Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10870/1
Permit type:	Purpose Permit
Applicant name:	Focus Operations Pty Ltd
Application received:	29 November 2024
Application area:	120 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 15/630, 15/645, 15/827
	Miscellaneous Licence 15/95
Location (LGA area/s):	Shire of Coolgardie
Colloquial name:	CNX Open Pit Project

1.2. Description of clearing activities

Focus Operations Pty Ltd proposes to clear up to 120 hectares of native vegetation within a boundary of approximately 227.46 hectares, for the purpose of mineral production and associated activities. The project is located approximately 2 kilometres northeast of Coolgardie, within the Shire of Coolgardie.

The application is to allow for Mineral production and associated activities (Focus, 2024a)

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	14 August 2025
Decision area:	120 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 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) 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 E), 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 in the form of water and soil erosion.
- the loss of native vegetation that is suitable habitat for malleefowl (*Leipoa ocellata*, VU); and
- the loss of southern whiteface (*Aphelocephala leucopsis*, VU) breeding habitat (active nests).

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (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 slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;

- commence construction no later than six months after undertaking clearing to reduce the risk of erosion;
- watercourse management to avoid riparian vegetation and maintain existing water flow;
- a fauna management (malleefowl) condition requiring areas proposed to be cleared between 1 September and 31 January are inspected to identify active (in use) malleefowl mounds, and to maintain a 200 metre buffer around identified active mounds; and
- a fauna management (southern whiteface) condition requiring areas proposed to be cleared between 1 July and 31 October are inspected to identify active (in use) southern whiteface nests, and to maintain a 250 metre buffer around identified active nests.

1.5. Site map

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

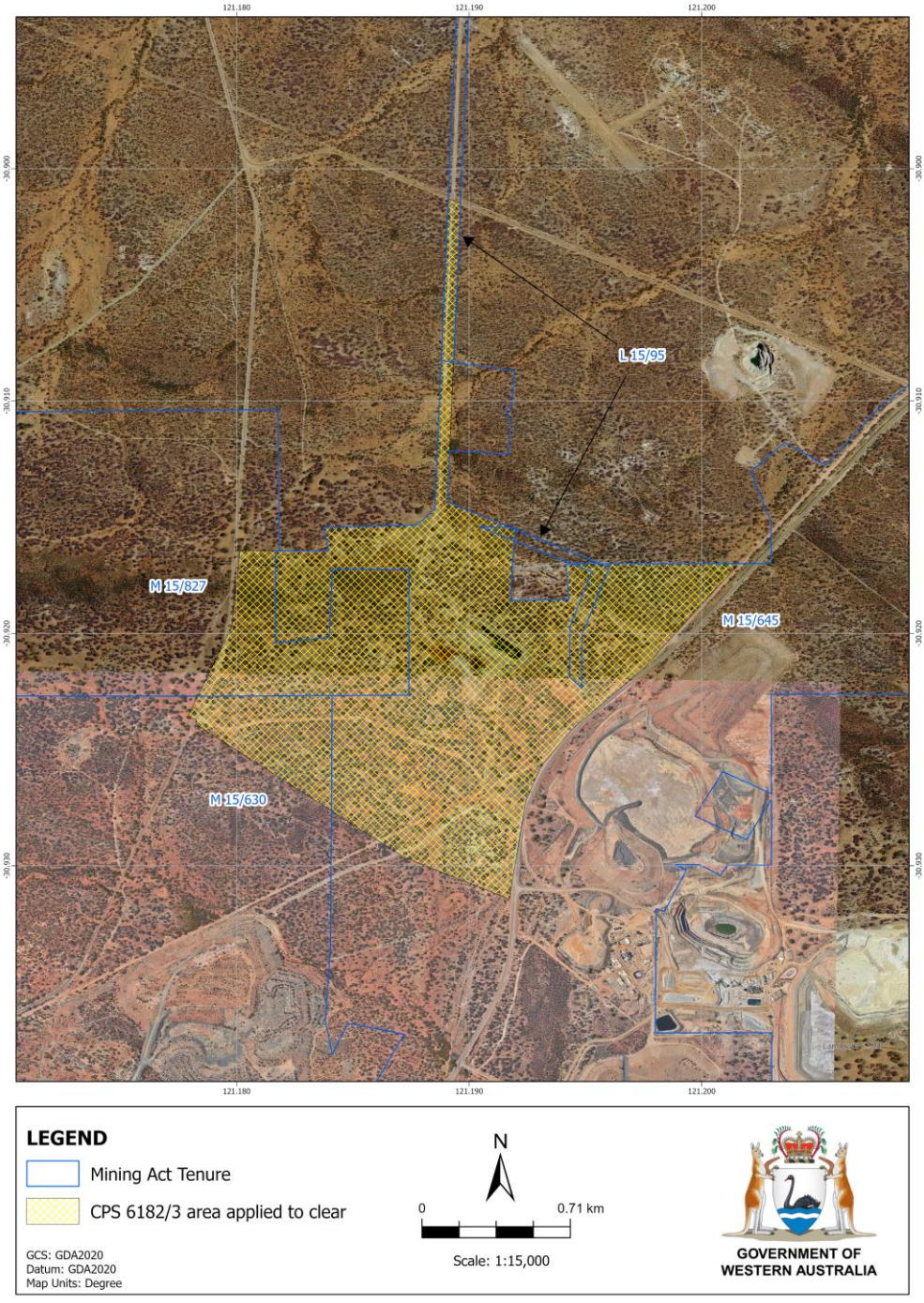

Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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 51O of the EP Act (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)
- *Biosecurity and Agriculture Management Act 2007* (BAM Act)
- *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 agreements (treaties) considered during the assessment include:

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

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The 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. Control measures were submitted by the applicant demonstrating (Astill Consultants, 2024):

Air quality

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

Land and soils

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

Fauna

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

Vegetation management

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

Weed management

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

In addition to, avoiding and minimising clearing, demarcation of proposed clearing boundaries prior to clearing, raised blade clearing where practicable, and rehabilitation in accordance with Coolgardie Gold Operations Mine Closure Plan (under the *Mining Act 1978*).

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (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, flora and vegetation). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

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

Assessment

Flora

A detailed flora and vegetation survey was conducted on the 11 to 15 October 2021 and 15 to 19 November 2021 by 360 Environmental over a broader survey area (360 Environmental, 2022a). The survey, covering 1,360 hectares, covered multiple sites within the Coolgardie Gold Project, including the CNX Open Pit Project (CNX), (see Figure 2, Appendix D) (360 Environmental, 2022a; Astill Consultants, 2024). No Threatened or Priority flora were recorded within the application area. The survey recorded *Austrostipa blackii* which is no longer a conservation significant species (WA Herbarium, 1998-). (360 Environmental, 2022a; Astill Consultants, 2024). No survey constraints were identified by 360 Environmental (2022a).

Threatened flora

A record of *Gastrolobium graniticum* is located approximately 4 kilometres from the application area (GIS Database). This species is associated with margins of granite outcrops, especially along drainage lines, on sandy soils in open woodland, in association with *Allocasuarina huegeliana*, *Acacia lasiocalyx* and *Eucalyptus eremophila*, which are not present within the application area (DEWHA, 2008; WA Herbarium, 1998-).Given there is no suitable habitat within the application area it is unlikely this species will be present and significantly impacted by the proposed clearing.

