

1. Application details and outcomes

1.1. Permit application details

Permit number:	6689/7
Permit type:	Purpose permit
Applicant name:	Robe River Limited
Application received:	6 June 2024
Application area:	1,490 hectares
Purpose of clearing:	Mineral exploration, a construction camp, geotechnical investigations, mine support infrastructure, fauna/flora monitoring access, groundwater/hydrogeological monitoring access, and Aboriginal Heritage survey/access.
Method of clearing:	Mechanical removal
Tenure:	<i>Iron Ore (Robe River) Agreement Act 1964</i> , Mineral Lease 248SA (AML 70/248)
Location (LGA area):	Shire of Ashburton
Colloquial name:	Mesa A to Mesa G Project

1.2. Description of clearing activities

Robe River Limited proposes to clear up to 1,490 hectares of native vegetation within a boundary of approximately 8,089.38 hectares, for the purpose of mineral exploration, a construction camp, geotechnical investigations, mine support infrastructure, fauna/flora monitoring access, groundwater/hydrogeological monitoring access, and Aboriginal Heritage survey/access (Robe River Limited, 2024; 2025). The project is located approximately 20 kilometres southwest of Pannawonica, within the Shire of Ashburton (GIS Database). Clearing permit 4343/3 is covered by this clearing permit (Robe River Mining Co Pty Ltd, 2024). Robe River Limited has also applied to amend that clearing permit. During the assessment of this amendment, the application was modified to amalgamate both permits into the one application (Robe River Limited, 2025).

Clearing permit CPS 6689

Clearing permit CPS 6689/1 was granted by the Department of Mines and Petroleum (now the Department of Mine, Petroleum and Exploration) on 1 October 2015 and was valid from 24 October 2015 to 31 July 2030. The permit authorised the clearing of up to 500 hectares of native vegetation within a boundary of approximately 3,723 hectares, for the purpose of mineral exploration, hydrogeological and geotechnical investigations and associated activities.

CPS 6689/2 was granted on 23 June 2016, amending the permit to increase the area authorised to clear from 500 hectares to 600 hectares, increase the permit boundary from 3,723 hectares to 4,600 hectares, extend the duration of the permit and change the reporting date.

CPS 6689/3 was granted on 13 July 2017, amending the permit to increase the area authorised to clear from 600 hectares to 620 hectares, increase the boundary from 4,600 hectares to 4,648 hectares and include construction camp as a purpose of clearing.

CPS 6689/4 was granted on 21 December 2017, amending the permit to increase the boundary from 4,648 hectares to 5,809 hectares and include mine support infrastructure and environmental investigations as a purpose of clearing. The amount of clearing authorised remains unchanged.

CPS 6689/5 was granted on 16 August 2018, amending the permit to increase the area authorised to clear from 600 hectares to 800 hectares and increase the permit boundary from 5,809 hectares to 6,259.5 hectares.

CPS 6689/6 was granted on 28 March 2019, amending the permit to increase the area authorised to clear from 800 hectares to 1,490 hectares, increase the boundary from 6,259.5 hectares to 7,965 hectares and amalgamate clearing permits CPS 2251/3, 5266/3, 7077/1 and 7628/1.

Clearing permit CPS 4343

CPS 4343/1 was granted on 21 July 2011, authorising the clearing of up to 16 hectares within a boundary of 1,704 hectares for the purpose of exploration.

CPS 4343/2 was granted on 21 May 2015, amending the permit to increase the area authorised to clear from 16 hectares to 46 hectares, increase the boundary from 1,704 hectares to 1,785.64 hectares and extend the duration of the permit to 31 July 2024.

CPS 4343/3 was granted on 7 June 2019, amending the permit to extend the duration of which clearing is authorised and the duration of the permit by five years. The amount of authorised clearing and permit boundary remain unchanged.

Clearing and rehabilitation reported

The total cumulative area of land cleared under CPS 6689/6 is approximately 250.25 hectares and approximately 210.23 hectares of rehabilitation activities have been conducted (Rio Tinto, 2024). Approximately 198.11 hectares within the conditioned area has been cleared under this permit to date (Rio Tinto, 2025b).

The total cumulative area of land cleared under CPS 4343/3 is approximately 45.72 hectares and approximately 4.08 hectares of rehabilitation activities have been conducted (Rio Tinto, 2025a).

