



# Clearing Permit Decision Report

## 1. Application details and outcomes

### 1.1. Permit application details

Permit number:	10572/1
Permit type:	Purpose Permit
Applicant name:	Focus Operations Pty Ltd
Application received:	26 March 2024
Application area:	220 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 15/412, 15/646, 15/660, 15/958, 15/966, 15/1114, 15/1294
Location (LGA area/s):	Shire of Coolgardie
Colloquial name:	Dreadnought and Alicia Project

### 1.2. Description of clearing activities

Focus Minerals Ltd proposes to clear up to 220 hectares of native vegetation within a boundary of approximately 407 hectares, for the purpose of mineral production and associated activities. The project is located approximately 1.6 kilometres south of Coolgardie, within the Shire of Coolgardie.

The application is to allow for develop the development of the Dreadnought and Alicia Project, which encompasses a cutback on the existing Dreadnought open pit and mining of previously approved Alicia open pit to extract gold ore for processing at the nearby Three Mile Hill (TMH) mill and associated infrastructure and activities (Focus Operations, 2024).

### 1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	10 October 2024
Decision area:	220 hectares of native vegetation

### 1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E and 51O of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) on 12 April 2024. DEMIRS 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), supporting information provided by the applicant including the results of flora, vegetation and fauna surveys, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing, to develop the Dreadnought and Alicia Project.

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;
- potential land degradation in the form of water erosion;
- the potential impact to vegetation growing in association with watercourses;
- the loss individuals and of native vegetation that is suitable habitat for malleefowl (*Leipoa ocellata*);
- the loss individuals and of native vegetation that is suitable habitat for chuditch (*Dasyurus geoffroi*); and
- the loss individuals and of native vegetation that is suitable habitat for inland hairstreak (*Jalmenus aridus*)

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 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;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion;
- avoid the clearing of vegetation growing in association with watercourses where possible and maintain water flows;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- fauna management condition to survey for malleefowl (*Leipoa ocellata*) mounds prior to clearing, avoiding clearing nearby them during breeding season;
- fauna management condition to survey for chuditch (*Dasyurus geoffroi*); individuals and potential dens prior to clearing, so that individuals can be relocated if present;
- fauna management condition to avoid known breeding sites of inland hairstreak (*Jalmenus aridus*) to minimise impacts from clearing.

## 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)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *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

The proponent has submitted the Focus Minerals Ltd supporting documentation for Native Vegetation Clearing Permit Application for Dreadnought Open Pit Project (Focus Minerals, 2024). In this they have stated that the following measures from their internal environmental management plan are applicable to the application. The proposed the following mitigation and management measures for various environmental factors are listed below.

#### Air quality:

- Weather conditions are monitored, and dust impacts are assessed during clearing;
- Topsoil stripping and spreading activities will be restricted if dust cannot be adequately controlled during periods of high winds; and
- Water carts are available and utilised for wetting down of soils as required.

#### Land and soils:

- Regular inspections and maintenance of machinery including daily pre-starts;
- Spill kits closely available during clearing activities;
- Stripping topsoil to a maximum depth of up to 200 millimetres;
- Topsoil stripping to be undertaken as close as possible to commencement of activities; and
- Soils to be paddock-dumped into stockpiles of no greater than 2 metres in height and have adequate distance between them to create a series of mounds and troughs.

#### Fauna:

- Speed limits will be signed and enforced;
- Any injury or death of fauna will be recorded and investigated;
- Access to food wastes will be minimised by ensuring effective storage and disposal; and
- Personnel are prohibited from direct contact with fauna, including feeding.

## Vegetation:

- Utilising existing disturbances where possible for mine infrastructure;
- Choosing paths of least resistance through vegetation when siting roads and other linear infrastructure (where practicable); and
- Retention of canopy trees where possible.