Priority flora

The application area contains potentially suitable habitat for four conservation significant flora species;

- *Acacia coatesii*
- *Austrostipa turbinata*
- *Eremophila caerulea* subsp. *merrallii*
- *Eremophila praecox*

Acacia coatesii (P1) is a low domed, intricately branched, compact, rigid sub-shrub, 20-40cm tall and 0.5-1.5 across, plants forming hemispherical cushions (see Figure 3, Appendix D). This species has been recorded flowering in early September, and it is suspected that the flowering period would extend from mid-August to early October (Maslin, 2014). Pods with immature seeds have been collected in late November and early December; mature seeds are likely to be present in mid to late December (Maslin, 2014).

Acacia coatesii is known from only a single population (containing several hundred plants) less than 13 kilometres south of Coolgardie (Maslin, 2014; WA Herbarium, 1998- ; GIS Database). This species occurs in shallow, red sandy clay on flat or gently sloping ground towards the base of a low greenstone ridge in open woodland dominated by *Eucalyptus* species over open shrubland (*Acacia*, *Atriplex, Eremophila, Dodonaea, Olearia* species) (Maslin, 2014; Maslin, 2018; WA Herbarium, 1998-). Within the application area, vegetation types EgAhSaf and EsppEiiSaa would likely provide suitable habitat for this species.

Despite the application area containing suitable habitat, this species was not recorded during the flora survey. This species should have been detectable at the time of survey due to its distinct form and the likelihood of flowers or seed pods being present at the time of the flora survey. This species is dissimilar to all *Acacia* species recorded within the application area; therefore, it is unlikely to be misidentified. Additionally, the species most closely related to *Acacia coatesii*, *Acacia intricata,* does not occur within the application area (Maslin, 2014; WA Herbarium, 1998-).

Austrostipa turbinata (P2) is a perennial tussock grass that flowers in September to October and fruits in November to December (Williams, 2022). This species is known from 25 records across Eastern Goldfield, Eastern Mallee, Fitzgerald, Merredin, and Southern Cross IBRA subregions (WA Herbarium, 1998-). This species has been recorded in a variety of different habitats within its distribution, however, is primarily found on hills or slopes with brown loam or red-brown sandy clay loams, where eucalypt species are present (WA Herbarium, 1998-). A sterile specimen of *Austrostipa* sp. was collected from the application area however did not show resemblance to any priority *Austrostipa* species that are likely to occur within the application area (360 Environmental, 2022a). Although suitable habitat occurs within the application area, this species was likely flowering at the time of survey and was not recorded. This species is known from multiple locations within multiple bioregions, therefore the proposed clearing of suitable habitat for this species is not likely to impact this species on a local level.

Eremophila caerulea subsp. *merrallii* (P4) is a spreading or sprawling shrub with blue-purple flowers, flowers October to December (WA Herbarium, 1998-). This species is known from 23 records and occurs on sand, clay or loam on undulating plains within Eastern Goldfield, Merredin, Southern Cross, Western Mallee IBRA subregions (WA Herbarium, 1998-). Although suitable habitat occurs within the application area, this species was likely flowering at the time of survey and was not recorded. This species is known from multiple locations within multiple bioregions, therefore the proposed clearing of suitable habitat for this species is not likely to impact this species on a local level.

Eremophila praecox (P2) is a tall broom-like shrub that occurs on red, brown sandy loam undulating plains across the Eastern Goldfields and Eastern Murchison IBRA subregions (WA Herbarium, 1998-). This species flowers in October or December, so

may have been detectable at the time of the flora survey (WA Herbarium, 1998-). Although suitable habitat occurs within the application area, this species was likely flowering at the time of survey and was not recorded. This species is known from multiple locations within multiple bioregions, therefore the proposed clearing of suitable habitat for this species is not likely to impact this species on a local level.

Unknown flora

Eighteen specimens were collected during the broader field survey that were sterile at the time of collection and could not be confidently identified beyond a genus level (360 Environmental, 2022a). *Atriplex ?vesicaria*, *Atriplex* sp., *Austrostipa* sp., *Maireana ?georgei, Roeper* sp. were recorded within the application area, and the location of *Carpobrotus* sp. was not recorded. None of these unconfirmed flora taxa were analogous to Priority flora taxa listed as likely to occur within the survey area (360 Enviornmental, 2022a; Astill Consultants, 2024).

Introduced flora

Introduced flora species; *Carrichtera annua, Centaurea melitensis, Nicotiana glauca*, and *Rumex vesicarius* were recorded within the application area (360 Environmental, 2022a). None of the species are listed as Weeds of National Significance or declared pest plants in Western Australia under the *Biosecurity and Agriculture Management Act 2007*, however weeds have potential to outcompete native flora and reduce biodiversity of an area.

Fauna

A basic vertebrate fauna and habitat was conducted on the 11 to 15 October 2021 and 15 to 19 November 2021 by 360 Environmental over a broader survey area, including the application area (Figure 2, Appendix D) (360 Environmental, 2022a). A targeted *Camponotus* sp. Nr. *Terebrans* survey was also undertaken during December 2021 (Figure 4, Appendix D) (36-Environmental, 2022b). A total of 61 fauna taxa comprising of 42 birds from 21 families, ten mammals from seven families and nine reptiles from five families. No conservation significant fauna were recorded. 360 Environmental (2022a) identified that the survey timing may have been a constraint for amphibian species as it the survey was conducted outside of the optimal survey period for autumn and winter breeding amphibians.

<u>Vertebrates</u>

Central long-eared bat

The central long-eared bat (*Nyctophilus major tor*, P3) occupies eucalypt woodlands with prominent shrub strata and around the fringes of sheoak and wattle thickets that surround granite outcrops and old dams in these woodlands (DBCA, 2024). This species roosts mostly in tree hollows and sometimes under loose bark and in other crevices, and forages low on the ground amongst foliage within the shrub layer (Menkhorst and Knight, 2011).

Based on DBCA (2024) advice, the proposed clearing is not likely to significantly impact foraging or breeding habitat for this species in the local area.

Chuditch (Western quoll)

The chuditch (*Dasyurus geoffroii*, VU) previously occurred throughout arid and semi-arid Australia, but is now restricted to south-west Western Australia (Commonwealth of Australia, 2008). Within their current range chuditch occur within jarrah forests and woodlands in south-western corner of Western Australia, woodlands, mallee shrublands and heaths along the south coast of Western Australia east to Ravensthorpe, and drier woodlands and mallee shrubland within the Wheatbelt and Goldfields region (DEC, 2012).

The application area is located at the edge of this species known distribution and suitable habitat range (Commonwealth of Australia, 2008). Chuditch often shelter in dens such as earth burrows beneath stumps, logs, trees or rock outcrops, as well as in hollow logs and hollows within termitaria (termite mounds) (DEC, 2012; SEWPAC, 2011). Suitable mallee woodland and shrubland was identified within the application area, as well as hollow logs and tree bases which could be used for denning (360 Environmental, 2022a).

360 Environmental (2022a) recorded a scat within the application area, believed to be from a chuditch. Further site assessment and camera surveys conducted over the application area and other sites within the Coolgardie Gold Project have not detected any further evidence of chuditch presence (Terrestrial Ecosystems, 2024; Terrestrial Ecosystems, 2025a-d). 360 Environmental (now SLR consultants) have stated that they no longer believe the scat previously recorded to be chuditch scat on the balance of probabilities, however as the scat has not been genetically tested and therefore its origin is unknown (SLR Consultants, 2024).

Chuditch often leave scats repeatedly at the same latrine site, these sites are usually conspicuous places such as rocks or boulders (Triggs, 2004). As no additional scats, or other signs of chuditch, have been recorded it is unlikely this species is present within the application area, or adjacent areas.

