

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

| 10190/1 |
|---|
| Area Permit |
| Crimson Metals Pty Ltd |
| 11 May 2023 |
| 7.7 hectares |
| Construction of accommodation village and associated infrastructure |
| Mechanical Removal |
| General Purpose Lease 59/48 |
| Shire of Yalgoo |
| Mt Gibson Gold Project Accommodation Village |
| |

1.2. Description of clearing activities

Crimson Metals proposes to clear up to 7.7 hectares of native vegetation within a boundary of approximately 5.7 hectares, for the purpose of mining related infrastructure. The project is located approximately 57 kilometres south-east of Rothsay, within the Shire of Yalgoo.

The application is to allow for an accommodation village and associated infrastructure which is required to support local and regional exploration operations and will be utilised for the subsequent construction and operation of the Mt Gibson Gold Project (MGGP).

1.3. Decision on application and key considerations

| Decision: | Grant |
|----------------|-----------------------------------|
| Decision date: | 19 September 2023 |
| Decision area: | 7.7 hectares of native vegetation |

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 11 May 2023. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), 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 C), 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;
- potential land degradation;
- potential impacts to conservation significant flora; and
- the loss of native vegetation that is suitable habitat for Leipoa ocellata (Malleefowl).

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 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;
- undertake clearing within three months of the authorised clearing being undertaken;

- Fauna Management Malleefowl: inspection for active Malleefowl mounds and placement of appropriate buffers; and
- Fauna Management slow directional clearing and a fauna spotter to allow fauna to move into adjacent vegetation ahead of the clearing activity which will minimise impact to individuals.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.



Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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 510 of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

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

The key guidance documents which inform this assessment are:

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

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures such as those listed below will be undertaken:

- pre-existing tracks/historically cleared areas will be used where possible; and
- infrastructure has been designed to avoid priority flora and communities (Crimson Metals, 2023; Tetris Environmental, 2023b).

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 (fauna and fora). 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) - Clearing Principles (a) and (b)

Assessment

Tetris Environmental undertook a targeted flora and vegetation survey within the application area in March 2023. Four broad vegetation units were identified within the application area: Acacia Shrubland, Eucalyptus Woodland, Allocasuarina Shrubland and cleared areas (Tetris Environmental, 2023a). No conservation significant flora were recorded during the survey (Tetris Environmental, 2023a).

The following conservation significant flora have been recorded within the local area (within 20 kilometres of the application area) and suitable habitat is present within the application area and therefore may occur (GIS Database):

Acacia subrigida, Priority 2, is an erect shrub which can be found inhabiting yellow or red sand on plains (Western Australian Herbarium, 1998-). This species has been previously recorded within the Avon Wheatbelt, Coolgardie, Geraldton Sandplains, Murchison and Yalgoo Interim Biogeographic Regionalisation for Australia (IBRA) regions (Western Australian Herbarium, 1998-). This species has 16 records with the West Australian Herbarium.

Amanita inculta, Priority 2, is a secatoid fungi that has been previously recorded within the Avon Wheatbelt, Esperance Plains and Yalgoo IBRA regions with 15 records at West Australian Herbarium (Western Australian Herbarium, 1998-).

Calytrix plumulosa, Priority 3, is a shrub growing 0.15-0.4 metres high and can be found inhabiting yellow sand with lateritic gravel and red loam (Western Australian Herbarium, 1998-). This species has 24 records with the West Australian Herbarium from Avon Wheatbelt and Coolgardie IBRA regions (Western Australian Herbarium, 1998-).

Comesperma griffinii, Priority 2, is an annual or perennial herb growing to 0.15 metre high and can be found inhabiting yellow or grey sands on plains (Western Australian Herbarium, 1998-). This species has been submitted to the West Australian Herbarium from 17 records within the Avon Wheatbelt, Esperance Plains, Geraldton Sandplains, Mallee and Swan Coastal Plain IBRA regions (Western Australian Herbarium, 1998-).

