

## **Clearing Permit Decision Report**

#### 1. Application details and outcomes

#### 1.1. Permit application details

Permit number: 3045/6

Permit type: Purpose Permit

Applicant name: Galaxy Resources Pty Ltd

**Application received:** 19 June 2024 **Application area:** 15 hectares

Purpose of clearing: Mineral production

Method of clearing: Mechanical removal

Tenure: Mining Lease 74/244

Location (LGA area): Shire of Ravensthorpe

Colloquial name: Mount Cattlin Project

#### 1.2. Description of clearing activities

Galaxy Resources Pty Ltd proposes to clear up to 15 hectares of native vegetation within a boundary of approximately 480 hectares, for the purpose of mineral production (Galaxy Resources Pty Ltd, 2024b). The project is located approximately 1 kilometre north-west of Ravensthorpe, within the Shire of Ravensthorpe (GIS Database). The project is located primarily on previously cleared agricultural land (89%) (Keith Lindbeck and Associates, 2009b). The total cumulative area of land cleared to date is approximately 13.45 hectares, and approximately 12 hectares of rehabilitation trials previously undertaken with a low success rate (Galaxy Resources Limited, 2023). Reworks of approximately 20 hectares of rehabilitation are commencing in August 2024 on the southern waste rock landform as part of the offset condition (Galaxy Resources Pty Ltd, 2024a; Appendix F). There is a narrow strip of approximately 1.0 hectares of native vegetation proposed to be cleared within the application area consisting of isolated *Eucalyptus* trees within the farmland area (Appendix D; GIS Database).

The application is to allow for mining operations to continue for the production of spodumene, lithium carbonate and tantalum (Keith Lindbeck and Associates, 2009b). The project involves open cut pit and associated infrastructure including tailings storage facility, waste dump, processing plant, access roads and stockpile areas (Keith Lindbeck and Associates, 2009b).

Clearing permit CPS 3045/1 was granted by the Department of Mines and Petroleum (now the Department of Energy, Mines, Industry Regulation and Safety) on 23 July 2009 and was valid from 22 August 2009 to 31 July 2014. The permit authorised the clearing of up to 15 hectares of native vegetation within a boundary of approximately 366 hectares, for the purpose of mineral production.

CPS 3045/2 was granted on 8 October 2009, amending the permit to extend the permit duration to 31 July 2024. The area of clearing authorised and the permit boundaries remained unchanged.

CPS 3045/3 was granted on 1 July 2010, amending the permit to reflect change in tenements. The area of clearing authorised and the permit boundaries remained unchanged.

CPS 3045/4 was granted on 16 December 2010, amending the permit to increase the permit boundary to 420 hectares. The amount of clearing authorised remained unchanged.

CPS 3045/5 was granted on 12 July 2012, amending the permit to increase the permit boundary to 480 hectares. The amount of clearing authorised remained unchanged.

On 19 June 2024, the Permit Holder applied to amend CPS 3045/5 to extend the duration of the permit to 31 July 2030. The amount of clearing authorised and the permit boundaries remain unchanged. The extension of duration is a better representation of the predicted life of the mine and allows for offset rehabilitation activities to be undertaken.

## 1.3. Decision on application and key considerations

Decision: Grant

Decision date: 26 July 2024

**Decision area:** 15 hectares of native vegetation

#### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51KA(1) of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advertised the application for a public comment for a period of 7 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix E), supporting information provided by the applicant including the results of a flora and vegetation survey, 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 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;
- the loss of remnant of native vegetation in an area that has been extensively cleared; and
- potential land degradation in the form of wind erosion.

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 cannot be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures, the offset provided does counterbalance the impacts to remnant vegetation impact requiring offset. The proposed offset has been previously considered and approved by the Delegated Officer.

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 dieback;
- commence construction no later than six months after undertaking clearing to reduce the risk of erosion; and
- rehabilitation offset which is currently in progress.

The assessment has not changed since the assessment for CPS 3045/5. The Delegated Officer determined that the proposed amendment to extend the permit duration is not likely to lead to an unacceptable risk to environmental values, provided conditions of the permit and offset are adhered to upon completion of the project.

#### 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.
- the polluter pays principle

Other legislation of relevance for this assessment include:

- Biodiversity Conservation Act 2016 (WA) (BC Act)
- Biosecurity and Agriculture Management Act 2007
- Conservation and Land Management Act 1984 (WA) (CALM Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Mining Act 1978 (WA)
- Rights in Water and Irrigation Act 1914 (RIWI Act)

Relevant policies considered during the assessment include:

• Environmental Offsets Policy (2011)

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)
- Environmental Offsets Position Statement No. 9 (EPA, January 2006)
- Environmental Offsets Guidelines (EPA, August 2014)
- 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

Environmental management strategies were submitted by the applicant demonstrating proposed avoidance and mitigation measures and include (Keith Lindbeck and Associates, 2009b; Galaxy Resources Limited, 2023):

Construction Environmental Management Plan (CEMP);

- revised weed and hygiene management procedure 2023;
- clearly marked areas to avoid unauthorised clearing;
- · conserving topsoil and subsoil for rehabilitation; and
- progressively rehabilitate areas not required for ongoing operations, using only local native species for rehabilitation.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to extensively cleared remnant vegetation was necessary. In accordance with the Government of Western Australia's Environmental Offsets Policy and Environmental Offsets Guidelines (EPA, 2014), these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit.