## Weeds:

- All vehicles and equipment arriving on site will be free of soil, seeds, and vegetative matter;
- Movement of vehicles and equipment will be restricted to areas to be cleared; and
- Weed spray programs may be implemented on a seasonal basis to eradicate identified weed infestations.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

### 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (flora and fauna) and conservation areas. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

#### 3.2.1. Biological values (flora and fauna) - Clearing Principles (a) and (b)

##### Assessment

##### Flora

A total of 26 conservation significant flora species have been recorded within 20 kilometres of the application area (Terratree, 2021; NVS, 2023; GIS Database). Eight of these conservation significant flora species, *Acacia websteri* (P1), *Acacia coatesii* (P1), *Cryptandra exserta* (P1), *Cryptandra exserta* (P1), *Eremophila microphylla* (P3), *Eremophila veronica* (P3), *Lepidosperma* sp. *Kambalda* (P3) and *Lepidosperma* sp. *Parker Range* (N. Gibson & M. Lyons 2094) (P1) were recorded during surveys (Terratree 2021; NVS, 2023). All were found over nine kilometres from the application area, except for *Acacia websteri* which was recorded within 2 kilometres of the application area. Based on the habitat within the application area these species are considered unlikely to occur within the application area. Additionally, another five flora species were considered to have suitable habitat within the application area, however due to the extensive targeted surveys within the area it is unlikely that these species occur within the application area (Terratree, 2021; NVS, 2023; Western Australian Herbarium, 1998-). Furthermore, due to the widespread nature of the vegetation and soil types within the application area throughout the surrounding region, it is unlikely that the area proposed to be cleared would form significant habitat for any of the flora species listed above (GIS Database).

A total of eight introduced flora species were recorded during surveys of Alicia and Dreadnought project areas (Terratree, 2021; 360 Environmental, 2022a). Of these, two were considered Weeds of National Significance (*Lycium ferocissimum* and *Opuntia stricta*), despite neither of these being recorded within the application area, management of potential outbreaks of these species is still important to reduce negative impacts on surrounding vegetation (Focus Minerals, 2024; DBCA, 2024).

##### Fauna

A total of six conservation significant fauna species were recorded as potentially occurring within the application area or have records within 20 kilometres (360 Environmental 2022a, GIS Database). From these records four species were considered to potentially occur within the application area (360 Environmental 2022a, GIS Database). The two records not included are both migratory shore birds, which do not have suitable habitat within the application area (360 Environmental 2022a, GIS Database).

*Dasyurus geoffroi* (chuditch) scat was recorded during the survey conducted by 360 Environmental (2022), approximately 5.5 kilometres north of the application area. Of the habitat types present with the application area, the eucalyptus woodland and acacia shrubland would present the most value to this species as these habitats reported to have dense understorey which would provide refuge and shelter, as well as woody debris and hollow logs throughout. If there are sufficient denning resources (e.g. hollow logs and tree bases) these habitat types may also provide potential breeding habitat for chuditch (360 Environmental, 2022; DEC, 2012; DBCA, 2024). The suitability of these habits likely varies with the degree of disturbance which may alter prevalence of both denning sites and availability of prey, however any areas of natural vegetation chuditch use to breed, forage or disperse are considered critical habitat (360 Environmental; DEC, 2012). Due to the sparse records and existing disturbance from mining, chuditch are most likely to only be transient within the application area, however, given their propensity to utilise burrows of others species (including rabbits), and the presence of hollow logs it would be prudent to survey these denning resources prior to the commencement of clearing activities in case chuditch are sheltering in them (DEC, 2012; DBCA, 2024).

*Leipoa ocellata* (malleefowl) have recently been recorded within three kilometres of the application area, with a further 15 records within 20 kilometres (GIS Database). The eucalyptus woodland habitat constitutes suitable habitat within the application area for the species however, no mounds, tracks, or other signs of the taxon were observed during any of the field surveys, despite these signs being easily identifiable (Benshemesh, 2007; Focus Minerals, 2022). Due to the proximity and number of records within the local area, it is still likely that *Leipoa ocellata* may utilise the suitable habitat within the application area for breeding and foraging (360 Environmental, 2022; GIS Database).