Current amendment application

On 6 June 2024, the Permit Holder applied to amend CPS 6689/6 to increase the permit boundary at Mesa A by 38.71 hectares from 7,965 hectares to 8,007.84 hectares, extend the duration of the permit and extend the period in which authorised clearing can be conducted by five years. During the assessment, the application was modified to amalgamate clearing permit CPS 4343/3, increasing the boundary to 8,089.38 hectares. The amount of clearing authorised remains unchanged.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	12 February 2026
Decision area:	1,490 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51KA(1) and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advertised the application for a public comment period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix L), supporting information provided by the applicant (Appendix A) including the results of flora and vegetation surveys, 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;
- impacts to five conservation significant flora species;
- impacts to major watercourse (Robe River), waterbodies associated with Robe River, ephemeral drainage lines, and consequently on riparian vegetation and surface water flow;
- impacts to habitat that could be utilised by several conservation significant fauna;
- impacts to one vegetation priority ecological community and two troglofauna priority ecological communities; and
- potential land degradation in the form of water erosion.

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, in daylight hours to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity and minimise impacts on nocturnal species;
- commence construction no later than six months after undertaking clearing to reduce the risk of erosion;
- restricted clearing condition – no clearing within 25 to 50 metres from bat caves and overhangs;
- restricted clearing condition – limited clearing within troglofaunal priority ecological communities of up to 222 hectares;
- restricted clearing condition – no clearing within Mesa edges, breakaway, gully, Robe River groundwater dependent vegetation and larger *Triodia pisolitica* populations, except for the purpose of installation of groundwater monitoring bores or surface water monitoring equipment and access tracks;
- flora management condition limiting clearing of *Triodia pisolitica* to 5,000 individuals and no clearing within 10 metres of *Pentalepis trichodesmoides* subsp. *hispida* and *Solanum* sp. Red Hill (S. van Leeuwen et al. PBS 5415);
- conduct a targeted survey for *Triodia pisolitica* assemblages of mesas of the West Pilbara Priority Ecological Community, map the extent of occurrence and only clear for the purpose of access tracks; and

- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the application area within 12 months of clearing to ensure vegetation and fauna habitat is not permanently lost.

The assessment for CPS 6689/7 has considered new survey information and cumulative disturbances which has resulted in a change in the assessment of principles (a), (b), (d), (e), (f), (i) and (j). The Delegated Officer determined that the proposed increased boundary, permit amalgamation, extended duration of the permit and period in which authorised clearing can be conducted is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 to Figure 3 below.