The applicant proposed an environmental offset consisting of 44 hectares of rehabilitation with 15 hectares as a direct offset and an additional 29 hectares as a contributing offset, providing approximately 3:1 ratio (Keith Lindbeck and Associates, 2009a). The applicant is required to rehabilite areas within the project area during and after completition of the project (Keith Lindbeck and Associates, 2009a). The offset proposal was approved by DEMIRS in October 2009.

The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above.

#### 3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix A) reveals that the assessment against the clearing principles has not changed significantly from the Clearing Permit Decision Report CPS 3045/5. The application area has been extensively cleared (13.45 hectares), with isolates trees within agricultural land remaining (GIS Database). The vegetation remaining to be cleared is not likely to have a significant environmental value in the local or regional area.

#### 3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 2 July 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.

The permit area is within the South West Native Title Settlement area (DPLH, 2024). This settlement (WCD2021/010) resolves Native Title rights and interests over an area of approximately 200,000 square kilometres within the south west of Western Australia. 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, 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.

During the initial assessment of CPS 3045/1, the proposed Ravensthorpe Spodumene Project (now Mount Cattlin Project) was referred to the Environmental Protection Authority (EPA) for assessment and on 3 November 2008, the EPA issued a notice stating the project will not be assessed and managed under Part V of the EP Act.

Other relevant authorisations required for the proposed land use include:

- A Programme of Work approved under the *Mining Act 1978*.
- 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

| Local context  Ecological linkage          | The area proposed to be cleared is a small, isolated patch of remnant native vegetation in the intensive land use zone of Western Australia (GIS Database). It is surrounded by farmland, remnant bushland and adjacent the Ravensthorpe townsite (GIS Database).  According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).   |
|--|--|
| Ecological linkage                         |  |
|  | 8 8 ( )  |
| Conservation areas                         | The nearest conservation area is Overshot Hill Nature Reserve, located approximately 1.6 kilometres northwest of the application area (GIS Database).  |
| Vegetation description                     | The application area is located within the Fitzgerald subregion of Esperance Plains (ESP01) (GIS Database). The vegetation of the application area is broadly mapped as the following Beard vegetation association 352: Medium woodland; York gum (GIS Database).  |
|  | A flora and vegetation survey was conducted over the application area by Botanica Consulting (2008) during October, 2008. The following vegetation associations were recorded within the application area (Botanica Consulting, 2008):  • Eucalyptus oleosa subsp. corvina woodland: Eucalyptus oleosa ssp corvina, over Acacia erinacea, Melaleuca elliptica, Daviesia nematophylla, Platysace trachymenioides, Olearia muelleri, and Acacia sulcata var. platyphylla.  • farm paddock: *Hordeum leporinum, *Carthamus lanatus, Siemssenia capillaris, *Carrichtera annua, *Phalaris minor and *Raphanus raphanistrum  Additionally, ENV undertook a preliminary vegetation survey during April 2008 and identified isolated Eucalyptus sp. trees and creekline of Eucalyptus?utilis over Melaleuca elliptica, Acacia cyclops and *Lycium ferocissimum over Lepidosperma sp., Diplotaxis muralis and ?Teucrium sp |
| Vegetation condition                       | (Keith Lindbeck and Associates, 2009b). * denotes weed species. Representative photos of vegetation from 2009 are provided in Appendix E  The vegetation survey (Botanica Consulting, 2008) and aerial imagery indicate the vegetation   |
| v ogotation oonation                       | within the proposed clearing area is in degraded to completely degraded (Keighery, 1994) condition, described as:  |
|  | <ul> <li>Degraded: basic vegetation structure severely impacted by disturbance. Scope for<br/>regeneration but not to a state approaching good condition without intensive<br/>management. For example, disturbance to vegetation structure caused by very frequent<br/>fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.</li> </ul>   |
|  | <ul> <li>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.</li> </ul>  |
|  | The full Keighery (1994) condition rating scale is provided in Appendix C.   |
| Climate and landform                       | The application area is mapped within elevations of 220-270 meters Australian Height Datum (AHD) (GIS Database). The Esperance bioregion has a temperate Mediterranean climate with an annual average rainfall of approximately 423.9 millimetres recorded at Ravensthorpe (BoM, 2024; CALM, 2002).  |
| Soil description and land degradation risk | The soil is mapped as the Ravensthorpe 2 subsystem (244Ra_2) described as undulation plain and low hills colluvial slopes (DPIRD, 2024). The application area consists of undulating hill slopes and crests. Hill crests are nearly flat, with slope gradients of 2% and side slopes vary from 2-25% and lower slopes can vary between 10 and 15% (Keith Lindbeck and Associates, 2009b). A landform and soils survey was conducted by Keith and Associations (2009b) on 12-13 December 2008 and described soils as rocky/stony clay loam to clay at depths of 10-20 centimetres. The Ravensthorpe 2 subsystem has a low risk of waterlogging and salinity, and a low to high risk of wind erosion (DAFWA, 2009).  |
| Waterbodies                                | The desktop assessment and aerial imagery indicated that there are no permanent wetlands or watercourses within the application area; however two, minor ephemeral drainage lines that run through the area (Keith Lindbeck and Associates, 2009b; GIS Database).  |
| Hydrogeography                             | The application area is located within the hydrographic catchments: Jerdacuttup River and the Culham Inlet Phillips West Steere (GIS Database). The area is located within the Kondinin-Ravensthorpe Ground Water Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database). A portion of the application area has mapped groundwater salinity between 3000-7000 and 14000-35000 total dissolved solids (TDS), which is described as brackish to saline (GIS Database). There are no Water Reserve Public Water Source Areas or Wetlands of International Importance or Nationally Important Wetlands within the application area or the local surrounds (20 kilometres) (GIS Database).   |
| Flora                                      | No threatened flora been recorded within the application area (Keith Lindbeck and Associates, 2009b; GIS Database). There is one database record of priority one flora species within the  |