*Jalmenus aridus* (inland hairstreak) preferred habitat is summarised as open woodland with mature *Senna artemisioides* ssp. *flifolia* as well as mixed flowering shrubs with open areas of well drained exposed ground adjoining the hostplants (*Acacia tetragonophylla* and *Senna artemisioides* ssp. *flifolia*) (Eastwood et al., 2023). The ant *Froggattella kirbii* must also be present (Eastwood et al., 2023). One adult was found during surveys within the application area, whilst another 15 adults were found

within 200 metres west of the application area (360 Environmental, 2022b). No *Jalmenus aridus* larvae or *Froggattella kirbii* ants were found (360 Environmental, 2022b). Flora host species of *Senna artemoides* ssp. *flifolia* and *Acacia tetragonophylla* were found widely across the application area and the surrounding region (360 Environmental, 2022; NVS, 2023). *Jalmenus aridus* have a spatially patchy distribution with only 10 known breeding sites within an area just over 5,000 square kilometres (DBCA, 2024; Eastwood et al 2023). Rod Eastwood (personal communication, 3 October 2024) wrote that unpublished data shows that the Inland Hairstreak is known from 16 breeding sites with its extent of occurrence measuring 8,500 square kilometres. Despite this larger than previously thought extent of occurrence, the records within the application area are the most southerly for this species, and thus have high conservation significance (DBCA, 2024). Furthermore, *Jalmenus aridus* has been determined to have a 30 percent chance of going extinct in the wild by 2040 without proper management such as habitat protection (Geyle et al., 2021). As *Jalmenus aridus* are extremely localised, with adults displaying strong natal hostplant fidelity, any identified breeding sites should be retained with an adequate buffer to reduce indirect impacts (Eastwood et al., 2023; DBCA, 2024).

*Ogyris subterrestris petrina* (arid bronze azure butterfly) larvae are known to be myrmecophilous (i.e. occur in association with ants) specifically with *Camponotus terebrans* (Department of the Environment, 2015). As *Camponotus terebrans* requires soft-barked eucalypts to form its nests and due to the presence of these within the application area, a survey was conducted by 360 Environmental (2022b) to determine the presence of the species (Department of the Environment, 2015). No *Camponotus terebrans* were found and it has been determined that *Ogyris subterrestris petrina* are unlikely to occur within the application area (360 Environmental, 2022b).

### Conclusion

Based on the above assessment, the proposed clearing may result in significant impacts to chuditch, malleefowl, inland hairstreak and their habitats. For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora and fauna can be managed by avoiding and minimising the extent of clearing, taking steps to minimise the risk of the introduction and spread of weeds, slow directional clearing to allow fauna to move into adjacent vegetation and fauna management conditions for malleefowl, chuditch and inland hairstreak.

The applicant may have notification responsibilities under the EPBC Act for *Leipoa ocellata* (malleefowl) and *Dasyurus geoffroi* (chuditch), impacts to and their habitats, as set out in the EPBC Act. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

### Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid and minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- slow one- directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity minimising the impact to individuals;
- fauna management (malleefowl); inspect for malleefowl mounts prior to clearing, where identified don't clear during breeding season to minimise impact;
- fauna management (chuditch); preclearance survey to identify individuals and inspect potential dens, so that individuals can be relocated if present;
- fauna management (Inland hairstreak); targeted survey prior to clearing to identify individuals, breeding sites and host plants to avoid impacts.

## 3.2.2. Conservation areas - Clearing Principle (h)

### Assessment

Given the application areas clearing size and proximity to the eastern boundary of Kangaroo Hills Timber Reserve, potential impacts to this conservation area include weed invasion, surface drainage and alterations to groundwater levels because of clearing, dewatering or water extraction activities associated with the mine (DBCA, 2024).

Changes to surface water drainage as a result of proposed clearing or creation of tracks may lead to detrimental impacts including increased potential for erosion, turbidity and pollution events in the conservation area (DBCA, 2024). Drainage lines that originate or pass through the project area (either existing or as a result of proposed activities) that drain towards the Kangaroo Hills Timber Reserve should be managed to avoid unnecessary impacts to both the watercourse and the conservation area (DBCA, 2024). This can be managed through a watercourse management condition.

Management of declared weeds and the two Weeds of National Significance identified in the areas surrounding the application are during surveys and database review is vital to reduce impacts on the Kangaroo Hills Timber Reserve (360a Environmental, 2022; DBCA, 2024; Terratree, 2021). In particular the management of species *Cylindropuntia imbricata* subsp. *rosea* (white spined Hudson pear) which has received significant control efforts on neighbouring lands, is important to reduce the risk of encroachment into conservation estate (DBCA, 2024).

### Conclusion

Based on the above assessment, the proposed clearing may result in significant impacts to the Kangaroo Hills Timber Reserve. For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation areas can be managed by avoiding and minimising the extent of clearing, taking steps to minimise the risk of the introduction and spread of weeds and avoiding the clearing of vegetation growing in association with watercourses where possible, maintaining water flows.

### Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid and 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 the clearing of vegetation growing in association with watercourses where possible and maintain water flows.

### 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 12 April 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2024). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are 2 registered Aboriginal Sites of Significance within the application area (DPLH, 2024). 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.

This project was referred to the Environmental Protection Authority for assessment and approval under Part IV of the *Environmental Protection Act 1986*. The Environmental Protection Authority decided to not assess the proposal.

It is noted that the proposed clearing may impact on *Leipoa ocellata* (malleefowl) and *Dasyurus geoffroi* (chuditch), which are protected matters under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Climate Change, Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

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 area proposed to be cleared is primarily a historic mine site, surrounded by an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is adjacent to the town of Coolgardie and the Kangaroo Hills Timber Reserve (GIS Database). The application area is further surrounded by native vegetation, mining developments and the landscape of the Coolgardie bioregion in the local area (GIS Database).
Ecological linkage	Aerial imagery and available databases shows that the application area does not form part of any formal or informal ecological linkages (GIS Database).
Conservation areas	The application area does not fall within any mapped conservation areas. The closest mapped conservation area is the Kangaroo Hills Timber Reserve, which at its nearest point is approximately 50 metres from the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <p>9: Medium woodland; coral gum (<i>Eucalyptus torquata</i>) &amp; goldfields blackbutt (<i>E. le soufii</i>) (GIS Database).</p> <p>Two flora and vegetation surveys were conducted over the application area by Terratree and 360 Environmental between during November, 2020 and November, 2021. The following vegetation associations were recorded within the application area by Terratree (2021):</p> <p><b>C1</b> - Shallow stony soils, upper slopes, <i>Eucalyptus griffithsii</i> with <i>E. torquata</i>  <b>C2</b> - Greenstone midslopes, <i>Eucalyptus clelandiorum</i> (Cleland's Blackbutt)  <b>C3</b> – Drainage lines, <i>Eucalyptus griffithsii</i> (<i>E. torquata</i> absent)  <b>C5</b> – Greenstone midslopes, occasionally drainage areas, <i>E. campaspe</i> (Silver-topped gimlet)  <b>C6</b> – Flats, low lying deep soils, <i>E. Salmonophloia</i> (Salmon gum)</p> <p>The following vegetation associations were recorded within the application area by 360 Environmental (2022a):</p> <p><b>EsppEiiSaa</b> - Plains, low hills, <i>Eucalyptus salmonophloia</i> mid isolated trees over a mosaic of <i>E. celastroides</i>, <i>E. clelandiorum</i>, and <i>E. torquata</i> low open woodland over <i>Eremophila interstans</i> subsp. <i>interstans</i> (<i>Eremophila parvifolia</i> subsp. <i>auricampi</i>) mid isolated shrubs over <i>Senna artemisioides</i> subsp. <i>artemisioides</i>, <i>S. artemisioides</i> subsp. <i>filifolia</i>, and <i>Atriplex vesicaria</i> low open shrubland  <b>EsEiiAv</b> – Plains, <i>Eucalyptus salmonophloia</i> mid open woodland over <i>Eremophila interstans</i> subsp. <i>interstans</i> (<i>Eremophila parvifolia</i> subsp. <i>auricampi</i>, <i>Senna artemisioides</i> subsp. <i>filifolia</i>) tall to mid isolated shrubs over <i>Atriplex vesicaria</i> low open shrubland  <b>AcEoaDI</b> – Rocky hills, <i>Acacia collegialis</i> (<i>A. acuminata</i>) tall shrubland over <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>, <i>E. georgei</i>, <i>A. tetragonophylla</i> (<i>Senna artemisioides</i> subsp. <i>filifolia</i>, <i>Exocarpos aphyllus</i>) mid shrubland over <i>Dodonaea lobulata</i> (<i>Atriplex vesicaria</i>, <i>Ptilotus obovatus</i> var. <i>obovatus</i>) low shrubland  <b>Cleared</b> - Plains, cleared or historically cleared areas including mine pits and borrow pits (often filled with water), bitumen roads, and dirt tracks.  Some of these areas were showing signs of revegetation. With occasional <i>Eucalyptus griffithsii</i>, <i>Atriplex vesicaria</i>, <i>Maireana</i> spp., and assorted weed species</p>
Vegetation condition	<p>Vegetation surveys (Terratree, 2021; 360 Environmental, 2022) and aerial imagery indicate the vegetation within the proposed clearing area is in completely degraded to excellent (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> <li>• <b>Excellent</b> - Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.</li> <li>• <b>Very good</b> - Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.</li> <li>• <b>Good</b> - Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.</li> <li>• <b>Degraded</b> - Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.</li> <li>• <b>Completely degraded</b> - The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.</li> </ul> <p>The full Keighery (1994) condition rating scale is provided in Appendix C.</p>