Goodenia perryi, Priority 3, is a herb or shrub growing 0.15-0.3 metre high and can be found inhabiting yellow sand (Western Australian Herbarium (1998-)). This species has been submitted to the West Australian Herbarium from 13 records within the Avon Wheatbelt and Yalgoo IBRA regions (Western Australian Herbarium, 1998-).

Grevillea scabrida, Priority 3, is a densely and irregularly branched shrub growing 0.6-1.5 metres high and can be found inhabiting red clay loam and stony loam (Western Australian Herbarium, 1998-). This species has 45 records with the West Australian Herbarium from the Avon Wheatbelt and Yalgoo IBRA regions (Western Australian Herbarium, 1998-).

Grevillea subtiliflora, Priority 3, is an erect to spreading shrub growing 1-2.5 metres high and can be found inhabiting red-brown loam (Western Australian Herbarium, 1998-). This species has been submitted to the West Australian Herbarium from 43 records from the Avon Wheatbelt and Yalgoo IBRA regions (Western Australian Herbarium, 1998-).

Verticordia venusta, Priority 3, is an erect, spreading shrub growing 0.2-0.2 metre high and can be found inhabiting yellow sand and sandy gravels amongst sandplains (Western Australian Herbarium, 1998-). This species has 92 records with the West Australian Herbarium the Avon Wheatbelt and Geraldton Sandplains IBRA regions (Western Australian Herbarium, 1998-).

Given that there is suitable habitat in an equal or better condition for priority flora in the local and regional area, the proposed clearing is unlikely to have a significant impact on the continued existence of priority flora. There is existing infrastructure and historical disturbance within the application area which limits the amount of suitable habitat available for conservation significant flora.

A small portion of the application area (approximately 0.1 ha) is mapped within the buffer zone of the State listed Priority 3 Ecological Community (PEC), Eucalypt Woodlands of the Western Australian Wheatbelt (GIS Database). This PEC is also an EPBC listed Critically Endangered Threatened Ecological Community (TEC). The flora and vegetation survey did not identify this community within the application area, however two small patches (in degraded condition) representative of this PEC was identified adjacent to the application area (Tetris Environmental, 2023a). Potential impacts to this PEC can be managed by maintaining the avoid and minimise condition and by taking hygiene steps to reduce the risk of the introduction and spread of weeds.

Conclusion

Based on the above assessment, the proposed clearing may potentially result in the removal of some priority flora. For the reasons set out above, it is considered that the impacts of the proposed clearing on flora can be managed by the mitigation and management strategies provided by the applicant.

Conditions

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

- avoid, minimise to reduce the impacts and extent of clearing; and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

3.2.2. Biological values (fauna) - Clearing Principle (b)

Assessment

A basic and targeted fauna survey was undertaken by Biota Environmental Sciences from 19-23 September 2022. Three broad fauna habitats were recorded within the application area:

- mixed shrubland dominated by Acacia sp. shrubland and heath, Allocasuarina sp. shrubland, or Callitris columellaris woodland, often with Melaleuca spp., Eremophila spp. and Olearia spp. mixed shrubland with scattered Eucalyptus spp. mallee. Associated with sandy clay loam and sandy loam plains;
- eucalypt woodland dominated by Eucalyptus loxophleba (York Gum), Eucalyptus salmonophloia (Salmon Gum) or Eucalyptus salubris (Gimlet). Associated with clay loam and sandy clay loam plains; and
- previously cleared habitat areas that have been cleared of vegetation, but left for natural regeneration to occur. Regeneration was dominated by young, open Acacia acuminata regrowth (Biota Environmental Sciences, 2023).

Leipoa ocellata (malleefowl), Vulnerable, is found in semi-arid to arid shrubland and lowlands, especially those dominated by mallee and/or acacias (DCCEEW, 2023). This species requires sandy substrates and an abundance of leaf litter to breed (DCCEEW, 2023). A targeted survey for Malleefowl mounds was undertaken by Biota Environmental Sciences in September 2022 and a total 68 mounds were identified (11 active) within the local area, five were recorded within the eucalypt woodland habitat and the other 63 mounds were recorded within the mixed shrubland habitat (Biota Environmental Sciences, 2023). Eight mounds were identified within one kilometre of the application area, consisting of two active and six inactive mounds (Biota Environmental Sciences, 2023). The application area contains suitable foraging habitat, however it is in varying condition and is highly fragmented with existing infrastructure and historical disturbances. The surrounding environment provides more suitable habitat for this species, any impacts may be managed by maintaining slow directional clearing allowing fauna to safely move into adjacent environments. Pre-clearance surveys will be conditioned on this permit, to ensure there will be no impacts to potential future mounds.