|                         | application area (GIS Database). There are records of 7 threatened flora and 93 priority flora within the local area (20 kilometres) (GIS Database).   |
|-------------------------|--|
| Ecological communities  | There are no records of Threatened Ecological Communities (TEC) listed under the EP Act within the application area or surrounding area (20 kilometres) (GIS Database). There are two TEC listed under the EPBC act within the local area (GIS Database). The nearest Ecological Community is Proteaceae Dominated Kwongkan Shrubland, that is located approximately 700 metres from the application area (GIS Database).  |
| Fauna and fauna habitat | There are no records of conservation significant fauna within the application area (Keith Lindbeck and Associates, 2009b; GIS Database). There are records of 21 threatened and priority fauna species within the local area (20 kilometres) (GIS Database). A basic fauna survey was undertaken of the project area in April 2008 by ENV and a detailed survey in July 2008 by Keith Lindbeck and Associated. The habitat was described as degraded remnant patches of vegetation adjacent cleared farmland (Keith Lindbeck and Associates, 2009b). |

## A.2. Vegetation extent

|  | Pre-European<br>area (ha)                 | Current extent (ha) | Extent<br>Remaining<br>% | Current extent<br>in all DBCA<br>managed land<br>(ha) | Current proportion (%) of pre- European extent in all DBCA Managed Lands |
|--|---|---------------------|--------------------------|---|--|
| IBRA Bioregion<br>- Geraldton<br>Sandplains    | 2,899,940.66                              | 1,494,450.87        | 51.53                    | 822,666.27  | 28.37  |
| IBRA Subregion - Fitzgerald                    | 1,570,678.39                              | 865,779.27          | 55.12                    | 438,848.14  | 27.94  |
| Local Government –<br>Shire of<br>Ravensthorpe | 982,194.16                                | 605,474.80          | 61.65                    | 193,140.68  | 19.66  |
| Beard vegetation asso - State                  | ciations                                  |                     |                          |   |  |
| Veg Assoc No.<br>352                           | 724,268.73                                | 142,012.22          | 19.61                    | 12,672.52   | 1.75   |
| Beard vegetation asso - Bioregion              | ciations                                  |                     |                          |   |  |
| Veg Assoc No.<br>352                           | 19,711.46                                 | 4,080.13            | 20.70                    | 503.49  | 2.55   |
| Beard vegetation asso - subregion              | Beard vegetation associations - subregion |                     |                          |   |  |
| Veg Assoc No.<br>352                           | 22,816.85                                 | 6,566.34            | 28.78                    | 21.81   | 0.10   |

Government of Western Australia (2019)

## A.3. Flora analysis table

Through a search of available databases, the below species were identified to occur within 20 kilometres of the application area (Western Australian Herbarium, 1998-; GIS Database).