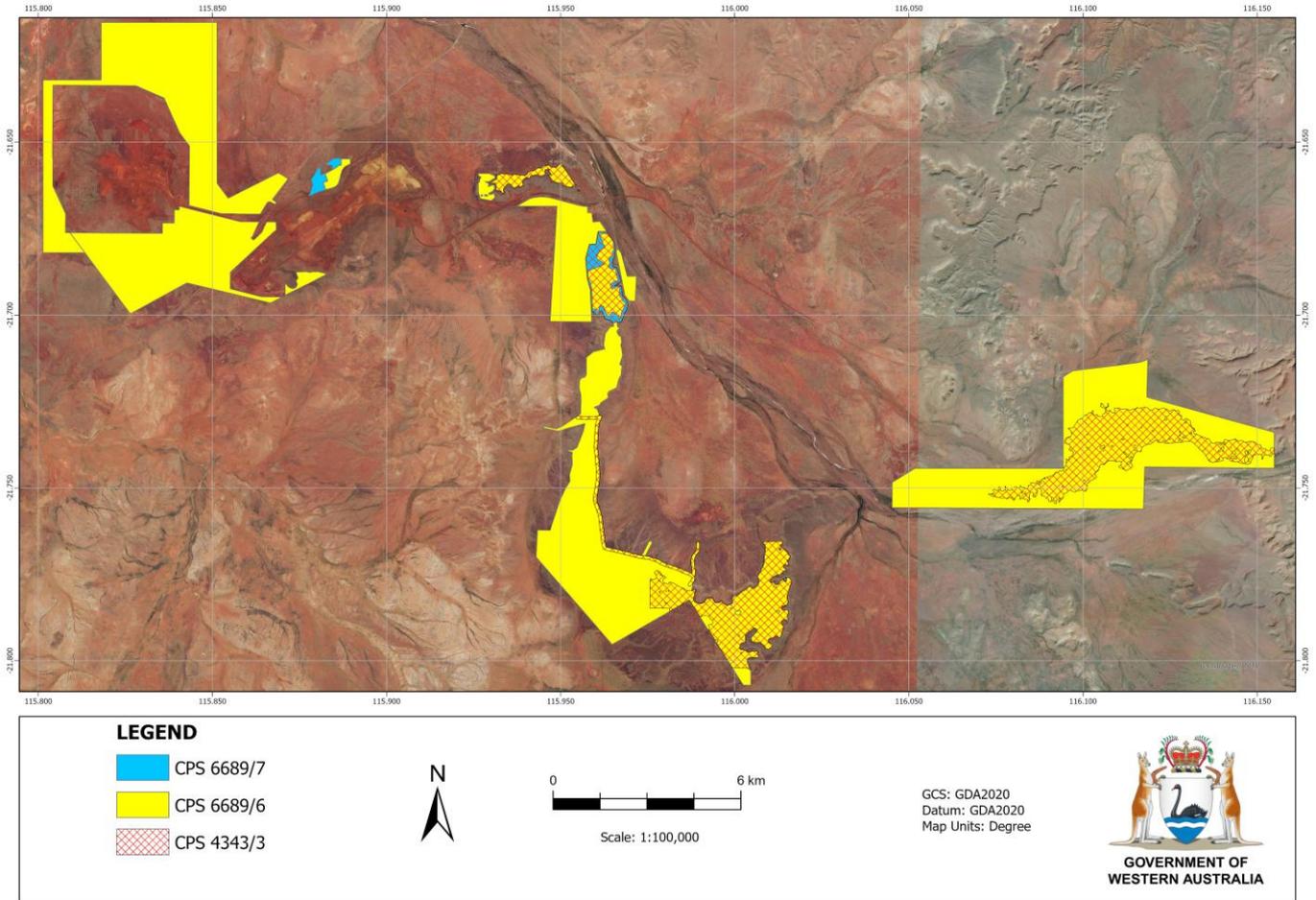


Figure 1. Map of the application area. The shaded blue area indicates the amended boundary areas. The shaded yellow area indicates the area formerly authorised to clear under CPS 6689/6. The red cross-hatched area indicates the area formerly authorised to clear under CPS 4343/3.