Characteristic	Details
Climate and landform	The application area is located within a semi-arid zone with an average annual rainfall (Coolgardie Station) of 270.7 millimetres (BoM, 2024). The landform consists of uplands and undulating plains (DPIRD, 2024a).
Soil description	The soil is mapped as 266g4 within the BB5 atlas system (DPIRD, 2024b). It is described as rocky ranges and hills of greenstones-basic igneous rocks with chief soils of shallow calcareous loamy soils, with shallow brown and grey-brown calcareous earths. Below weathered rock occurs at shallow depths. Associated soils are not described but may include alkaline red earths.
Land degradation risk	The application area falls within the BB5 atlas system within the Norseman Zone (GIS Database). These are part of the Coolgardie land system which is described as uplands and undulating plains associated with ultramafic greenstones supporting eucalypt woodlands and halophytic shrublands (DPIRD, 2024a). Erosional surfaces with deeply weathered uplands and rises (DPIRD, 2024a). Where not protected by a stony mantle, foot slopes and valley floors are susceptible to water erosion, particularly in areas where perennial shrub cover is substantially reduced and/or the soil surface is disturbed as occurs with poorly developed infrastructure, such as tracks and fence lines (DPIRD, 2024a). The Coolgardie land system is susceptible to soil erosion when cleared of perennial vegetation (DPIRD, 2024a).
Waterbodies	The desktop assessment and aerial imagery indicated that several minor, non-perennial watercourses transect the area proposed to be cleared (GIS Database). There is one mapped small perennial lake (approximately 3 hectares in size) within 1 kilometre of the application area (GIS Database).
Hydrogeography	The application area is located within the Goldfields Groundwater Area which is legislated by the <i>RIWI Act 1914</i> (GIS Database). The mapped groundwater salinity of the majority of the application area is 14,000-35,000 milligrams per litre total dissolved solids which is described as saline (GIS Database). The north-eastern point of the application area is mapped as more than 35,000 milligrams per litre total dissolved solids which is described as hypersaline (GIS Database).
Flora	No conservation significant flora species have been recorded within the application area (Focus Minerals, 2024; GIS Database). 26 conservation significant flora species have been recorded within 20 kilometres of the application area, 8 of which were recorded in recent surveys (Terratree, 2021; NVS, 2023; GIS Database).
Ecological communities	There are no Priority or Threatened Ecological Communities within the application area or nearby to the application area (GIS Database). The closest record is the Priority three Ecological Community, the Emu Land System which is over 66 kilometres from the application area (GIS Database).
Fauna	Five conservation significant fauna species were recorded within the local area (20 kilometres) from the application area (GIS Database). One conservation significant fauna species was recorded within the application area, <i>Jalmenus aridus</i> (inland hairstreak) (360 Environmental, 2022b) with a further four conservation significant fauna species recorded within 20 kilometres of the application area, two of which are migratory shorebirds which are unlikely to occur within the application area (360 Environmental, GIS Database). Furthermore, it was determined that there is suitable habitat for the <i>Ogyris subterrestris petrina</i> (arid bronze azure butterfly) within the application area (360 Environmental, 2022a).
Fauna habitat	Three broad-scale fauna habitats were identified in the survey conducted by 360 Environmental (2022a). These are described as: <ul style="list-style-type: none"> <li>• <b>Eucalyptus woodland</b> – Mixed <i>Eucalyptus</i> sp. woodlands over <i>Acacia</i> sp. <i>dodonea</i> sp. <i>Eremophila</i> sp. or <i>Melaleuca</i> sp. mixed shrublands. Peeling bark, woody debris, leaf litter and hollow logs were observed throughout this habitat type. These microhabitat features provide shelter for small reptiles and mammals. The canopy of trees provides shelter and foraging habitat for birds.</li> <li>• <b>Rocky slopes</b> – <i>Acacia collegialis</i> (<i>A. acuminata</i>) tall shrubland over <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>, <i>E. georgei</i>, <i>Acacia tetragonophylla</i> (<i>Senna artemisioides</i> subsp. <i>filifolia</i>, <i>Exocarpos aphyllus</i>) mid shrubland over <i>Dodonaea lobulata</i> (<i>Atriplex vesicaria</i>, <i>Ptilotus obovatus</i> var. <i>obovatus</i>) low shrubland. Leaf litter, peeling bark, rock crevices, and woody debris provide shelter for small reptiles and mammals. Shrublands provide shelter and foraging habitat for birds, reptiles and mammals.</li> <li>• <b>Disturbed areas</b> - Cleared or historically cleared areas including mine pits and borrow pits (often filled with water), bitumen roads, and dirt tracks.</li> </ul>