| Species name                                     | Distance of closest record to application area (km) | Number of<br>known records<br>(total) |
|--|---|---------------------------------------|
| Threatened                                       |   |                                       |
| Acacia rhamphophylla                             | 16.7  | 8                                     |
| Conostylis lepidospermoides                      | 4.7   | 43                                    |
| Daviesia megacalyx                               | 3.5   | 37                                    |
| Eremophila denticulata subsp. denticulata        | 18.5  | 27                                    |
| Eucalyptus purpurata                             | 1.3   | 18                                    |
| Eucalyptus steedmanii                            | 0.5   | 41                                    |
| Kunzea acicularis                                | 18.4  | 7                                     |
| Priority 1                                       |   |                                       |
| Acacia besleyi                                   | 0.5   | 18                                    |
| Acacia sp. Ravensthorpe Range (B.R. Maslin 5463) | 6.5   | 18                                    |
| Calothamnus roseus                               | 15.7  | 16                                    |

| Species name  | Distance of<br>closest record to<br>application area<br>(km) | Number of<br>known records<br>(total) |
|---|--|---------------------------------------|
| Cryptandra craigiae   | 9.4  | 10                                    |
| Drosera bicolor   | 11.4   | 5                                     |
| Drosera grievei   | 4.2  | 30                                    |
| Grevillea sulcata   | 0.5  | 16                                    |
| Guichenotia anota   | 4.2  | 29                                    |
| Guichenotia apetala   | 0.5  | 32                                    |
| Hibbertia atrichosepala   | 5.3  | 17                                    |
| Lepidosperma sp. Archer Drive (S. Kern & R. Jasper LCH 18300)     | 6.7  | 5                                     |
| Lepidosperma sp. Elverdton (R. Jasper et al. LCH 16844)           | 10.0   | 6                                     |
| Lepidosperma sp. Hopetoun Road (S. Kern et al. LCH 16552)         | 7.9  | 4                                     |
| Lepidosperma sp. Maydon (S. Kern, R. Jasper, H. Hughes LCH 17844) | 9.0  | 3                                     |
| Lepidosperma sp. Mt Chester (S. Kern et al. LCH 16596)            | 7.6  | 19                                    |
| Lepidosperma sp. Mt Short (S. Kern et al. LCH 17510)              | 5.8  | 15                                    |
| Melaleuca sophisma  | 0.0  | 10                                    |
| Microcorys wilsoniana   | 4.5  | 12                                    |
| Tetratheca applanata  | 5.6  | 4                                     |
| Thysanotus sp. Mount Madden (G.F. Craig 10516)                    | 19.7   | 2                                     |
| Xanthoparmelia sammyi   | 10.8   | 8                                     |
| Priority 2  | 10.0   | 0                                     |
| Acacia papulosa   | 16.1   | 15                                    |
| Amanita inculta   | 9.9  | 15                                    |
| Anticoryne ovalifolia   | 9.1  | 31                                    |
| Austrostipa heteranthera  | 1.2  | 19                                    |
| Boronia denticulata subsp. whoogarupensis                         | 13.0   | 10                                    |
| Cassinia arcuata  | 0.5  | 31                                    |
|   | 9.6  | 27                                    |
| Eucalyptus astringens subsp. merleae                              |  |                                       |
| Eucalyptus uncinata subsp. crassifolia  Guichenotia asteriskos    | 2.0  | 13                                    |
|   | 17.9   | 21                                    |
| Hakea acuminata   | 16.0   | 7                                     |
| Hydrocotyle tuberculata   | 17.9   | 7                                     |
| Lasiopetalum sp. Desmond (N. McQuoid 653)                         | 6.5  | 4                                     |
| Thomasia sp. Hopetoun (K.R. Newbey 4896)                          | 4.4  | 21                                    |
| Xanthoparmelia xanthomelanoides                                   | 10.8   | 5                                     |
| Priority 3  |  | T                                     |
| Acacia bifaria  | 0.2  | 37                                    |
| Acacia errabunda  | 2.5  | 27                                    |
| Acacia improcera  | 0.5  | 16                                    |
| Austrostipa turbinata   | 0.1  | 22                                    |
| Banksia corvijuga   | 3.6  | 23                                    |
| Banksia rufa subsp. chelomacarpa                                  | 0.5  | 24                                    |
| Calytrix nematoclada  | 18.9   | 30                                    |
| Dampiera sericantha   | 1.7  | 33                                    |
| Dampiera sp. Ravensthorpe (G.F. Craig 8277)                       | 5.7  | 16                                    |
| Daviesia newbeyi  | 3.6  | 15                                    |
| Daviesia pauciflora   | 1.6  | 31                                    |
| Eucalyptus quaerenda  | 12.7   | 50                                    |
| Eutaxia acanthoclada  | 17.2   | 21                                    |