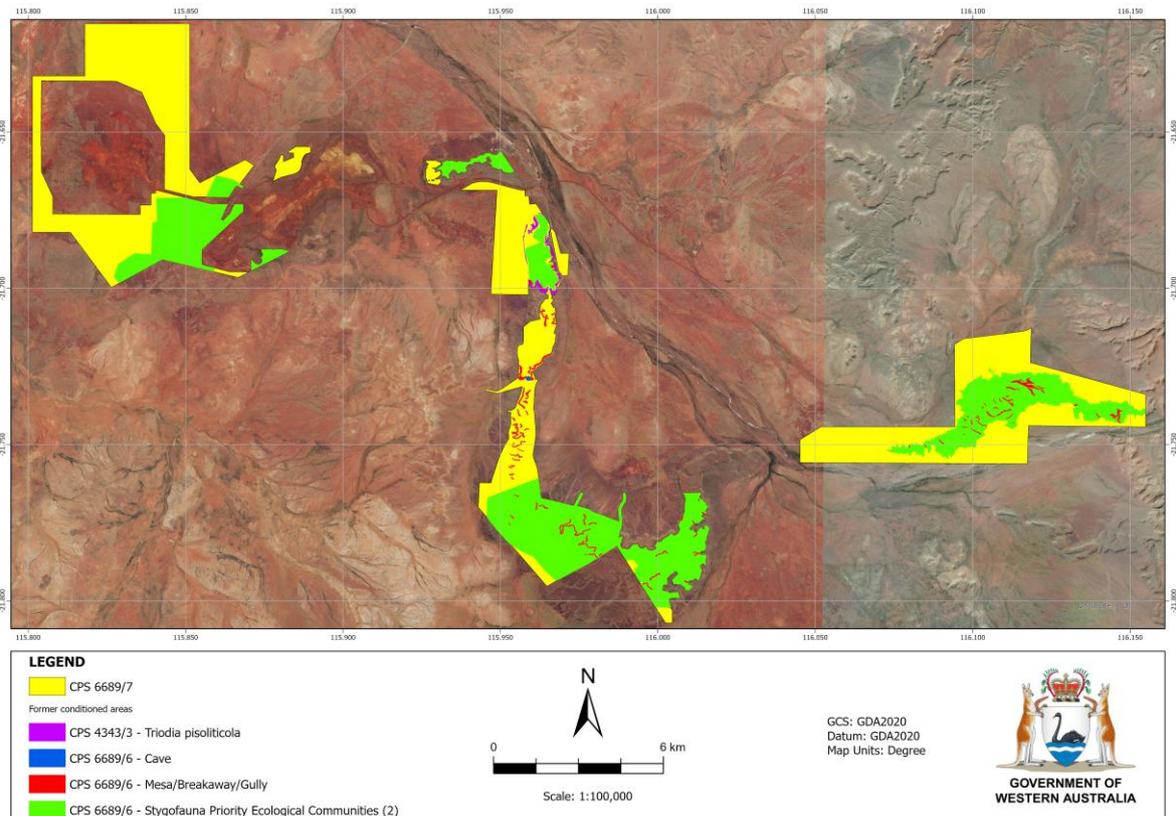


Figure 2. Map of the application area with former restricted clearing conditions. The shaded yellow indicates the areas conditionally authorised to clear under CPS 6689/7. The shaded blue areas indicate the areas subject to no clearing fauna management condition under CPS 6689/6. The areas shaded purple and red indicate the areas formerly subject to restricted clearing - fauna habitat and vegetation management conditions under CPS 4343/3 and CPS 6689/6, allowing only tracks. The shaded green areas indicate the areas subject to restricted clearing – priority ecological communities condition allowing a maximum of 222 hectares.

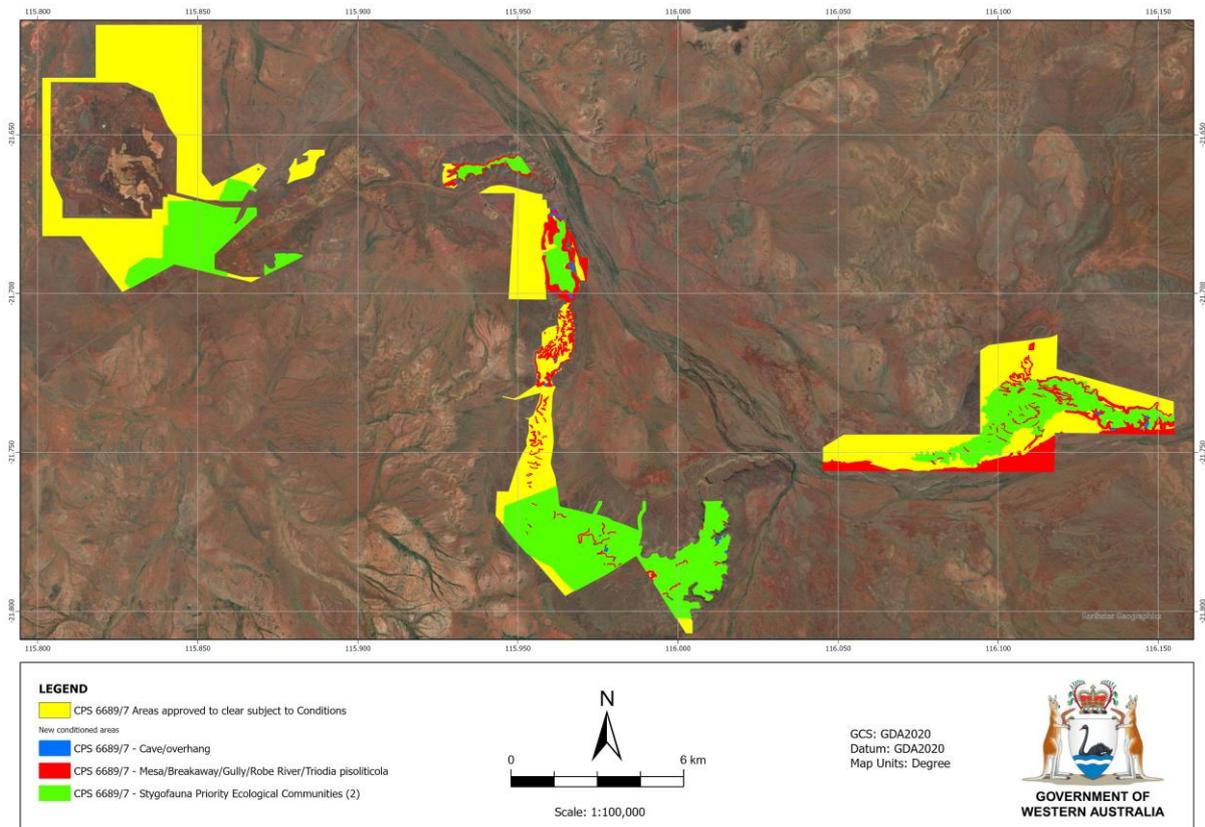


Figure 3. Map of the application area with modified restricted clearing conditions. The shaded yellow indicates the areas conditionally authorised to clear under CPS 6689/7. The shaded blue areas indicate the areas subject to no clearing fauna management condition. The shaded red areas indicate the areas subject to restricted clearing – fauna habitat and vegetation management condition allowing installation of groundwater monitoring bores or surface water monitoring equipment and tracks only. The shaded green areas indicate the areas subject to restricted clearing – priority ecological communities condition allowing a maximum of 222 hectares.