The targeted survey for Idiosoma sp. was undertaken by Biota Environmental Sciences in September 2022 and a total of twelve Idiosoma sp. burrows were recorded in eucalypt woodland habitat from seven sites within the local area (Biota Environmental Sciences, 2023). These burrows could belong to Idiosoma clypeatum (northern shield-backed trapdoor spider), Priority 3; Idiosoma formosum (ornate shield-backed trapdoor spider), Endangered; or Idiosoma kopejtkaorum (Lake Goorly shield-backed trapdoor spider), Endangered (Biota Environmental Sciences, 2023). One defunct burrow was located within one kilometre of the application area within the Eucalypt woodlands (Biota Environmental Sciences, 2023). No burrows were recorded within the CPS 10190/1

application area, and although suitable habitat is present, the application area is not considered significant to these species as similar habitat is available in the surrounding environment. The proposed clearing of 7.7 hectares will not likely lead to a significant impact to conservation status of this species.

The following conservation significant fauna species have previously been recorded within the local area and suitable habitat is present within the application area, however the application area is not regarded as significantly important to these species as suitable habitat is available in the surrounding environment and therefore the clearing of 7.7 hectares of native vegetation is not likely to significantly impact these species.

Egernia stokesii badia (western spiny-tailed skink), Vulnerable, is known to occur in a broad semi-arid area in the south-west Western Australia, between Shark Bay and Minnivale and east to Cue (DCCEEW, 2023). Most records of this species are in York Gum (*Eucalyptus loxophleba*) woodland with some records in Gimlet (*Eucalyptus salubris*) and Salmon Gums (*Eucalyptus salmonophloia*) woodland (DCCEEW, 2023). The species is known to refuge in hollow logs in woodland habitat (DCCEEW, 2023). Given the closest record of this species is within 20 kilometres from the application area, and the habitat present within the application area is not known to be significant to the species, the proposed clearing is unlikely to have a significant impact on the species. Potential impacts to this species may be managed with a fauna condition (slow directional clearing and a fauna spotter) to allow for individuals to relocate to the adjacent vegetation.

Falco peregrinus (peregrine falcon), Other Specially Protected Species, is one of the most widespread birds in the world and occurs across most of Australia (DCCEEW, 2023). The species inhabits cliffs, costal habitats, rivers, wooded water courses, lakes and urban environments (DCCEEW, 2023). No individuals were recorded during the survey, however, this species has been recorded within 20 kilometres from the application area, suggesting that they may use the application area as part of a larger home range, however there is no suitable breeding habitat within the application area (GIS Database).

Leporillus conditor (greater stick-nest rat), Vulnerable, inhabits perennial shrublands, especially of succulent and semisucculent plant species including the chenopod genera *Atriplex, Rhagodia, Maireana, Chenopodium, Enchylaena, Sclerolaena, Threlkeldia*, and pig-face genera including *Disphyma* and *Carpobrotus* (DCCEEW, 2023). The application area contains shrubland habitat suitable for this species however, the area is fragmented and surrounded by disturbance and is not considered significant for this species. Any impacts to fauna may be managed by slow directional clearing, allowing fauna to move into adjacent habitats.