| Species name  | Distance of closest record to application area (km) | Number of<br>known records<br>(total) |
|---|---|---------------------------------------|
| Gastrolobium stenophyllum   | 10.7  | 27                                    |
| Gonocarpus trichostachyus   | 18.8  | 13                                    |
| Grevillea fulgens   | 0.5   | 41                                    |
| Grevillea punctata  | 6.5   | 28                                    |
| Hakea brachyptera   | 17.2  | 29                                    |
| Isolepis australiensis  | 6.8   | 9                                     |
| Lechenaultia acutiloba  | 19.3  | 24                                    |
| Lepidosperma sp. Shoemaker Levy (L. Ang & O. Davies 10815)              | 13.6  | 8                                     |
| Levenhookia pulcherrima   | 11.3  | 26                                    |
| Melaleuca coccinea  | 6.2   | 35                                    |
| Microcorys longiflora   | 18.2  | 21                                    |
| Micromyrtus navicularis   | 0.5   | 42                                    |
| Notisia intonsa   | 15.7  | 28                                    |
| Phlegmatospermum eremaeum   | 2.6   | 18                                    |
| Pultenaea craigiana   | 6.4   | 22                                    |
| Pultenaea indira subsp. monstrosita                                     | 8.6   | 15                                    |
| Sphaerolobium validum   | 0.5   | 21                                    |
| Spyridium mucronatum subsp. recurvum                                    | 17.4  | 13                                    |
| Synaphea drummondii   | 4.7   | 31                                    |
| Xanthoparmelia subimitatrix   | 19.3  | 16                                    |
| Priority 4  |   |                                       |
| Acacia argutifolia  | 14.7  | 22                                    |
| Acacia grisea   | 10.6  | 35                                    |
| Allocasuarina hystricosa  | 4.8   | 46                                    |
| Banksia foliosissima  | 0.5   | 36                                    |
| Banksia laevigata subsp. laevigata                                      | 0.5   | 45                                    |
| Banksia porrecta  | 19.5  | 52                                    |
| Beyeria villosa   | 6.9   | 23                                    |
| Chorizema ulotropis   | 6.7   | 24                                    |
| Dampiera deltoidea  | 4.2   | 24                                    |
| Eucalyptus desmondensis   | 0.8   | 74                                    |
| Eucalyptus ravensthorpensis   | 0.5   | 33                                    |
| Eucalyptus stoatei  | 16.5  | 54                                    |
| Goodenia phillipsiae  | 4.7   | 36                                    |
| Goodenia stenophylla  | 4.9   | 32                                    |
| Grevillea aneura  | 19.1  | 52                                    |
| Grevillea fastigiata  | 10.4  | 26                                    |
| Grevillea prostrata   | 1.1   | 39                                    |
| Isopogon elatus   | 0.5   | 22                                    |
| Lepidosperma sp. Steere River (S. Kern, R. Jasper, H. Hughes LCH 17764) | 8.9   | 15                                    |
| Leucopogon compactus  | 0.5   | 22                                    |
| Marianthus mollis   | 5.7   | 31                                    |
| Melaleuca penicula  | 3.2   | 21                                    |
| Pultenaea calycina subsp. proxena                                       | 7.5   | 41                                    |
| Thysanotus parviflorus  | 0.5   | 25                                    |
| Verticordia integra   | 0.5   | 36                                    |

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

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#### A.4. Fauna analysis table

Through a search of available databases, the below species were identified to occur within 20 kilometres of the application area (GIS Database).

| Species name   | Conservation status | Distance of closest record to application area (km) |
|--|---------------------|---|
| Mammals  |                     |   |
| Red-tailed phascogale (Phascogale calura)                              | CD                  | 13.5  |
| Western ringtail possum (Pseudocheirus occidentalis)                   | CR                  | 12.5  |
| Dibbler (Parantechinus apicalis)                                       | EN                  | 16.7  |
| Numbat (Myrmecobius fasciatus)   | EN                  | 0.8   |
| Western quoll, chuditch (Dasyurus geoffroii)                           | VU                  | 0.8   |
| Heath mouse, heath rat (Pseudomys shortridgei)                         | VU                  | 10.3  |
| Quenda, southwestern brown bandicoot (Isoodon fusciventer)             | P4                  | 0.9   |
| Tammar wallaby (Notamacropus eugenii derbianus)                        | P4                  | 10.9  |
| Water-rat (Hydromys chrysogaster)                                      | P4                  | 18.5  |
| Western brush wallaby (Notamacropus Irma)                              | P4                  | 3.0   |
| Western mouse (Pseudomys occidentalis)                                 | P4                  | 4.6   |
| Birds  |                     |   |
| Western ground parrot (Pezoporus flaviventris)                         | CR                  | 10.9  |
| Malleefowl (Leipoa ocellata)   | VU                  | 0.2   |
| Australasian bittern (Botaurus poiciloptilus)                          | EN                  | 19.6  |
| Carnaby's cockatoo (Calyptorhynchus latirostris)                       | EN                  | 0.8   |
| Western whipbird (western heath) (Psophodes nigrogularis nigrogularis) | EN                  | 4.0   |
| Peregrine falcon (Falco peregrinus)                                    | OS                  | 4.1   |
| Western rosella (inland) (Platycercus icterotis xanthogenys)           | P4                  | 12.8  |
| Western whipbird (western mallee) (Psophodes nigrogularis oberon)      | P4                  | 3.5   |
| Reptiles   |                     |   |
| Ravensthorpe range slider (Lerista viduata)                            | P1                  | 5.5   |
| Southern death adder (Acanthophis antarcticus)                         | P3                  | 5.8   |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, CD: conservation dependent, OS: other specially protected