## A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands

IBRA Bioregion - Coolgardie	12,912,204.35	12,648,491.39	97.96	16.39	16.37
Beard vegetation associations - State					
Veg Assoc 9.	240,509.33	235,161.94	97.78	18,984.28	7.89
Beard vegetation associations - Bioregion					
Veg Assoc 9.	240,441.99	235,100.97	97.78	7.97	7.90

Government of Western Australia (2019)

### A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information (Terratree, 2021; 360 Environmental, 2022a; NVS, 2023), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia coatesii</i>	P1	Y	7.4	5	Y
<i>Acacia sclerophylla</i> var. <i>teretiuscula</i>	P1	Y	15.1	27	Y
<i>Acacia websteri</i>	P1	Y	1.2	21	Y
<i>Allocasuarina eriochlamys</i> subsp. <i>grossa</i>	P3	N	12.5	28	Y
<i>Austrostipa frankliniae</i>	P2	Y	6.3	9	Y
<i>Austrostipa turbinata</i>	P3	Y	8.7	22	Y
<i>Chrysocephalum apiculatum</i> subsp. <i>norsemanense</i>	P3	N	2.3	17	Y
<i>Cryptandra exserta</i>	P1	N	17.1	4	Y
<i>Dampiera plumosa</i>	P1	Y	4.4	8	Y
<i>Eremophila caerulea</i> subsp. <i>merrallii</i>	P4	N	11.1	23	Y
<i>Eremophila microphylla</i>	P3	N	15.9	25	Y
<i>Eremophila veronica</i>	P3	Y	1.4	20	Y
<i>Eucalyptus jutsonii</i> subsp. <i>jutsonii</i>	P4	N	16.8	31	Y
<i>Eucalyptus websteriana</i> subsp. <i>norsemanica</i>	P1	Y	7.8	15	Y
<i>Gastrolobium graniticum</i>	EN	N	2.2	43	Y
<i>Grevillea georgeana</i>	P3	Y	1.0	64	Y
<i>Hakea rigida</i>	P2	N	17.1	19	Y
<i>Lepidium merrallii</i>	P2	Y	2.2	3	Y
<i>Lepidosperma</i> sp. <i>Kambalda</i>	P2	Y	9.6	12	Y
<i>Lepidosperma</i> sp. Parker Range (N. Gibson & M. Lyons 2094)	P1	Y	8.2	33	Y
<i>Notisia intonsa</i>	P3	N	15.6	26	Y
<i>Phebalium appressum</i>	P1	N	17.0	5	Y
<i>Phebalium clavatum</i>	P2	N	10.1	13	Y
<i>Phlegmatospermum eremaeum</i>	P3	Y	3.2	18	Y
<i>Thryptomene planiflora</i>	P1	N	3.2	21	Y
<i>Thryptomene</i> sp. Coolgardie (E. Kelso s.n. 1902)	P1	N	2.2	2	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

### A.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information (360 Environmental, 2022a, 2022b), impacts to the following conservation significant flora required further consideration.



Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Dasyurus geoffroi</i> (chuditch)	VU	Y	5.5	5,528	Y
<i>Jalmenus aridus</i> (inland hairstreak)	P1	Y	1 adult within the application	49	Y
<i>Leipoa ocellata</i> (malleefowl)	VU	Y	3.0	29,638	Y
<i>Ogyris subterrestris petrina</i> (arid bronze azure butterfly)	CR	Y	21.9	22	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

## Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<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>The application area does not contain any conservation significant flora or Priority Ecological Communities (PECs) (Focus Minerals, 2024; GIS Database). There are no PECs within 20 kilometres of the application area (GIS Database). No Priority flora species were recorded within the application area, however 25 Priority flora species were recorded within the local area (20 kilometre radius) (Terratree, 2021; 360 Environmental, 2022a; GIS Database). The application area contains records of conservation significant fauna species and has other potentially occurring fauna species that may be impacted by clearing (360 Environmental, 2022b; GIS Database). The potential impacts to these flora and fauna species are further discussed in section 3.2.1.</p>	May 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>The area proposed to be cleared may contain significant breeding and foraging habitat for conservation significant fauna. Fauna habitats within the application area are common and widespread throughout the surrounding area (Focus Minerals, 2024; GIS Database). The potential impacts to significant fauna habitat is further discussed in section 3.2.1.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain Threatened flora or habitats that support Threatened flora. There are no records of Threatened flora are within the application area and none were found within the application area during surveys (Focus Minerals, 2024; GIS Database). In the local area (20 kilometres) there are three records of <i>Gastrolobium graniticum</i> (EN) however there is no suitable habitat for the species within the application area and it was not found during surveys (360 Environmental, 2022a; Terratree, 2021; Western Australian Herbarium, 1998-).</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not form part of any known or mapped Threatened Ecological Communities (GIS Database). There are no mapped Threatened Ecological Communities (TECs) within the local area (20 kilometres) (GIS Database). No vegetation analogous to any TECs were recorded within the application area in any of the vegetation and flora surveys (Focus Minerals Ltd, 2024).</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<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 Coolgardie bioregion of the Interim Biogeographic Regionalisation of Australia (GIS Database). Over 97 percent of the pre-European vegetation still exists in the Coolgardie bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation association 9 (GIS Database). This vegetation association has not been extensively cleared as over 97 percent of the pre-European extent of this vegetation association remains uncleared at the state and bioregional level (Government of Western Australia, 2019).</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 within the application area (GIS Database). The nearest DBCA legislated land is the Kangaroo Hills Timber Reserve, which is located approximately 50 metres west of the application area and is separated from the application area by Nepean Road (GIS Database). The potential impacts to conservation areas are further discussed in section 3.2.2.</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<b>Environmental value: land and water resources</b>		
<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> There are no permanent watercourses or wetlands within the area proposed to be cleared (Focus Minerals, 2024; GIS Database). Several minor non-perennial drainage lines intersect the application area and the proposed clearing has the potential to impact vegetation growing in association with these drainage lines (GIS Database). There is also a small perennial lake approximately 1.5 kilometres northwest of the application area, however this is unlikely to be affected by the proposed clearing (GIS Database). Impacts can be managed through a vegetation management condition on the clearing permit to avoid clearing of riparian vegetation where possible and maintain waterflows.</p>	At variance	No
<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 mapped soils and land systems within the application area are susceptible to water and soil erosion when clearing of native vegetation occurs (see Appendix A). Noting the extent and location of the application area the proposed clearing may have an appreciable impact on land degradation (DPIRD, 2024a). These impacts can be managed by a staged clearing condition and a watercourse vegetation management condition on the clearing permit to prevent cleared areas from being unstable and prone to erosion for extended periods of times.</p>	May 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 permanent watercourses, wetlands or Public Drinking Water Source Areas recorded within the application area (GIS Database). There are multiple non-perennial drainage lines intersecting the application area however they are dry for most of the year, only flowing after a significant rainfall event (Focus Minerals, 2024). Given this and the hypersaline groundwater in the region, the proposed clearing is unlikely to impact surface or ground water quality.</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>There are no permanent wetlands or watercourses within the application area (GIS Database). The area proposed to be cleared has relatively flat topographic contours</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
with only minor non-perennial drainage lines occurring (Focus Minerals, 2024; GIS Database). Due to this and the semi-arid climate of the region, it is unlikely that the clearing of vegetation will exacerbate the incidence or intensity of flooding.		