Whilst there is suitable foraging and denning habitat is present within the application area; further assessments have determined that chuditch are likely absent from the application area.

Malleefowl

Malleefowl (*Leipoa ocellata*, VU) occur in semi-arid to arid shrublands and low woodlands dominated by mallee and associated habitats, such as broombush *Melaleuca uncinata* and native pine *Callitris* spp. scrub, as well as scrubs of acacia in central Australia (DEWHA, 2017). However, this species favours long unburnt and ungrazed mallee (DEWHA, 2017). Malleefowl forage on the ground amongst leaf litter and low vegetation such as herbs and shrubs, and nest in light sandy soils where leaf litter is abundant (DEWHA, 2017).

360 Environmental (2022a) identified unburnt mallee and woodland with abundant litter and low scrub, suitable habitat for foraging and nesting. Acacia shrubland and Eucalyptus woodland habitats were identified as containing suitable breeding and nesting habitat for malleefowl, and rocky slope habitat was identified as containing suitable foraging habitat (360 Environmental, 2022a). Malleefowl have recently been recorded within one kilometre of the application area (GIS Database), and as there is suitable habitat within the application area, it is highly likely this species will utilise the application area for foraging and nesting.

Migratory shorebirds

There are numerous records of migratory shorebirds within the local surrounds (20 kilometres), however as there are no suitable waterbodies within the application area it is unlikely these species will be significantly impacted by the proposed clearing (360 Environmental, 2022a; GIS Database).

Southern Whiteface

The southern whiteface (*Aphelocephala leucopsis*, VU) occurs across most of mainland Australia, within open woodlands and shrublands where there is an understorey of grasses, shrubs or both (DCCEEW, 2023). These areas are usually dominated by acacias or eucalypts on ranges, foothills, lowlands and plains (DCCEEW, 2023). The southern whiteface forages in areas with low tree density and an herbaceous understory with litter cover, and roosts and nests in living and dead trees that contain suitable hollows or crevices (DCCEEW, 2023). This species nests in large bulky domed-shaped nests made out of grass, bark and roots within hollows or crevices in trees, and low bushes (DCCEEW, 2023).

Acacia shrubland and *Eucalyptus* woodland habitat within the application area provides suitable foraging habitat and potentially suitable breeding habitat for the southern whiteface. 360 Enviornmental (2022a) recorded trees with hollows within *Eucalyptus* woodland habitat, additionally a southern whiteface call was recorded within the broader survey area, making it likely this species will utilise suitable habitat within the application area.

Invertebrates

Arid Bronze Azure Butterfly

Arid Bronze Azure Butterfly (*Ogyris petrina*, CR) occurs in mature mixed gimlet (*Eucalyptus salubris*) and salmon gum (*E. salmonophloia*) woodlands, with an open understory, as well as (areas with wandoo (*E. capilosa* subsp. *wandoo*), smooth-barked York gum (*E. loxophleba* subsp. *lissophloia*) and ribbon-barked mallee (*E. sheathiana*) (DBCA, 2020). Extant ABAB populations have been recorded on soil types ranging from loamy to sandy, however there is a lack of knowledge about soil types that best support ABAB populations (WABSI, 2022). Salmon gum open woodlands with red sandy to loamy soils have been recorded within the application area and could potentially contain suitable habitat to host ABAB populations, however this habitat is marginally suitable (360 Environmental, 2022a; DPIRD, 2025). ABAB has an obligate association with the sugar ant *Camponotus* sp. nr. *terebrans*. (DBCA, 2020).

No ant colonies were recorded within the application area (360 Environmental, 2022b). Soils within the application area were poorly drained and compacted which reduces their suitability for *Camponotus* sp. nr. *terebrans* to occur as this species prefers sandy soils (360 Environmental, 2022b). Additionally, the application area hosted a large number of meat ants, *Iridomyrmex purpureus*, which are considered a threat to the *Camponotus* species and a competitor of the ABAB (360 Environmental, 2022b; WABSI, 2022).

Inland Hairstreak Butterfly

The inland hairstreak butterfly (*Jalmenus aridus*, P2) preferred habitat is open woodlands with a mixture of young and mature *Senna artemisioides* ssp. *filifolia* shrubs, a variety of flowering shrubs (*Eremophila, Scaveola,* and *Maireana*), some scattered taller vegetation and open areas of exposed, well-drained ground adjoining *Senna* hostplants (Eastwood et al., 2023). The AcEoaDl vegetation type contains suitable vegetation and host plant species for the inland hairstreak. Soil within the application area was described as poorly drained (360 Environmental 2022b), which may reduce suitability of habitat for this species.

Inland hairstreak larvae have a mutualistic association with *Froggattella kirbii* ants, these ants are often found at the base of *Senna* hostplants, however no ants were detected within the application area (360 Environmental, 2022b; Eastwood et al., 2023). A small population of butterflies was recorded during the survey at a site approximately six kilometres southwest of the application area, however no butterflies were recorded within the application area (360 Environmental, 2022b). In correspondence between Focus Operations Pty Ltd and Rod Eastwood, Eastwood stated he believed majority of the habitat was unsuitable for both butterfly species (ABAB and Inland hairstreak) (Focus, 2024b).

Subterranean fauna

A desktop subterranean fauna survey was conducted by Invertebrate Solutions (2022), determined that the application area does not contain suitable habitat for stygofauna or troglofauna. Invertebrate Solutions (2022) analysed two cores taken from within the CNX application area, these two cores were composed of; ultra mafic rock that showed no fracturing at depth that

would support stygofauna, and clay dominated non-saturated zones that showed low to nil suitable troglofauna habitat. Ultramatic's and other volcanic rocks are generally considered to be poor habitat for troglofauna and stygofauna unless highly fractured Invertebrate Solutions (2022). Additionally, as the application area does not sit within a palaeovalley it is unlikely stygofauna will be present within the application area (Invertebrate Solutions, 2022; GIS Database).

Conclusion

Flora

Threatened flora

Gastrolobium graniticum is unlikely to be significantly impacted by the proposed clearing, this species is unlikely to occur within the application area due to lack of suitable habitat.

Priority flora

Acacia coatesii is unlikely to be present within the application area as it was not recorded during the flora survey, despite being detectable at the time of the survey.

Austrostipa turbinata, *Eremophila caerulea* subsp. *merrallii* and *Eremophila praecox* were not recorded during the flora survey, despite likely being detectable at the time of the survey. The proposed clearing is unlikely to significantly impact these species at a local or regional level as these species occur across multiple bioregions.

Unknown flora

The sterile specimens collected were not analogous to priority or threatened flora that may occur within the application area and therefore are not likely to be significantly impacted by the proposed clearing.

Introduced flora

Potential impacts to biodiversity as a result of the proposed clearing may be minimised by implementing the weed management condition.

Fauna

Central Long-eared bat

This species may utilise the area for foraging however are unlikely to utilise the area for roosting and nesting as hollow trees are limited within the application area.

Chuditch

This species is unlikely to be significantly impacted by the proposed clearing as no further evidence of this species has been recorded within or adjacent to the application area, making it unlikely that this species is currently present within the area.

Malleefowl

This species is likely to occur within the application area as it is known within the local surrounds and suitable foraging and nesting habitat is present within the application area.

Migratory shorebirds

These species are unlikely to be impacted as suitable waterbody habitat is not present within the application area.

Southern whiteface

This species is likely to occur within the application area due to the presence of suitable foraging habitat and potentially suitable breeding habitat within *Acacia* shrubland and *Eucalyptus* woodland.