#### A.5. Ecological community analysis table

Through a search of available databases, the below Threatened and Priority Ecological Communities were identified within 20 kilometres of the application area (GIS Database).

| Community name  | Conservation status |          | Distance of closest record to application area (km) |  |
|---|---------------------|----------|---|--|
|   | EP Act              | EPBC Act | ` ,   |  |
| Banksia laevigata - Banksia lemanniana<br>proteaceous thicket (all/or portion in EPBC listed<br>Kwongkan community) | P1                  | EN       | 4.7   |  |
| Proteaceae dominated kwongkan shrublands of<br>the southeast coastal floristic province of<br>Western Australia     | P3                  | EN       | 0.7   |  |
| Very open mallee over <i>Melaleuca</i> sp. Kundip (now <i>Melaleuca sophisma</i> ) dense heath                      | P1                  |          | 18.4  |  |
| Heath on Komatiite of the Ravensthorpe area   | P3                  |          | 7.3   |  |

| Appendix B. Assessment against the clearing principles  |                              |                                    |
|---|------------------------------|------------------------------------|
| Assessment against the clearing principles  | Variance level               | Is further consideration required? |
| Environmental value: biological values  |                              |                                    |
| Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."  | Not likely to be at variance | No                                 |
| Assessment:  The area proposed to be cleared is unlikely to contain conservation significant flora, fauna or assemblages of plants. There is record of a priority one flora species;  Melaleuca sophisma within the application area (GIS Database), this species is commonly misidentified with common species Melaleuca cliffortioides (ALA, 2024), however neither were recorded during field survey (Botanica, 2008) and is unlikely to occur within the application area.  | as per CPS<br>3045/5         |                                    |
| The application area is located within a dieback ( <i>Phytophthora cinnamon</i> ) Vulnerable Zone (GIS Database); however, dieback is not known to be present within the application area (Keith Lindbeck and Associates, 2009b).   |                              |                                    |
| During a flora and vegetation survey, 22 weed species were identified in the application area and local surrounds (Botanica Consulting, 2008). Two Declared Weeds listed under the <i>Biosecurity and Agriculture Management Act 2007</i> were identified within the survey (Botanica Consulting, 2008), however, both are exempt from control:   |                              |                                    |
| <ul> <li>cape tulip (Moraea flaccida) s22(2)</li> <li>bridal creeper (Asparagus asparagoides) s22(2)</li> </ul>   |                              |                                    |
| A previously identified Declared Weed was saffron thistle ( <i>Carthamus lanatus</i> ), however is now listed as Permitted s11 and is not assigned to any control categories. The proponent has provided revised weed and hygiene management procedure (Galaxy Resources Limited, 2023). Weeds have potential to out-compete native flora and reduce biodiversity of an area. Potential impacts associated with weeds and disease risk can be minimised by the implementation of a weed and dieback management condition.                             |                              |                                    |
| Principle (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."   | Not likely to be at variance | No                                 |
| Assessment:  The area proposed to be cleared does not contain significant habitat for conservation significant fauna. According to available database information, the conservation significant fauna species listed in Appendix A.4 have been recorded within the local area (20 kilometres) (GIS Database). However, given only isolated trees remain in a degraded condition within the application area, the extent of clearing and available adjacent vegetation, it is unlikely to contain suitable habitat for conservation significant fauna. | as per CPS<br>3045/5         |                                    |
| <u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."   | Not likely to be at variance | No                                 |
| Assessment:  The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act. There are records of seven threatened flora within the local surrounds (Appendix A.3), however none were recorded during field survey (Botanica Consulting, 2008).   | as per CPS<br>3045/5         |                                    |
| Principle (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."   | Not likely to be at variance | No                                 |
| Assessment:   |                              |                                    |
| The area proposed to be cleared does not contain species that can indicate a Threatened Ecological Community listed under the BC Act or the EPBC Act. The nearest PEC/TEC is located approximately 700 metres southeast of the application area, however, is geographically isolated with the town of Ravensthorpe located in between.  | as per CPS<br>3045/5         |                                    |
|   |                              |                                    |