### 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 Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

#### Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the 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](http://www.data.wa.gov.au)):

- Aboriginal Heritage Places (DPLH-001)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Pre-European Vegetation Statistics
- Remnant Vegetation, All Areas
- 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 (2022a) CNX Three Mile Hill Coolgardie Gold Project – Biological Surveys. Prepared for Focus Minerals Limited by 360 Environmental, June 2022.
- 360 Environmental (2022b) Coolgardie *Camponotus* sp. nr. *terebrans* Targeted Survey. Prepared for Focus Minerals Limited by 360 Environmental, May 2022.
- Benshemesh, J. (2007). National Recovery Plan for Malleefowl. Department for Environment and Heritage, South Australia. Available from: <https://www.dcceew.gov.au/sites/default/files/documents/malleefowl.pdf>
- Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Coolgardie Station. Bureau of Meteorology. <https://reg.bom.gov.au/climate/data/> (Accessed 29 April 2024).
- Department of Biodiversity, Conservation and Attractions (DBCA) (2024) Advice received in relation to Clearing Permit Application CPS 10572/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, July 2024.
- Department of Environment and Conservation (DEC) (2012). Chuditch (*Dasyurus geoffroii*) Recovery Plan. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia. Available from: <https://www.dcceew.gov.au/sites/default/files/documents/dasyurus-geoffroii-2012.pdf>
- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: [https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2\\_assessment\\_native\\_veg.pdf](https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf)
- Department of the Environment (2015) Conservation Advice: *Ogyris subterrestris petrina* Arid bronze azure (a butterfly). Available from: <https://www.environment.gov.au/biodiversity/threatened/species/pubs/77743-conservation-advice.pdf>
- Department of Planning, Lands and Heritage (DPLH) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 29 April 2024).
- Department of Primary Industries and Regional Development (DPIRD) (2024a) Advice received in relation to Clearing Permit Application CPS 10572/1. Office of the Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, April 2024.
- Department of Primary Industries and Regional Development (DPIRD) (2024b) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 29 April 2024).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: [https://dwer.wa.gov.au/sites/default/files/Procedure\\_Native\\_vegetation\\_clearing\\_permits\\_v1.pdf](https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf)
- Eastwood, R., Jacks, A., Williams, A.A.E., Petersen, L., and Cameron, J. (2023) Current distribution, preferred habitat, behaviour, and biology of the Inland Hairstreak, *Jalmenus aridus* Graham & Moulds, 1988 (Lepidoptera: Lycaenidae) in the Eastern Goldfields region of Western Australia. DOI: 10.18195/issn.0312-3162.38.2023.068-075
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: [http://www.epa.wa.gov.au/sites/default/files/Policies\\_and\\_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey\\_Dec13.pdf](http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf)
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- Focus Minerals Ltd (2024). Native Vegetation Clearing Permit Application for Dreadnought Open Pit Project. Prepared for Department of Energy, Mines, Industry Regulation and Safety, received March 2024.
- Focus Operations (2024) Clearing permit application form, CPS 10572/1, received 26 March 2024.
- Geyle HM., Braby MF., Andren M., Beaver EP., Bell P., Byrne C., Castles M., Douglas F., Glatz RV., Haywood B., Hendry P., Kitching RL., Lambkin TA., Meyer CE., Moore MD., Moss JT., Nally S., New TR., Palmer CM., Petrie E., Potter-Craven J., Richards K., Sanderson C., Stolarski C., Taylor GS., Williams MR., Woinarski JCZ. & Garnett ST. (2021). Butterflies on the brink: identifying the Australian butterflies (Lepidoptera) most at risk of extinction. *Austral Entomology*. <https://doi.org/10.1111/aen.12525>
- 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. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
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- Terratree (2021) Targeted Flora and Vegetation Survey – Coolgardie Gold Project. Prepared for Focus Minerals by Terratree, June 2021.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 02 May 2024).

## 4. Glossary

### Acronyms:

<b>BC Act</b>	<i>Biodiversity Conservation Act 2016</i> , Western Australia
<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water, Australian Government
<b>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<b>DEMIRS</b>	Department of Energy, Mines, Industry Regulation and Safety
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DEMIRS)
<b>DoEE</b>	Department of the Environment and Energy (now DCCEEW)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora (now known as Threatened Flora)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	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.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.