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)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Iron Ore (Robe River) Agreement Act 1964*

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, 2016a)
- Technical guidance – *Subterranean fauna – Environmental Impact Assessment* (EPA, 2016b)
- 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, including proposed buffer zones surrounding caves and overhangs, exclusion zones in line with Ministerial Statement 1112 and avoidance of priority flora, where practicable (Robe River Limited, 2025).

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix B) reveals that the assessment against the clearing principles has not changed significantly from the Clearing Permit Decision Report CPS 6689/6, however has incorporated new survey information and considered information relating cumulative disturbances leading to changes in principles (a), (b), (d), (e), (f), (i) and (j).

The assessment refers to a number of different Mesas that are mapped in Appendix E.

3.2.1. Biological values (flora and ecological communities) - Clearing principle (a) and (b)

Assessment

Priority flora

Five priority flora species have been recorded within the application area (Biologic, 2023; Biota, 2014; Biota, 2018; Robe River Limited, 2025):

- *Abutilon* sp. Onslow (F. Smith s.n. 10/9/61) (Priority 3)
- *Pentalepis trichodesmoides* subsp. *hispida* (Priority 3)
- *Rhynchosia bungarensis* (Priority 4)
- *Solanum* sp. Red Hill (S. van Leeuwen et al. PBS 5415) (Priority 3)
- *Triodia pisolitica* (Priority 3)

***Abutilon* sp. Onslow (P3)**

There is one record of *Abutilon* sp. Onslow with a population size of 16 individuals that has been recorded within the application area on Mesa C (Robe River Limited, 2025; GIS Database). This species occurs within the Carnarvon and Pilbara bioregions (Western Australian Herbarium, 1998-; GIS Database). A targeted survey was undertaken outside the application area and recorded 8,688 individuals at 770 locations at Peedmulla Station, Yaraloola Station, Cane River and Cane River North/ Mt Minnie (Biologic, 2022). A targeted survey recorded new populations within Cane River Conservation Park (R46122) and proposed Conservation Park (LR3046/473). A population of over 1,200 has been recorded near Mesa A, approximately five kilometres west of the application area (GIS Database). The applicant has over 26,000 records of this species on their internal database and stated internal control measures will avoid impact to populations, if practicable (Robe River Limited, 2025).

***Pentalepis trichodesmoides* subsp. *hispida* (P3)**

There are 15 individuals of *Pentalepis trichodesmoides* subsp. *hispida* that have been recorded at seven locations within the application area on Mesa G towards the southeast of the application area (Robe River Limited, 2025; GIS Database). This species has a restricted distribution occurring in the Pilbara region with some populations recorded within Millstream Chichester National Park and Karijini National Park (Western Australian Herbarium, 1998-; GIS Database). *Pentalepis trichodesmoides* subsp. *hispida* is found in *Triodia* hummock grassland, often in the understorey of a shrubland of *Acacia* spp., *Gossypium* spp., *Senna* spp., *Brachychiton* spp. and *Eucalyptus* spp., on summits and slopes of low hills, on basaltic soils, at altitudes to 1,150 metres (Orchard and Cross, 2012). The records occurring within the application area are representative of a possible range extension, with closest records approximately 30 kilometres east of the records occurring within the application area (Western Australian Herbarium, 1998-; GIS Database). The applicant has over 2,200 records of this species on their internal database and stated internal control measures will avoid impact to populations, if practicable (Robe River Limited, 2025).

***Rhynchosia bungarensis* (P4)**

Rhynchosia bungarensis has been recorded within the application area, once at Mesa A within the additional areas included in the amendment and fifteen records at nine locations south of Mesa G (Biota, 2018; Robe River Limited, 2025; GIS Database). Seven of these locations have been recorded within mapped groundwater dependent vegetation (EcEvAtrApyPITw; Appendix K) associated with vegetation of major drainage of the Robe River (Biota, 2018; GIS Database). This species has been recorded several times adjacent Mesa B and Mesa C outside the application area (GIS Database). *Rhynchosia bungarensis* occurs across four regions and seven subregions inhabiting banks of flow lines in the mouth of a gully in a valley wall (Western Australian Herbarium, 1998-; GIS Database). The records are at the western most extent of the known occurrence with populations also being recorded within Millstream Chichester National Park, Karijini National Park and Barlee Range Nature Reserve (Western Australian Herbarium, 1998-; GIS Database).