Nyctophilus major tor (central long-eared bat), Priority 3, inhabits the upperstory of trees that are the large to very tall eucalypt species, karri *Eucalyptus diversicolor*, jarrah *E. marginata*, tuart *E. gomphocephala*, and marri *Corymbia calophylla* (Atlas of Living Australia, 2023). Other woodland types inhabited by the bat include stands of melaleuca, banksia and sheoak tees of genus *Allocasuarina*, and include a dense understory (Atlas of Living Australia, 2023). Roost sites favoured by this species include tree hollows and amongst foliage, and beneath the loose thick bark of swamp paperbark (*Melaleuca* sp.) and flooded gum (*Eucalyptus* sp.) in riparian habitat (Atlas of Living Australia, 2023). Foraging habitat is present within the application area, however the area is fragmented and surrounded by disturbance and is not considered significant for this species. Any impacts to fauna may be managed by slow directional clearing, allowing fauna to move into adjacent habitats.

Conclusion

Based on the above assessment, the proposed clearing will result in a small amount of disturbance to available fauna habitat.

For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna habitats can be managed by the implementation of management conditions, which are summarised below.

Conditions

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

- Fauna Management Malleefowl: inspection for active Malleefowl mounds and placement of appropriate buffers; and
- Fauna Management slow directional clearing and a fauna spotter to allow fauna to move into adjacent vegetation ahead of the clearing activity which will minimise impact to individuals.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 9 June 2023 by the Department of 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 (Badimia - WAD6123/1998) over the area under application (DPLH, 2023). This claim has been determined by the Federal Court 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 no registered Aboriginal Sites of Significance within the application area (DPLH, 2023). It is the proponent's responsibility to comply with the *Aboriginal Cultural Heritage Act 2032* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

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

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

It is noted that the proposed clearing may impact on the Critically Endangered Ecological Community, Eucalypt Woodlands of the Western Australian Wheatbelt and *Leipoa ocellata* (malleefowl), which are a protected matter 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 Agriculture, Water and the Environment for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Agriculture, Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

End

Appendix A.

Site characteristics

A.1. Site characteristics

| Characteristic | Details |
|------------------------|---|
| Local context | The application area is located approximately 57 kilometres south east of Rothsay, within the Shire of Yalgoo (GIS Database). The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). The surrounding land use includes exploration and mining (GIS Database). |
| Ecological linkage | According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database). |
| Conservation areas | The application area is not located within a conservation area (GIS Database). The nearest conservation area is Biluny Wells Nature Reserve (R 53842), which is located approximately four kilometres south west of the application area (GIS Database). |
| Vegetation description | The vegetation of the application area is broadly mapped as the following Beard vegetation association: 437: Wattle, casuarina and teatree (<i>Acacia-Allocasuarina-Melaleuca alliance</i>) (GIS Database). |
| | The following vegetation associations were recorded within the application area (Tetris Environmental, 2023a): |
| | Acacia Shrubland, Eucalyptus Woodland, Allocasuarina Shrubland and Cleared areas. |
| | Acacia acuminata, Allocasuarina acutivalvis subsp. acutivalvis, Eucalyptus loxophleba subsp. supralaevis, Eremophila oldfieldii subsp. oldfieldii, Melaleuca stereophloia tall shrubland over Eremophila clarkei, Ptilotus obovatus low sparse shrubland over Amphipogon caricinus low open tussock grassland. |
| | Eucalyptus loxophleba subsp. supralaevis open woodland over Acacia acuminata, Melaleuca eleuterostachya, Allocasuarina acutivalvis subsp. acutivalvis tall open shrubland over Philotheca brucei subsp. brucei, Eremophila clarkei, Rhagodia drummondii sparse shrubland over Amphipogon caricinus, Eremophila clarkei, Dodonaea inaequifolia, Ptilotus obovatus lowsparse tussock grassland. |
| | Eucalyptus loxophleba subsp. supralaevis woodland over Acacia acanthoclada, Eremophila oppositifolia subsp. angustifolia, Acacia acuminate sparse shrubland over Acacia erinacea, Rhagodia drummondii, Ptilotus obovatus low open shrubland. |
| | Eucalyptus salubris woodland over Atriplex sp., Rhagodia drummondii, Sclerolaena diacantha low open chenopod shrubland. |
| | Acacia burkittii, Melaleuca radula, Allocasuarina acutivalvis subsp. acutivalvis, Acacia acuminata, Dodonaea inaequifolia tall shrubland over Melaleuca radula, Aluta aspera subsp. hesperia, Dianella revoluta subsp. divaricata open shrubland over Borya sphaerocephala, Amphipogon caricinus low open to sparse forbland. |
| | Allocasuarina acutivalvis subsp. acutivalvis, Eucalyptus loxophleba subsp. supralaevis, Acacia acuminata, Eremophila oldfieldii subsp. oldfieldii, Santalum spicatum, Melaleuca leiocarpa tall open shrubland over Eremophila oldfieldii subsp. oldfieldii, Dodonaea inaequifolia, Acacia andrewsii sparse shrubland over Borya sphaerocephala low forbland. |
| Vegetation condition | The vegetation survey (Tetris Environmental Sciences, 2023) and aerial imagery indicate the vegetation within the proposed clearing area is in Very Good to Completely Degraded (Keighery, 1994) condition, described as |
| | 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 yery aggressive weeds a partial clearing diaback and/or grazing. |
| | |