Arid bronze azure butterfly

As no *Camponotus* sp. nr. *terebrans* were detected in the target *Camponotus* sp. nr. *terebrans* survey it has been determined that the ABAB is unlikely to occur within the application area.

Inland hairstreak butterfly

This species is unlikely to occur within the application area as potential habitat for this species was determined to be largely unsuitable.

Subterranean fauna

Subterranean fauna species are unlikely to occur within the application area as suitable habitat is not present.

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;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- a fauna management (malleefowl) condition requiring areas proposed to be cleared between 1 September and 31 January are inspected to identify active (in use) malleefowl mounds, and to maintain a 200 metre buffer around identified active mounds; and
- a fauna management (southern whiteface) condition requiring areas proposed to be cleared between 1 July and 31 October are inspected to identify active (in use) southern whiteface nests, and to maintain a 250 metre buffer around identified active nests.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 11 March 2025 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2025). This claim has been registered with the National Native Title Tribunal (WC2017/007) and determined by the Federal Court (WAD647/2017) on behalf of the claimant group. 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, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on malleefowl (*Leipoa ocellata*) and southern whiteface (*Aphelocephala leucopsis*) 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 (Commonwealth) Department of Climate Change, Energy, the Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water for further information regarding notification and referral responsibilities under the EPBC Act.

Other relevant authorisations required for the proposed land use include:

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

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located 2 kilometres northeast of the Coolgardie townsite on Crown reserve and Unallocated Crown Land (UCL) (GIS Database). The area proposed to be cleared is surrounded by other mines and native vegetation within the Great Western Woodlands, in the extensive land use zone of Western Australia (GIS Database). The predominant land use in the region is UCL, Crown reserves, grazing-native pasture-leasehold, freehold, conservation and mining leases (CALM, 2002).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	Within the local surrounds (20 kilometres) there are six conservation areas: • **Nature Reserve:** Kerrawang Nature Reserve, approximately 15 kilometres northeast of the application area; • **State Forest:** Karamindie Forest approximately 19 kilometres southeast of the application area; • **Section 5(1)(h) (CALM, Act 1984) Reserve:** Yallari Timber Reserve approximately 18 kilometres southeast of the application area; • **Section 5(1) (g) (CALM, Act 1984) Reserve:** Scahill Timber Reserve approximately 17 kilometres south of the application area. Kangaroo Hills Timber Reserve, approximately 13 kilometres southwest; and • **Timber Reserve:** Kangaroo Hills Timber Reserve, approximately 5 kilometres southwest of the application area.
Vegetation description	The application area occurs within the IBRA Coolgardie bioregion in the Eastern Goldfields subregion (COO3) (GIS Database). The vegetation of the application area is broadly mapped as the following Beard vegetation association: **Coolgardie 9:** Woodland other. Wheatbelt; York gum, salmon gum etc. (*E. loxophleba*, *E. salmonophloia*). Goldfields; gimlet, redwood etc. (*E. salubris*, *E. oleosa*). Riverine; rivergum (*E. camaldulensis*). Tropical; messmate, woolybush (GIS Database). The following vegetation associations were recorded within the application area (360 Environmental, 2022a): • **EgAhSaf:** *Eucalyptus griffithsii* low open woodland over *Acacia hemiteles* and *Dodonaea stenozyga* (*A. jennerae, Alyxia buxifolia*) mid shrubland over *Senna artemisioides* subsp. *filifolia* and *Atriplex vesicaria* (*Olearia muelleri*) low open shrubland. On plains; • **EsppEiiSaa:** *Eucalyptus salmonophloia* mid isolated trees over a mosaic of *E. celastroides*, *E. clelandiorum*, and *E. torquata* low open woodland over *Eremophila interstans* subsp. *interstans* (*Eremophila parvifolia* subsp. *auricampi*) mid isolated shrubs over *Senna artemisioides* subsp. *artemisioides*, *S. artemisioides* subsp. *filifolia*, and *Atriplex vesicaria* low open shrubland. On plains, low hills; • **EsEiiAv:** *Eucalyptus salmonophloia* mid open woodland over *Eremophila interstans* subsp. *interstans* (*Eremophila parvifolia* subsp. *auricampi*, *Senna artemisioides* subsp. *filifolia*) tall to mid isolated shrubs over *Atriplex vesicaria* low open shrubland. On plains; • **AcEoaDl:** *Acacia collegialis (A. acuminata)* tall shrubland over *Eremophila oldfieldii* subsp. *angustifolia, E. georgei, A. tetragonophylla (Senna artemisioides* subsp*. filifolia, Exocarpos aphyllus)* mid shrubland over *Dodonaea lobulata (Atriplex vesicaria, Ptilotus obovatus* var. *obovatus)* low shrubland. On rocky hills; • **EtEaEpa:** *Eucalyptus torquata* low open woodland over *Exocarpos aphyllus* mid isolated shrubs over *Eremophila parvifolia* subsp. *auricampi, Westringia rigida*, and *Scaevola spinescens* (*Olearia muelleri*) low open shrubland. On plains, lower slopes of rocky hills; and • **Cleared:** Cleared or historically cleared areas including mine pits and borrow pits (often filled with water), bitumen roads, and dirt tracks. Some of these areas were showing signs of revegetation. With occasional *Eucalyptus griffithsii*, *Atriplex vesicaria*, *Maireana* spp., and assorted weed species. On plains.
Vegetation condition	The vegetation survey and aerial imagery indicate the vegetation within the proposed clearing area is in Very good to Completely degraded (Trudgen, 1991) condition, described as: • **Very good:** Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks. to

