometres north, north-east of the application area (GIS Database). The proposed clearing is unlikely to impact on the environmental values of any conservation area.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>The application area has several minor ephemeral drainage lines (GIS Database). Drainage lines within the application area are poorly defined and are only likely to flow following major rainfall events. As the vegetation associated with this ephemeral drainage line may be cleared, it is recommended to maintain surface water flow or reinstate downstream into existing natural drainage lines.</p> <p>Potential impacts to watercourses be managed through the continuous implementation of a vegetation management condition, which includes avoiding clearing riparian vegetation and maintaining surface water flow.</p>	At variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The application area lies within the Laverton, Leonora, Sunrise and Wyarri land systems (GIS Database).</p> <ul style="list-style-type: none"> • The Laverton land system is described as Greenstone hills and ridges with acacia shrublands. This land system is not generally susceptible to erosion (Pringle et al., 1994). • The Leonora land system is described as Low greenstone hills and stony plains supporting mixed stony chenopod shrublands. This land system is not generally susceptible to erosion (Pringle et al., 1994). • The Sunrise land system is described as Stony plains supporting mulga shrublands. This land system is not generally susceptible to erosion (Pringle et al., 1994). • The Wyarri land system consists of ‘Granite domes, hills and tor fields with gritty-surfaced fringing plains supporting mulga and granite wattle shrublands.’ This land system is not generally susceptible to erosion (Pringle et al., 1994). <p>The proposed clearing of up to 45 hectares of native vegetation within a boundary of approximately 463.366 hectares, for the purpose of mineral production and associated activities is unlikely to cause appreciable land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>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). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed amendment is unlikely to result in significant changes to surface water flows.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The climate of the region is semi-arid, with a low average rainfall of approximately 251.6 millimetres per year (BoM, 2022).</p> <p>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. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.</p>	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation’s ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.

Condition	Description
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Sources of information

D.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Pre-European Vegetation Statistics
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

D.2. References

- 360 Environmental Pty Ltd (2021) Agnew Gold Project: Barren Lands, Native Vegetation Clearing Permit Supporting Documentation. Unpublished report prepared for Goldfields Limited by 360 Environmental Pty Ltd, August 2021.
- BoM (2021) Bureau of Meteorology Website – Climate Data Online, Leinster AERO. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 15 November 2022).
- DBCA (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. <https://naturemap.dbca.wa.gov.au/> (Accessed 1 November 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.
- DPLH (2022) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 15 November 2022).
- Department of Primary Industries and Regional Development (DPIRD) (2022) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (Accessed 15 November 2022).

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>

Pringle, H.J.R., Van Vreeswyk, A.M.E., and Gilligan, S.A. (1994) An Inventory and Condition Survey of rangelands in the north-eastern Goldfields, Western Australia. Technical Bulletin No. 87. Department of Agriculture, Western Australia.

Trudgen, M.E. (1991) Vegetation condition scale in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
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)
DoEE	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
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

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

T **Threatened species:**

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

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

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

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

CR **Critically endangered species**

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

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

EN **Endangered species**

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

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

VU

Vulnerable species

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

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

Extinct Species:

EX

Extinct species

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

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

EW

Extinct in the wild species

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

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

Specially protected species:

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

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

MI

Migratory species

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

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

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

CD

Species of special conservation interest (conservation dependent fauna)

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

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

OS

Other specially protected species

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

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

P

Priority species:

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

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

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

P1

Priority One - Poorly-known species

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

P2

Priority Two - Poorly-known species

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

P3

Priority Three - Poorly-known species

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

P4

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

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

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

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

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (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.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened 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.
- (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.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (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.
- (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.

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