| Characteristic | Details |
|------------------------|--|
| | • 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. |
| | The full Keighery (1994) condition rating scale is provided in Appendix C. |
| Climate and landform | The application area experiences an average annual rainfall of 282.3 (BOM, 2023). |
| Soil description | The soils of the application area are broadly mapped as the following soil type: 258Eu: Euchre system. Low granite breakaways with alluvial plains and sandy tracts supporting eucalypt woodlands and acacia shrublands (DPIRD, 2023). |
| Land degradation risk | The application area is mapped within the Euchre Land System (DPIRD, 2023). This Land System's geomorphology is described as erosional and depositional surfaces; low breakaways on granite with up to 10 metre relief and restricted very gently inclined footslopes; gently inclined plains on granite with gritty surfaces, lower alluvial plains and sandy tracts (Paynes et al., 1998). |
| Waterbodies | There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). |
| Hydrogeography | The application area is not mapped within a proclaimed groundwater area (GIS Database). The proposed area is located within the East Murchison Groundwater Area (GIS Database). |
| Flora | No conservation significant flora have been recorded within the application area (Tetris Environmental, 2023a). Several conservation significant flora may potentially occur (GIS Database). |
| Ecological communities | The application area is mapped within the buffer zone of the Critically Endangered Ecological Community, Eucalypt Woodlands of the Western Australian Wheatbelt (GIS Database). |
| Fauna | Several conservation significant fauna species may occur within the application area (GIS Database). Three broad fauna habitats were recorded within the application area: mixed shrubland; eucalypt woodland; and previously cleared habitat (Biota Environmental Sciences, 2023). |

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 Avon Wheatbelt | 9,517,109.95 | 1,761,187.42 | 18.51 | 174,980.68 | 1.84 |
| IBRA Subregion Merredin | 6,524,180.55 | 1,367,565.48 | 20.96 | 126,804.59 | 1.94 |
| Local Government Shire of Yalgoo | 2,794,946.37 | 2,733,268.13 | 97.79 | 628,939.11 | 22.50 |
| Beard vegetation asso - State | ciations | | | | |
| Veg Assoc No. 437 | 505,364.86 | 475,077.96 | 94.01 | 80,571.65 | 15.94 |
| Beard vegetation asso - Bioregion | ciations | | | | |
| Veg Assoc No. 437 | 174,686.49 | 144,425.94 | 82.68 | 3,139.34 | 1.80 |
| Beard vegetation asso - subregion | ciations | | | _ | |
| Veg Assoc No. 437 | 174,686.49 | 144,425.94 | 82.68 | 3,139.34 | 1.80 |

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, impacts to the following conservation significant flora required further consideration.