	• **Completely degraded:** Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate and landform	The climate for the Eastern Goldfields subregion (COO3) is arid to semi-arid, the average annual rainfall is 270.7 millimetres record at Coolgardie (BoM, 2025; CALM, 2002). The application area is mapped within elevation areas of 410 to 440 meters Australian height datum (GIS Database).
Soil description and land degradation risk	The soil is mapped as a part of the following land systems (DPIRD, 2024; DPIRD, 2025; GIS Database): • **Coolgardie Land System (265Co):** Uplands and undulating plains associated with ultramafic greenstones, supporting eucalypt woodlands and halophytic shrublands. Soils associated with this land system are calcareous stony soils, calcareous loamy earths, self-mulching cracking clay, calcareous gravelly shallow loam, and very shallow soils. This land system is susceptible to soil erosion where perennial vegetation is cleared; • **Jaurdi Land System (265Jd):** Basalt hills and ridges, supporting acacia shrublands and scattered eucalypt woodlands with mainly non-halophytic understory. Soils associated with this land system are very shallow soils, of calcareous stony soils, calcareous loamy earths, and friable non-cracking clays; and • **Graves Disturbed land phase (265GrX Disturbed):** Disturbed land, previously graves land system (265Gr). Graves land system; basalt and greenstone rises and low hills supporting eucalypt woodlands with prominent saltbush and bluebush understoreys. Less than 0.1 ha of application area. Soils associated with this land system are calcareous stony soils, friable non-cracking clays, red deep sand, red shallow sandy duplex, red deep sandy duplex. A soil survey was conducted over the application area by 360 Environmental (2022a), this survey indicated there are two main soil types within the application area; transported materials (red sandy clays) and saprolitic clays (chemically weathered bedrock) (Astill Consultants, 2024). Red sandy clays were highly sodic and dispersive and had potential to cause slaking, hard setting and erosion when wet (Astill Consultants, 2024). Saprolitic clays were described as moderately saline and had low sodicity. All soils were described as alkaline and nutrient deficient (Astill Consultants, 2024).
Waterbodies	The desktop assessment and aerial imagery indicated that one minor, non-perennial watercourse that transects the area proposed to be cleared (360 Environmental, 2022a; GIS Database). There are no permanent watercourses or waterbodies within the application area (GIS Database).
Hydrogeography	The application area is located within the Goldfields Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (GIS Database). The closest Public Drinking Water Source Areas is Broad Arrow Dam Catchment Area approximately 51 kilometres northeast of the application area (GIS Database). There are no Wetlands of International Importance or Nationally Important Wetlands that occur within the application area or in the local surrounds (20 kilometres) (GIS Database). The mapped groundwater salinity is between approximately 14,000 to 35,000 milligrams per litre total dissolved solids which is described as saline (GIS Database).
Flora	There is one threatened flora species within the local surrounds (20 kilometres). There are 25 priority flora species within the local surrounds (20 kilometres) (GIS Database).
Ecological communities	There are no Threatened Ecological Communities or Priority Ecological Communities (PEC) within the local surrounds (20 kilometres) (GIS Database). The closest PEC is the Emu Land System (P3) approximately 65 kilometres northeast of the application area (GIS Database).
Fauna	There are 13 vertebrate fauna and two invertebrate species of conservation significance mapped within the local surrounds (20 kilometres) (GIS Database). The chuditch and southern whiteface occur within the Coolgardie bioregion (GIS Database).
Fauna habitat	Three broad fauna habitats were identified within the application area, in addition to cleared habitat (360 Environmental); • **Acacia Shrubland:** *Eucalyptus griffithsii* low open woodland over *Acacia hemiteles* and *Dodonaea stenozyga* (*A. jennerae*, *Alyxia buxifolia*) mid shrubland over *Senna artemisioides* subsp. *filifolia* and *Atriplex vesicaria* (*Olearia muelleri*) low open shrubland. Hollow logs, leaf litter, and peeling bark are present throughout this habitat type. • **Eucalyptus Woodland:** Mixed *Eucalyptus* sp. woodlands over *Acacia* sp. *dodonaea* sp. *Eremophila* sp. or *Melaleuca* sp. mixed shrublands. Peeling bark, woody debris, leaf litter and hollow logs were observed throughout this habitat type. • **Rocky Slopes:** *Acacia collegialis* (*A. acuminata*) tall shrubland over *Eremophila oldfieldii* subsp. *angustifolia*, *E. georgei*, *Acacia tetragonophylla* (*Senna artemisioides* subsp. *filifolia*, *Exocarpos aphyllus*) mid shrubland over *Dodonaea lobulata* (*Atriplex vesicaria*, *Ptilotus obovatus* var. *obovatus*) low shrubland. Leaf litter, peeling bark, rock crevices, and woody debris were observed throughout this habitat type.

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Coolgardie	12,912,204.35	12,648,491.39	97.96	2,114,349.37	16.37
Beard vegetation associations - State					
Veg Assoc 9.	240,509.33	235,161.94	97.78	18,984.28	7.89
Beard vegetation associations - Bioregion					
Veg Assoc 9.	240,441.99	235,100.97	97.78	18,984.28	7.90

Government of Western Australia (2019)

A.3. Flora analysis table

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

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Likelihood of Occurrence
Acacia coatesii	P1	Y	Y	Y	>13	5	Medium
Acacia sclerophylla var. *teretiuscula*	P1	N	N	Y	>19	30	Low
Acacia websteri	P1	Y	N	Y	>4	21	High
Allocasuarina eriochlamys subsp. *grossa*	P3	N	N	N	>15	29	Low
Austrostipa frankliniae	P2	N	N	Y	>15	9	Low
Austrostipa turbinata	P3	Y	Y	Y	>15	25	Medium
Calandrinia lefroyensis	P1	N	N	Y	>15	11	Medium
Chrysocephalum apiculatum subsp. *norsemanense*	P3	Y	N	N	>4	18	Medium
Dampiera plumosa	P1	N	N	Y	>13	7	Medium
Eremophila caerulea subsp. *merrallii*	P4	Y	Y	Y	>5	23	N/A
Eremophila praecox	P2	Y	Y	Y	>19	52	Low
Eremophila veronica	P3	N	Y	N	>6	16	High
Eucalyptus jutsonii subsp. *jutsonii*	P4	N	N	Y	>14	36	N/A
Eucalyptus websteriana subsp. *norsemanica*	P1	Y	N	N	>15	15	Medium
Eucalyptus urna subsp. *xesta*	P3	Y	N	N	>15	25	N/A

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Likelihood of Occurrence
Gastrolobium graniticum	T	N	N	Y	>4	43	Low
Grevillea georgeana	P3	N	N	Y	>8	66	Medium
Hakea rigida	P2	N	N	N	>12	19	Low
Lepidium merrallii	P2	N	Y	Y	>4	3	Medium
Lepidosperma sp. Kambalda (A.A. Mitchell 5156)	P2	N	Y	N	>16	2	Low
Notisia intonsa	P3	Y	N	N	>14	29	N/A
Phebalium appressum	P1	Y	N	N	>13	5	Low
Phebalium clavatum	P2	Y	N	Y	>19	16	Low
Phlegmatospermum eremaeum	P3	Y	N	N	>5	18	N/A
Thryptomene planiflora	P1	Y	N	N	>5	23	Medium

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

A.4. Fauna analysis table

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

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)
Birds				
Common greenshank (*Tringa nebularia*)	MI	N	N	>4
Common sandpiper (*Actitis hypoleucos*)	MI	N	N	>4
Curlew sandpiper (*Calidris ferruginea*)	MI, CR	N	N	>20
Glossy Ibis (*Plegadis falcinellus*)	MI	N	N	>29
Grey falcon (*Falco hypoleucos*)	VU	N	Y	>115
Grey-tailed tattler (*Tringa brevipes*)	MI, P4	N	N	>22
Hooded plover (*Thinornis cucullatus)*	P4	N	N	>46
Malleefowl (*Leipoa ocellata*)	VU	Y	Y	>2
Red-neck stint (*Calidris ruficollis*)	MI	N	N	>20
Sanderling (*Calidris alba*)	MI	N	N	>35
Sharp-tailed Sandpiper (*Calidris acuminata*)	MI	N	N	>19
Southern whiteface (*Aphelocephala leucopsis*)	VU	Y	Y	>407
Wood Sandpiper (*Tringa glareola*)	MI	N	N	>28
Invertebrates				
Arid Bronze Azure Butterfly (*Ogyris petrina*)	CR	N	Y	>20
Inland Hairstreak (*Jalmenus aridus*)	P2	Y	Y	>7
Mammals				
Central long-eared bat (*Nyctophilus major tor*)	P3	Y	Y	>4
Chuditch (*Dasyurus geoffroii*)	VU	Y	Y	>54

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)