***Solanum* sp. Red Hill (P3)**

Three individuals have of *Solanum* sp. Red Hill have been recorded at three locations within the application area on Mesa D and Mesa F (Robe River Limited, 2025; GIS Database). This species occurs in the Pilbara region with one population recorded within Karijini National Park (Western Australian Herbarium 1998-; GIS Database). The records occurring within the application area are representative of a possible range extension, with closest records approximately 25 kilometres east of the records occurring within the application area (Western Australian Herbarium 1998-; GIS Database). The applicant has over 5,400 records of this species on their internal database and stated internal control measures will avoid impact to populations, if practicable (Robe River Limited, 2025).

***Triodia pisolitica* (P3)**

Triodia pisolitica (formerly *Triodia* sp. Robe River (M.E. Trudgen et al. MET 12367)) has been recorded within the application area (Robe River Limited, 2025; GIS Database). This species is known from the western part of the Pilbara, with a range of about 200 kilometres, with main areas of occurrence in the Robe River Valley (Barrett and Trudgen, 2018). Most of the known records are either on edges of mesas capped with Robe Pisolite or on the tops of mesas (Barrett and Trudgen, 2018). There are two records within Millstream Chichester National Park, however all other occurrences are within live mining and exploration tenements (Barrett and Trudgen, 2018; GIS Database). There are approximately 120,000 individuals that have been recorded over the application area with a significant portion occurring at Mesa C (approximately 4,500 individuals), Mesa D (approximately 40,000 individuals) and the north to northeast and southeast edges of Mesa G (approximately 70,000 individuals) (Biota, 2014; 2018; Robe River Limited, 2025; GIS Database). The applicant has estimated approximately 5,000 individuals are expected to be impacted from the proposed clearing (Robe River Limited, 2025). This species is also associated with a Priority Ecological Community (PEC) (discussed below).

Other priority flora

There are a number of priority flora as listed in Appendix B.2 that have the potential to occur over the application area due to suitable habitat, however, have not been recorded during historical or recent field surveys. Additional field surveys have been conducted with final report yet to be finalised, however additional information provided by the applicant and interim report was utilised during assessment (Biologic, 2023; Robe River Limited, 2025).

Introduced flora

Numerous weed species occur have been recorded within the application area (Biota, 2011; 2018; MWH, 2016).

Vegetation Priority Ecological Community

'*Triodia pisolitica* (previously *Triodia* sp. Robe River) assemblages of mesas of the West Pilbara' PEC is typically restricted to mesas and cordillo landforms where the plant assemblages are dominated by or contain *Triodia pisolitica* (P3) and are indicative of inverted landscapes (DBCA, 2025b). The total DBCA mapped extent of occurrence is approximately 3,368 hectares, with 9.43 hectares occurring within the application area at Mesa G (GIS Database). The PEC has also been identified on Mesa C and Mesa F in vegetation units EIAarTw, AarTw, AtuPIAacTw, EITwTsr, and AarTwTRR (Biota, 2011; 2014; 2018; MWH, 2016). Recent interim survey information has identified *Triodia pisolitica* occurring on Mesa D, Mesa E, and Mesa G that is potentially representative of this PEC (Biologic, 2023; GIS Database). Current extent of occurrence within the application area is unknown.

Subterranean fauna Priority Ecological Communities

'Subterranean invertebrate communities of mesas in the Robe Valley region' PEC consists of a series of isolates mesas occurring in the Robe Valley (DBCA, 2025b). The mesas are remnant of old valley infill deposits of the palaeo Robe River (DBCA, 2025b). The troglobitic faunal communities occur in an extremely specialised habitat and appear to require the particular structure and hydrogeology associated with mesas to provide a suitable humid habitat (DBCA, 2025b). The habitat is the humidified pisolitic strata (DBCA, 2025b). Each mesa contains its own unique subterranean faunal assemblage (DBCA, 2024).

'Subterranean invertebrate communities of mesas in the Robe Valley region' PEC details	Approximate extent and potential impacts
Total DBCA mapped extent of occurrence of this PEC	6,716 hectares
Occurrence at Mesa B, Mesa C, Mesa E, Mesa F and Mesa G within the application area	2,562.24 hectares (38% of entire PEC)
Occurrence outside the application area	4,153.76 hectares
Occurrence within existing restricted clearing condition	2,052.81 hectares
Occurrence within the application area and not within the restricted clearing area	509.43 hectares

'Subterranean invertebrate community of pisolitic hills in the Pilbara' PEC consists of isolated low undulating hills (DBCA, 2025b). The troglofauna are being identified as having very short-range distributions (DBCA, 2025b).