| Species name | Conservation status | Suitable habitat features? [Y/N] | Distance of closest record to application area (km) | Number of known records (total) |
|---|---------------------|-------------------------------------|--|--|
| Acacia cerastes | Priority 1 | N | <20 | 23 |
| Acacia subrigida | Priority 2 | Y | <20 | 16 |
| Allocasuarina tessellata | Priority 3 | N | <20 | 49 |
| Amanita inculta | Priority 2 | Y | <20 | 15 |
| Baeckea sp. Perenjori (J.W. Green 1516) | Priority 2 | N | <20 | 20 |
| Calytrix plumulosa | Priority 3 | Y | <10 | 24 |
| <i>Chamelaucium</i> sp. Yalgoo (Y. Chadwick 1816) | Priority 1 | N | <20 | 11 |
| Comesperma griffinii | Priority 2 | Y | <10 | 16 |
| Darwinia masonii | Threatened | N | <20 | 28 |
| Dodonaea amplisemina | Priority 4 | N | <10 | 39 |
| Eucalyptus synandra | Threatened | Y | <20 | 67 |
| Euryomyrtus recurva | Priority 3 | N | <20 | 30 |
| Goodenia perryi | Priority 3 | Y | <10 | 13 |
| Grevillea obliquistigma subsp. cullenii | Priority 3 | N | <20 | 5 |
| Grevillea scabrida | Priority 3 | Y | <20 | 45 |
| Grevillea subtiliflora | Priority 3 | Y | <10 | 43 |
| Hibbertia cockertoniana | Priority 3 | N | <20 | 30 |
| Lepidosperma gibsonii | Threatened | N | <20 | 41 |
| <i>Lepidosperma</i> sp. Blue Hills (A. Markey & S. Dillon 3468) | Priority 1 | Ν | <20 | 28 |
| Persoonia pentasticha | Priority 3 | N | <10 | 51 |
| Philotheca nutans | Priority 1 | N | <10 | 21 |
| Podotheca uniseta | Priority 3 | N | <20 | 29 |
| Psammomoya grandiflora | Priority 2 | Y | <20 | 10 |
| Rhodanthe collina | Priority 3 | Ν | <20 | 10 |
| Verticordia venusta | Priority 3 | Y | <10 | 92 |

A.4. Fauna analysis table

| Species name | Common Name | Conservation status | Distance of closest record to application area (km) | Suitable habitat features? [Y/N] |
|----------------------------------|---|--|--|---|
| Actitis hypoleucos | common sandpiper | Migratory | <40 | Ν |
| Bettongia penicillata ogilbyi | woylie, brush-tailed bettong | Critically Endangered | <40 | Ν |
| Calidris ferruginea | curlew sandpiper | Critically Endangered | <40 | N |
| Calidris ruficollis | red-necked stint | Migratory | <40 | N |
| Egernia stokesii badia | western spiny-tailed skink | Vulnerable | <20 | Y |
| Falco peregrinus | peregrine falcon | Other Specially Protected | <20 | Y |
| Idiosoma clypeatum | northern shield-backed trapdoor spider | Priority 3 | <40 | Y |
| Idiosoma formosum | ornate shield-backed trapdoor spider | Endangered | <20 | Y |
| ldiosoma kopejtkaorum | Lake Goorly shield-backed trapdoor spider | Endangered | <10 | Y |
| Leipoa ocellata | malleefowl | Vulnerable | <10 | Υ |
| Leporillus conditor | greater stick-nest rat, wopilkara | Specially Protected - Conservation Dependent | <40 | Y |