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

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."* Assessment: The area proposed to be cleared contains potential habitat for conservation flora and fauna species.	May be at variance	Yes *Refer to Section 3.2.1, above.*
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."* Assessment: The area proposed to be cleared contains potential habitat for conservation significant fauna and contains potential breeding and foraging habitat for malleefowl (*Leipoa ocellata*).	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: There is a record of *Gastrolobium graniticum* in the local surrounds, however no suitable habitat was identified within the application area.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
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."* Assessment: There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the application area (360 Environmental, 2022a; Astill Consultants, 2024; GIS Database). No vegetation analogous to TECs or PECs were recorded in any of the vegetation and flora surveys (Astill Consultants, 2024).	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (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."* Assessment: The extent of the mapped vegetation type area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area (GIS Database).	Not at variance	No
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."* Assessment: Given the distance to the nearest conservation area is 5.5 kilometres (GIS Database), the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: There are no permanent water courses or wetlands recorded within the application area (GIS Database). There is one minor ephemeral watercourse that transects the application area. This watercourse is associated with the EsEiiAv vegetation community (360 Environmental, 2022a; GIS Database). Potential impacts to vegetation associated with this watercourse can be minimised by the implementation of a watercourse management condition.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are susceptible to soil and water erosion when vegetation is cleared (Astill Consultants, 2024; DPIRD, 2024). Noting the extent and location of the application area and the condition of the vegetation, the proposed clearing is likely to have an appreciable impact on land degradation. These impacts can be managed by a type of clearing authorised condition and a watercourse vegetation management condition on the clearing permit to prevent cleared areas from being unstable and prone to erosion for extended periods of times.	May be at variance	No
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."* Assessment: Given no permanent water courses, wetlands, or Public Drinking Water Sources Areas are recorded within the application area (GIS Database), the proposed clearing is unlikely to impact surface or ground water quality. There is one minor ephemeral drainage line within the application area, Astill Consultants (2024) have stated clearing will not impact these surface water bodies	Not likely to be at variance	No
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: There are no permanent watercourses or wetlands within the application area and the applicant has planned to implement drainage diversion infrastructure to mitigate flood risk and retain natural flow paths (Astill Consultants, 2024). Potential impacts that are likely to contribute to waterlogging or increased incident or intensity of flooding can be minimised by the implementation of a watercourse management condition.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.

Condition	Description
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

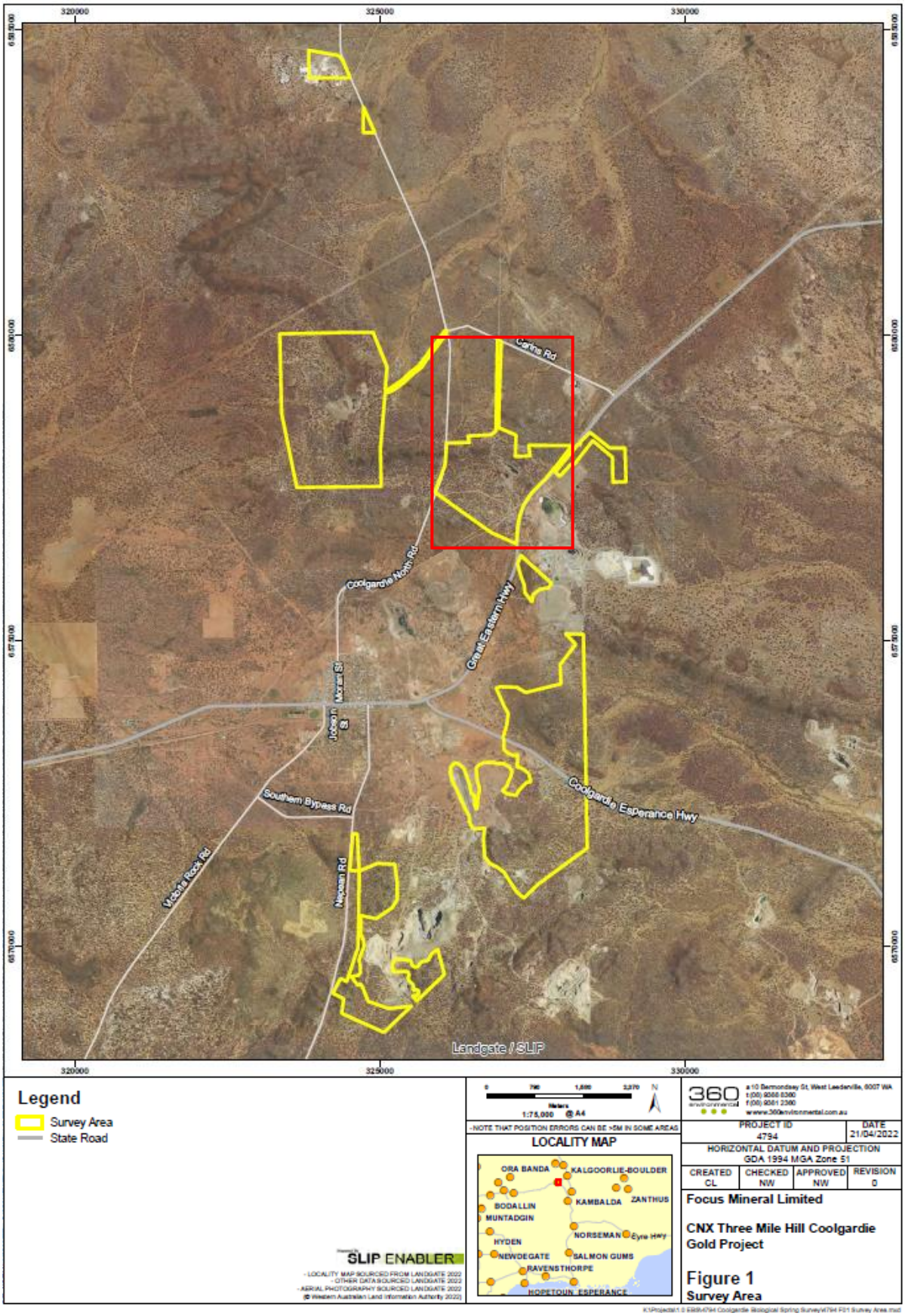

Figure 2. 360 Environmental flora and vegetation survey area, and basic vertebrate fauna and habitat survey area. Application area indicated by the survey area wholly within the red square (360 Environmental, 2022a).