| Assessment against the clearing principles   | Variance level               | Is further consideration required? |
|--|------------------------------|------------------------------------|
| Environmental value: significant remnant vegetation and conservation areas   |                              |                                    |
| <u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."   | At variance                  | No                                 |
| Assessment:  The extent of mapped vegetation type 352 is below 10 per cent of pre-European vegetation extents and considered to be extensively cleared (Commonwealth of Australia, 2001; GIS Database). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area (GIS Database). The proponent submitted an offset proposal that was approved by DEMIRS in October 2009 (Keith Lindbeck and Associates, 2009a). The offset summarised in Avoidance and Mitigation Measures 3.1.                | as per CPS<br>3045/5         |                                    |
| Principle (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."  | Not likely to be at variance | No                                 |
| Assessment:  Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.  | as per CPS<br>3045/5         |                                    |
| Environmental value: land and water resources  |                              |                                    |
| <u>Principle (f):</u> "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."  | At variance                  | No                                 |
| Assessment:  Two minor, ephemeral drainage lines have been recorded within the application area with <i>Eucalyptus</i> sp growing in association with drainage lines that flow into Cattlin Creek, however aerial imagery indicates the drainage lines contain minimal vegetation and are located within agricultural land (Keith Lindbeck and Associates, 2009b; GIS Database). The proposed clearing is likely to impact vegetation that is associated with drainage lines; however, these predominantly occur through previously cleared agricultural land. | as per CPS<br>3045/5         |                                    |
| Principle (g): "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."  Assessment:   | Not likely to be at variance | No                                 |
| The mapped and surveyed soils are low to high susceptibility to wind erosion (DPIRD, 2024; Keith Lindbeck and Associates, 2009b). Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.  | as per CPS<br>3045/5         |                                    |
| <u>Principle (i):</u> "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."   | Not likely to be at variance | No                                 |
| Assessment:  Given no permanent or major water courses or wetlands are recorded within the application area (GIS Database), the proposed clearing is unlikely to impact surface or ground water quality.   | as per CPS<br>3045/5         |                                    |
| Principle (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."  Assessment:   | Not likely to be at variance | No                                 |
| The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.   | as per CPS<br>3045/5         |                                    |

## 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. Aerial imagery of native vegetation proposed to be cleared

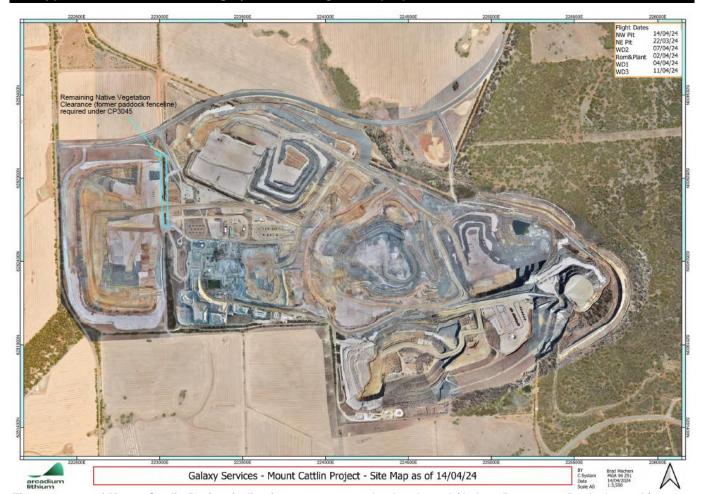


Figure 1. map of Mount Cattlin Project indicating area proposed to be cleared (Galaxy Resources Pty Ltd, 2024b).

# Appendix E. Representative photographs of vegetation (prior to clearing under this permit) within the application area



Photo 1: Area of remnant vegetation in the centre of the application area (Keith Lindbeck and Associates, 2009b).



Photo 2: Area of vegetation on the southeastern portion of the application area (Keith Lindbeck and Associates, 2009b).



Photo 3: Agricultural area within the application area (Keith Lindbeck and Associates, 2009b).

## Appendix F. Representative photographs and mapping of rehabilitation



Figure 2. Mapping of area to be rehabilitated (Galaxy Resources Pty Ltd, 2024a)



Figure 3. Rehabilitation site preparation (Galaxy Resources Pty Ltd, 2024a)



Figure 4. Rehabilitation site preparation utilising local native mulch (Galaxy Resources Pty Ltd, 2024a)

## Appendix G. Sources of information

### G.1. GIS databases

Publicly available GIS Databases used (sourced from <a href="www.data.wa.gov.au">www.data.wa.gov.au</a>):

- 10 Metre Contours (DPIRD-073)
- 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)
- Forest Disease Risk Areas (DBCA-024)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments Catchments (DWER-028)
- Hydrography Inland Waters Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Offsets Register Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Regional Parks (DBCA-026)

- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality Flood Risk (DPIRD-007)
- Soil Landscape Land Quality Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping Best Available (DPIRD-027)
- Soil Landscape Mapping Rangelands (DPIRD-064)
- WA Now Aerial Imagery

#### Restricted GIS Databases used:

- Black Cockatoo WTBC Breeding
- Black Cockatoo BC Roosts
- Black Cockatoo Breeding Sites Buffered
- Black Cockatoo Roosting Sites Buffered
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

#### G.2. References

Atlas of Living Australia (ALA) (2024) *Melaleuca sophisma*. Accessed July 2024. Available from: <a href="https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2909797">https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2909797</a>

Botanica Consulting (2008) Ravensthorpe Spodumene Flora and Vegetation Survey. Botanica Consulting, Western Australia.

Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Ravensthorpe (Station number: 010633). Bureau of Meteorology. <a href="https://reg.bom.gov.au/climate/data/">https://reg.bom.gov.au/climate/data/</a> (Accessed 10 July 2024).

Conservation and Land Management (CALM) (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Department of Agriculture and Food, Western Australia (DAFWA) (2009) Land degradation advice. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Mines and Petroleum (DMP), received 17 July 2009. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia.

Department of Environment Regulation (DER) (2014) A guide to the assessment of applications to clear native vegetation.

Perth. <a href="https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2">https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2</a> assessment native veg.pdf

Department of Planning, Lands and Heritage (DPLH) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <a href="https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS">https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS</a> (Accessed July 2024).

Department of Primary Industries and Regional Development (DPIRD) (2024) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia.

<a href="https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f">https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f</a> (Accessed July 2024).

Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. <a href="https://dwer.wa.gov.au/sites/default/files/Procedure">https://dwer.wa.gov.au/sites/default/files/Procedure</a> Native vegetation clearing permits v1.pdf

Environmental Protection Authority (EPA) (2006) Environmental Offsets. Position Statement No. 9. January 2006. Environmental Protection Authority.

Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment.

http://www.epa.wa.gov.au/sites/default/files/Policies\_and\_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey\_Dec13.pdf

Environmental Protection Authority (EPA) (2020) Technical Guidance - Terrestrial Fauna Surveys.

https://www.epa.wa.gov.au/sites/default/files/Policies\_and\_Guidance/2020.09.17%20-

%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Survevs%20-%20Final.pdf

Environmental Protection Authority (EPA) (2014) WA Environmental Offsets Guidelines.

https://www.epa.wa.gov.au/sites/default/files/Policies and Guidance/WA%20Environmental%20Offsets%20Guideline %20August%202014.pdf

Galaxy Resources Pty Ltd (2024a) Clearing permit additional information, CPS 3045/6, received June and July 2024.

Galaxy Resources Pty Ltd (2024b) Clearing permit application form, CPS 3045/6, received 19 June 2024.

Galaxy Resources Limited (2023) CPS 3045/5 – Galaxy Resources Limited – Internal Review of clearing records from 2009-2023. Recieved 1 August 2023.

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. <a href="https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics">https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics</a>

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

Keith Lindbeck and Associates (2009a) Ravensthorpe Spodumene Project – Offset Proposal. Prepared for Galaxy Resources Limited by Keith Lindbeck and Associates, October 2009).

Keith Lindbeck and Associates (2009b) Ravensthorpe Spodumene Project – Supporting Documentation for Clearing Permit Application. Prepared for Galaxy Resources Limited by Keith Lindbeck and Associates, March 2009.

Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <a href="https://florabase.dpaw.wa.gov.au/">https://florabase.dpaw.wa.gov.au/</a> (Accessed July 2024).

#### 4. Glossary

#### Acronyms:

BC Act Biodiversity Conservation Act 2016, 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)

**DCCEEW** Department of Climate Change, Energy, the Environment and Water, Australian Government

**DBCA** Department of Biodiversity, Conservation and Attractions, Western Australia

**DEMIRS** Department of Energy, Mines, Industry Regulation and Safety

DER Department of Environment Regulation, Western Australia (now DWER)

**DMIRS** Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)

**DMP** Department of Mines and Petroleum, Western Australia (now DEMIRS)

Dobe Department of the Environment and Energy (now DCCEEW)
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

EPA Environmental Protection Act 1986, Western Australia
EPA Environmental Protection Authority, Western Australia

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System
ha Hectare (10,000 square metres)

IBRA Interim Biogeographic Regionalisation for Australia

IUCN International Union for the Conservation of Nature and Natural Resources – commonly known as the

World Conservation Union

PEC Priority Ecological Community, Western Australia

RIWI Act Rights in Water and Irrigation Act 1914, Western Australia

TEC Threatened Ecological Community

#### **Definitions:**

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

## T Threatened species:

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

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

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

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

#### CR Critically endangered species

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

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

#### EN Endangered species

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

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

#### VU Vulnerable species

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

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