| Species name | Common Name | Conservation status | Distance of closest record to application area (km) | Suitable habitat features? [Y/N] |
|---|---|--|--|---|
| Macrotis lagotis | bilby, dalgyte, ninu | Vulnerable | <40 | N |
| Myrmecobius fasciatus | numbat, walpurti | Endangered | <40 | N |
| Nyctophilus major tor | central long-eared bat | Priority 3 | <40 | Y |
| Perameles bougainville | Shark Bay bandicoot | Vulnerable | <40 | N |
| | | | | |
| Appendix B. A Assessment against the o | ssessment against the cleari | ng principles | Variance level | Is further consideration required? |
| Environmental value: bio | logical values | | | |
| Principle (a): "Native vegeta biodiversity." | ation should not be cleared if it corr | nprises a high level of | May be at variance | Yes Refer to Section |
| Assessment: | | | | 3.2.1, above. |
| The area proposed to be cl significant flora and fauna s | eared may contain suitable habitat species. | for several conservation | | |
| A portion of the application Ecological Community, Euc (GIS Database). The flora a the application area, however representative of this PEC Environmental, 2023a). | area is mapped within the buffer zo calypt Woodlands of the Western A and vegetation survey did not ident ver two small patches (in degraded was identified adjacent of the applie | one of the Priority 3 ustralian Wheatbelt ify this community within condition) cation area (Tetris | | |
| Principle (b): "Native vegeta part of, or is necessary for | ation should not be cleared if it con the maintenance of, a significant ha | aprises the whole or a abitat for fauna." | May be at variance | Yes Refer to Section |
| Assessment: | | | | 3.2.2, above. |
| The area proposed to be cl fauna (Biota Environmental | roposed to be cleared contains foraging habitat for conservation significant a Environmental Sciences, 2023). | | | |
| Principle (c): "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: | | | | |
| There are no records of thro flora survey did not identify area (Tetris Environmental, | eatened flora within the application any conservation significant flora v 2023a; GIS Database). | area and the targeted vithin the application | | |
| Principle (d): "Native vegeta part of, or is necessary for | ation should not be cleared if it con the maintenance of, a threatened e | nprises the whole or a cological community." | Not likely to be at variance | No |
| Assessment: | | | | |
| There are no known Threatened Ecological Communities (TECs) located within the application area and the flora and vegetation survey did not identify any TECs (Tetris Environmental, 2023a; GIS Database). | | | | |
| Environmental value: sig | nificant remnant vegetation and | conservation areas | | |
| Principle (e): "Native vegeta of native vegetation in an a | ation should not be cleared if it is si rea that has been extensively clear | ignificant as a remnant red." | May be at variance | No |
| Assessment: | | | | |
| The application area falls w Biogeographic Regionalisa 18-97% of the pre-Europea Bioregion, IBRA Merredin S Australia, 2019). The applic association 437, approxima association remains unclea Australia, 2019). | rithin the Avon Wheatbelt Bioregion tion for Australia (IBRA) (GIS Datal n vegetation still exists in the IBRA Subregion and Shire of Yalgoo (Gor cation area is broadly mapped as B ately 94% of the pre-European exte red at state level, respectively (Gor | of the Interim base). Approximately Avon Wheatbelt vernment of Western eard vegetation nt vegetation vernment of Western | | |

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|--|------------------------------|--|
| The clearing of 7.7 hectares of native vegetation within the application area is unlikely to impact the conservation significance of the pre-European vegetation remaining within the local and regional area (GIS Database). | | |
| <u>Principle (h):</u> "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. | | |
| 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." | Not likely to be at variance | No |
| Assessment: | | |
| Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. | | |
| Principle (g): "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation." | May be at variance | No |
| Assessment: | | |
| The application area is mapped within the Euchre Land System which is described as having erosional and depositional surfaces (DPIRD, 2023). Land degradation will be managed through implementing a staged managed condition. | | |
| Principle (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." | Not likely to be at variance | No |
| Assessment: | | |
| Given no water courses / wetlands / Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality. | | |
| 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." | Not likely to be at variance | No |
| Assessment: | | |
| 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. | | |
| Given no water courses / wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging. | | |

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. |

| Condition | Description |
|---------------------|--|
| 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):

- Aboriginal Heritage Places (DPLH-001)
- Contours (DPIRD-073)
- Clearing Regulations Schedule One Areas (DWER-057)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- 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
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- 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 Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality Water Repellence Risk (DPIRD-014)
- 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
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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

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- 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. <u>https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics</u>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
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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 DPI H) |
| 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 |
| DFR | Department of Environment Regulation, Western Australia (now DWER) |
| DMIRS | Department of Mines, Industry Regulation and Safety, Western Australia |
| DMP | Department of Mines and Petroleum, Western Australia (now DMIRS) |
| DoEE | Department of the Environment and Energy (now 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 |
| EP Act | 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 |

PECPriority Ecological Community, Western AustraliaRIWI ActRights in Water and Irrigation Act 1914, Western AustraliaTECThreatened Ecological Community

Definitions:

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

T <u>Threatened species:</u>

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.

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:

P4

- (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.