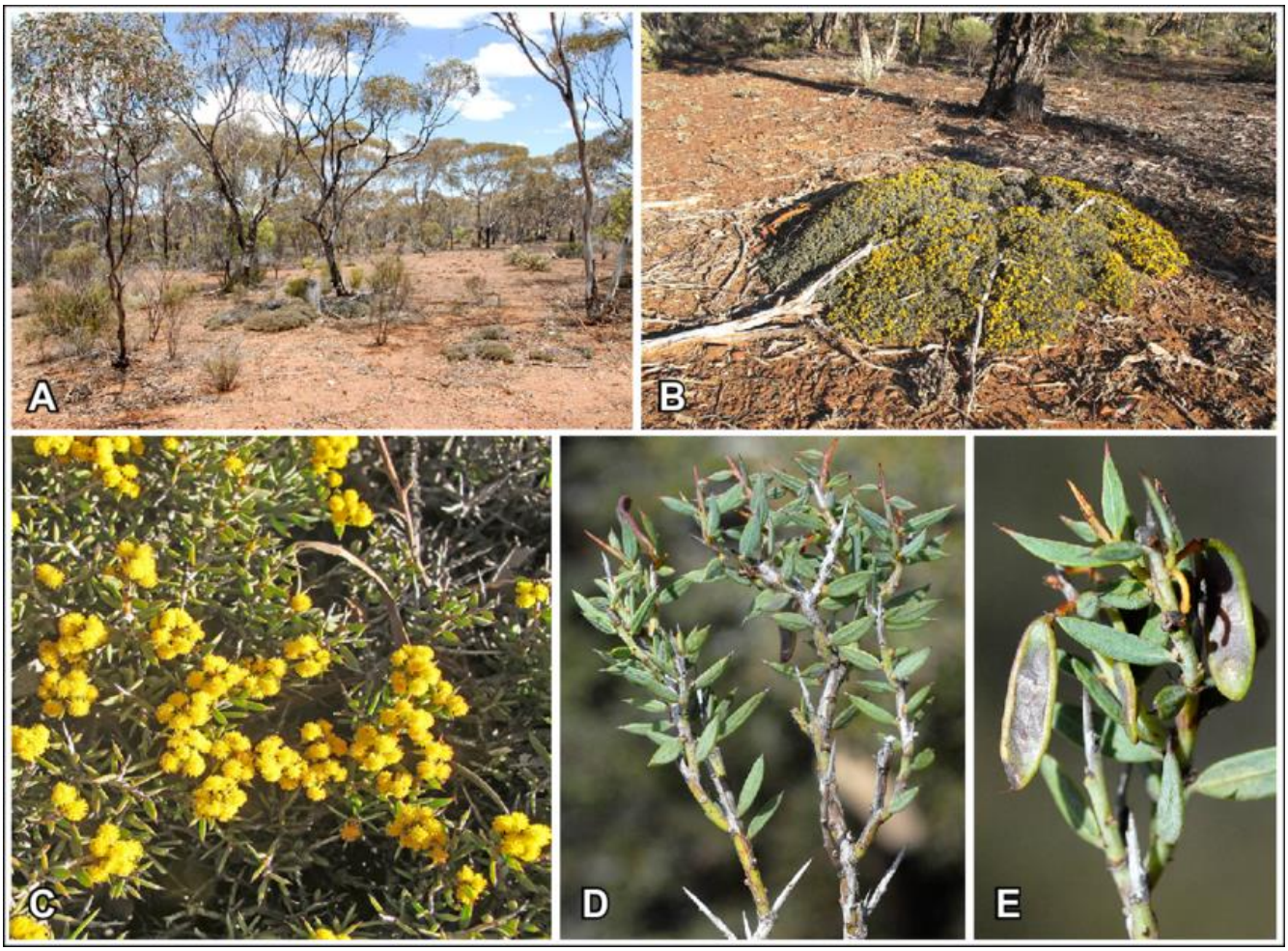

Figure 3. ***Acacia coatesii*****. A – habitat; B – habitat, showing low-domed compact growth form; C – flowering branches; D – branches showing short, spinescent branchlets and small, pungent phyllodes; E – pods (small) (Maslin, 2014).**

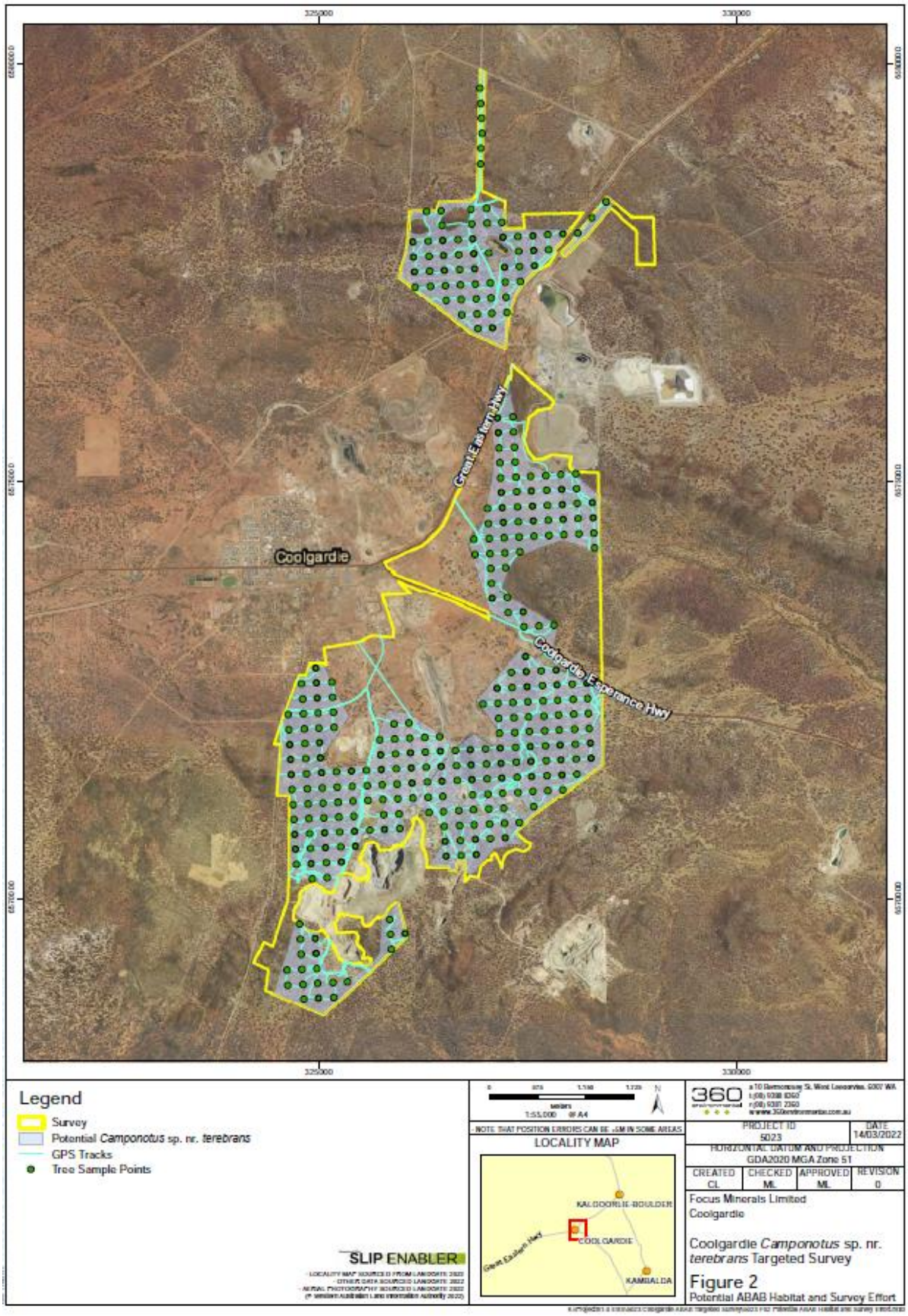

Figure 4. 360 Environmental *Camponotus* sp. nr. *terebrans* targeted survey area, shaded area indicates potential *Camponotus* sp. nr. *terebrans* habitat, blue lines indicate GPS tracking of path taken, green points indicate trees surveyed (360 Environmental, 2022b).

Appendix E. Sources of information

E.1. GIS datasets

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

- 10 metre contours (DPIRD-073)

- Bush Forever Areas 2000 (DPLH-019)
- Cadastre (Polygon) (LGATE-217)
- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- Clearing Instruments Conditions (Areas Subject to Conditions) (DWER-077)
- Clearing Instruments Proposals (Areas Applied to Clear) (DWER-075)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments - Catchments (DWER-028)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Medium Scale Topo Contour (Line) (LGATE-015)
- Medium Scale Topo Elevation (Point) (LGATE-014)
- Mineral Field Boundaries (DMIRS-005)
- Native Title (Determination) (LGATE-066)
- Native Title (Fed Court) (LGATE-005)
- Native Title (NNTT) (LGATE-004)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Reserves (LGATE-227)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Soil Landscape Mapping - Rangelands (DPIRD-063)
- Soil Landscape Mapping - Systems (DPIRD-064)
- Soil Landscape Mapping - Western Australia attributed by WA Soil Group (DPIRD-076)
- Townsites (LGATE-248)
- WA Now Aerial Imagery
- WRIMS - Groundwater Areas (DWER-085)
- WRIMS - Surface Water Areas (DWER-082)

Restricted GIS Databases used:

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

E.2. References

360 Environmental (2022a) CNX Three Mile Hill Coolgardie Gold Project, Biological Surveys, Prepared for Focus Minerals Limited, June 2022.