'Subterranean invertebrate community of pisolitic hills in the Pilbara' PEC details	Approximate extent and potential impacts
Total DBCA mapped extent of occurrence of this PEC	6,498 hectares
Occurrence at Mesa A within the application area	1,287 hectares (20% of entire PEC)
Occurrence outside the application area	5,211 hectares
Occurrence within existing restricted clearing condition	639.4 hectares
Occurrence within the application area and not within the restricted clearing area	647.6 hectares

Subterranean fauna communities are predominately impacted by removal of habitat, inundation, groundwater drawdown, dewatering and water quality changes (EPA, 2016b). Indirect impacts include changes to surface vegetation leading to sedimentation (EPA, 2016b). Ministerial Statement 1112 exists over the application area and local surrounds that contributes to the cumulative disturbances of the available habitat for the subterranean fauna of this PEC. Management conditions have been implemented for activities undertaken under Ministerial Statement 1112.

Conclusion

Based on the above assessment, the proposed clearing will result in:

Priority flora:

- *Abutilon* sp. Onslow: there may be some local impact to the one population of *Abutilon* sp. Onslow, however given there are large populations that occur outside the application area including in conservation areas, it is unlikely this species will be significantly impacted at a regional or species level.
- *Pentalepis trichodesmoides* subsp. *hispida* and *Solanum* sp. Red Hill (S. van Leeuwen et al. PBS 5415): there may be some local and regional impacts to these species due to a potential range extension, however it is unlikely these species will be significantly impacted at a species level, given populations occur within conservation areas.
- *Rhynchosia bungarensis*: there may be some local impact to *Rhynchosia bungarensis*, however given there are populations that occur adjacent application area and within conservation areas, it is unlikely this species will be significantly impacted at a regional or species level.
- *Triodia pisolitica*: there is likely to be local impacts to *Triodia pisolitica* given the extensive records that occur within the application area. There may be regional impacts due to cumulative disturbances, however this species is unlikely to be significantly impacted at a species level, given populations occur within conservation areas.
- Priority flora recorded within the local surrounds are unlikely to be significantly impacted at a regional or species level, however if they do occur within the application area, there may be some local impacts. The likelihood of occurrence is low due to historical and recent survey efforts.

Introduced flora: weeds have the potential to out-compete native flora and reduce biodiversity of an area.

Priority ecological communities:

- Vegetation within the application area is considered to be representative of *Triodia pisolitica* assemblages of mesas of the West Pilbara (P3) (Rio Tinto, 2024), however the extent of occurrence of this PEC within the application area is currently unknown, therefore local impacts are unable to be determined.
- 'Subterranean invertebrate communities of mesas in the Robe Valley region' and 'subterranean invertebrate community of pisolitic hills in the Pilbara' PECs: there may be some local and regional impacts, due to the area proposed to be cleared and extent of occurrence. The existing restricted clearing condition on CPS 6689/6 covers 3,101.94 hectares, limiting the clearing to 222 hectares. Approximately 198.11 out of 222 hectares has been cleared within the PEC conditioned area under CPS 6689/6 (Robe River Limited, 2025b).

Conditions

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

- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- flora management condition limiting clearing of *Triodia pisolitica* to 5,000 individuals and no clearing within 10 metres of *Pentalepis trichodesmoides* subsp. *hispida* and *Solanum* sp. Red Hill (S. van Leeuwen et al. PBS 5415);
- restricted clearing condition surrounding large populations of *Triodia pisolitica* allowing installation of groundwater monitoring bores, surface water monitoring equipment and access tracks;
- conduct a targeted survey for 'Triodia pisolitica' assemblages of mesas of the West Pilbara' PEC, map the extent of occurrence and only clear for the purpose of access tracks;
- restricted clearing condition limiting clearing within troglofaunal PEC's to 222 hectares; and
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the permit boundary within 12 months of clearing to ensure vegetation is not permanently lost.