360 Environmental (2022b) Coolgardie Project, Coolgardie *Camponotus* sp. nr. *terebrans* Targeted Survey, Prepared for Focus Minerals, May 2022.

Astill Consultants (2024) Native Vegetation Clearing Permit – CNX Project, Prepared for Focus Operations Pty Ltd, November 2024.

Bureau of Meteorology (BoM) (2025) Bureau of Meteorology Website – Climate Data Online, Coolgardie Station (012018). Bureau of Meteorology. https://reg.bom.gov.au/climate/data/ (Accessed 18 July 2025).

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.

Commonwealth of Australia (2008) Species Profile and Threats Database. Department of Climate Change, Energy, the Environment and Water, Australia. https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl (Accessed 5 August 2025).

Department of Biodiversity, Conservation and Attractions (DBCA) (2020) Guideline for the survey of arid bronze azure butterfly (ABAB) in Western Australia. Available from: https://www.dbca.wa.gov.au/management/threatened-species-and-communities/resources/threatened-and-priority-fauna-resources

Department of Biodiversity, Conservation and Attractions (DBCA) (2024) Advice received in relation to Clearing Permit Application CPS 10572/1. Species and Communities Branch, Department of Biodiversity, Conservation and Attractions, Western Australia, July 2025.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023) Conservation Advice for *Aphelocephala leucopsis* (southern whiteface). Available from: https://environment.gov.au/biodiversity/threatened/species/pubs/529-conservation-advice-31032023.pdf (Accessed 1 August 2025).

Department of Environment and Conservation (DEC) (2012) Chuditch (Dasyurus geoffroii) Recovery Plan. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia. Available from: https://www.dcceew.gov.au/sites/default/files/documents/dasyurus-geoffroii-2012.pdf

Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008) Approved Conservation Advice for *Gastrolobium graniticum* (Granite Poison). Canberra: Department of the Environment, Water, Heritage and the Arts. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/14872-conservation-advice.pdf.

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2017) Survey guidelines for Australia's threatened birds. https://www.dcceew.gov.au/sites/default/files/documents/survey-guidelines-birds-april-2017.pdf (Accessed 31 July 2025).

Department of Planning, Lands and Heritage (DPLH) (2025) Aboriginal Cultural Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/ACHIS/index.html?viewer=ACHIS (Accessed 21 July 2025).

Department of Primary Industries and Regional Development (DPIRD) (2024) Advice received in relation to Clearing Permit Application CPS 10572/1. Office of the Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, April 2024.

Department of Primary Industries and Regional Development (DPIRD) (2025) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f (Accessed 21 July 2025).

Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) (2011) Survey guidelines for Australia's threatened mammals https://www.dcceew.gov.au/sites/default/files/documents/survey-guidelines-mammals.pdf (Accessed 6 August 2025).

Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. https://www.wa.gov.au/system/files/2024-11/procedure-native-vegetation-clearing-permits.pdf

Eastwood, R. Jacks, A. Williams, A.A.E. Petersen. L, Cameron, J. (2023) Current distribution, preferred habitat, behaviour, and biology of the Inland Hairstreak, *Jalmenus aridus* Graham & Moulds, 1988 (Lepidoptera: Lycaenidae) in the Eastern Goldfields region of Western Australia. Records of the Western Australian Museum.

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%20Surveys%20-%20Final.pdf

Focus Operations Pty Ltd (Focus) (2024a) Clearing permit application form, CPS 10870/1, received 29 November 2024.

Focus Operations Pty Ltd (Focus) (2024b) Personal communication between Focus Operations Pty Ltd and Rod Eastwood, 3 October 2024.

Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Invertebrate Solutions (2022) Desktop assessment for subterranean fauna for the Coolgardie Gold Project - Alicia, Big Blow, Bonnievale, Brilliant, CNX, Greenfields and Happy Jack Deposit Areas, Coolgardie, Western Australia Report. Prepared for Focus Minerals Ltd, May 2022.

Maslin, B. R. (2014) Miscellaneous new species of Acacia (Fabaceae: Mimosoideae) from south-west Western Australia. Nuytsia: Western Australian Herbarium, 24, 142-145. https://doi.org/10.58828/nuy00722

Maslin, B. R. (2018) Wattle Acacias of Australia; *Acacia coatesii* Maslin. Department of the Environment and Energy; Department of Biodiversity, Conservation and Attractions; Australian Biological Resources Study. Available from: https://apps.lucidcentral.org/wattle/text/entities/acacia_coatesii.htm (Accessed 7 August 2025).

Menkhorst, P., and Knight, F. (2011) A Field Guide to the Mammals of Australia, Third Edition. Oxford University Press, Vicotria, Australia.

Terrestrial Ecosystems (2024) Pre-clearance inspection for the Alicia project area. Prepared for Focus Minerals, by Terrestrial Ecosystems, 30 November 2024.

Terrestrial Ecosystems (2025a) Pre-clearance inspection for the Alicia project area. Prepared for Focus Minerals, by Terrestrial Ecosystems, 6 February 2025.

Terrestrial Ecosystems (2025b) Pre-clearance inspection for the Alicia project area. Prepared for Focus Minerals, by Terrestrial Ecosystems, 31 March 2025.

Terrestrial Ecosystems (2025c) Pre-clearance inspection for the CNX project area. Prepared for Focus Minerals, by Terrestrial Ecosystems, 11 February 2025.

Terrestrial Ecosystems (2025d) Pre-clearance inspection for the Dreadnought project area. Prepared for Focus Minerals, by Terrestrial Ecosystems,15 July 2025.

Triggs, B. (2004) Tracks, Scats, and Other Traces, A field Guide to Australian Mammals Revised Edition. Oxford University Press, Vicotria, Australia.

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

The Western Australian Biodiversity Science Institute (WABSI) (2022) Arid Bronze Azure Butterfly, Workshop Report 2022. The Western Australian Biodiversity Science Institute. Available from: https://wabsi.org.au/wp-content/uploads/2022/10/Arid-Bronze-Azure-Butterfly-WABSI-Report.pdf (Accessed 28 July 2025).

Western Australian Herbarium (WA Herbarium) (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 21 July 2025).

Williams, A. R. (2022) *Austrostipa* (Poaceae) in Western Australia: new species, new records, keys, and character notes. Nuytsia: Western Australian Herbarium, 33, 71-73. https://www.biodiversitylibrary.org/item/321371

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 (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
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* (Commonwealth 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 (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

T 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 the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of Ministerial Guideline Number 1 and Ministerial Guideline Number 2 that adopts the use of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species Categories and Criteria, and is based on the national distribution of the species.

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.

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.

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.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

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).

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.

Specially protected species

SP **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).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or 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.

CD **Species of special conservation interest (conservation dependent fauna)**

Species of special conservation need that are 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).

Currently only fauna are listed as species of special conservation interest.

OS **Other specially protected species**

Species 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).

Currently only fauna are listed as species otherwise in need of special protection.

Priority species

P **Priority species**

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey 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 prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

Assessment of priority status 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 – known from few locations, none on conservation lands**

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, for example, 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 for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species – known from few locations, some on conservation lands**

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, for example, 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 for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species – known from several locations**

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. These species need 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 a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

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.