3.2.2. Biological values (fauna) - Clearing principles (a) and (b)

Assessment

Mammals:

- Brush-tailed mulgara (*Dasyercus blythi*, P4)
- Ghost bat (*Macroderma gigas*, VU)
- Long-tailed dunnart (*Antechinomys longicaudata*, P4)
- Northern short-tailed mouse (*Leggadina lakedownensis*, P4)
- Northern quoll (*Dasyurus hallucatus*, EN)
- Pilbara leaf-nose bat (PLNB) (*Rhinonictis aurantia*, VU)
- Western pebble-mound mouse (*Pseudomys chapmani*, P4)

Reptiles:

- Gane's blind snake (Pilbara) (*Anilius ganei*, P1)
- Lined soil-crevice skink (Dampier) (*Notoscincus butleri*, P4)
- Pilbara olive python (*Liasis olivaceus barroni*, VU)

Birds:

- Grey falcon (*Falco hypoleucos*, VU)
- Peregrine falcon (*Falco peregrinus*, OS)
- Red goshawk (*Erythrotriorchis radiatus*, VU)
- Migratory birds (as listed in Appendix B.3)

Fish:

- Blind cave eel (*Ophisternon candidum*, VU)
- Fortescue grunter (*Leiopotherapon aheneus*, P4)

Invertebrates:

- Pilbara threadtail (*Nososticta pilbara*, P2)

Stygofauna

- *Nedsia hurlberti* (Hurlbert's freshwater amphipod, EN)
- *Nedsia macrosculptilis* (a freshwater amphipod, EN)

Troglofauna

- Linnaeus' pseudoscorpion (Mesa A) (*Ideoblothrus linnaei*, P1)
- Ideoblothrus pseudoscorpion (Mesa A) (*Ideoblothrus* sp. 'Mesa A' (WAM T81374) P1)
- Mesa A Lagynochthonius pseudoscorpion (*Lagynochthonius asema*, P1)
- Mesa A draculoides (*Draculoides anachoretus*, VU)
- Mesa B/C draculoides (*Draculoides bythius*, VU)
- Mesa G draculoides (*Draculoides gnophicola*, VU)
- Tyrannochthonius pseudoscorpion (Mesa A) (*Tyrannochthonius* sp. 'Mesa A' (WAM T81480) P1)

Ghost bat

The ghost bat is a carnivorous species with a patchy distribution of isolated populations within the semi-desert Pilbara region (Bat Call WA, 2021a). This species moves seasonally or in response to weather conditions between multiple roost sites, including caves, rock crevices, and disused mine adits (Bat Call WA, 2021a). The species relies on deep underground day roosts located within temperature-stable (23-38 degrees Celsius) caves with chambers or cavities which retain humidity (50-100 percent) (Bat Call WA, 2021a). Pilbara populations forage on productive plains featuring thin mature woodland interspersed with patchy or clumped tussock or hummock grasses, typically on sandy or stony substrates and along riparian corridors (Bat Call WA, 2021a; Cramer et al., 2022). Ghost bats generally forage within five kilometres of their diurnal roost sites, although longer distances have been recorded (Commonwealth of Australia, 2008).

Roosting habitat for ghost bats in the Pilbara region have four proposed categories (Bat Call WA, 2021a). Category 1 and category 2 caves are classified as maternity/diurnal roost sites with permanent or regular occupancy described as deep and dark with reasonably narrow entrances and a steady microclimate (Bat Call WA, 2021a). Category 3 and 4 caves are diurnal or nocturnal roosts with occasional or opportunistic occupancy described as less well-developed structures that may be shallower and have a wide entrance or not a stable microclimate (Bat Call WA, 2021a).

A single ghost bat was recorded along Warrambo Creek, approximately one kilometre west of Mesa A (Bat Call WA, 2017). Permanent ghost bat colonies have been recorded at Mesa B and Mesa C, with an estimated population of 15 to 20 individuals (Bat Call WA, 2016). A colony of 16 bats was recorded at a diurnal roost at Mesa B, which has the capacity to potentially support a maternity colony (Bat Call WA, 2016). In 2016, eleven caves at Mesa B were assessed as currently being used by ghost bats, including one diurnal/maternal roost and ten nocturnal roost caves (Bat Call WA, 2016). At Mesa C, nine caves were identified as being in use, comprising of one diurnal roost and eight nocturnal roost caves (Bat Call WA, 2016). Numerous records of ghost bat have been documented within breakaway habitat at Mesa D (Rio Tinto, 2023). Additionally, a large permanent diurnal/maternity roost with over 70 individuals were identified at Mesa F (Bat Call WA, 2017) and caves located on southeastern face of Mesa G form part of a complex of caves, shelters and overhangs (Bat Call WA, 2017) with records at eleven locations (Biota, 2018).

Most of the application area does not include the mesa façades that contain critical habitat for ghost bat and Pilbara leaf-nose bat (PLNB), with buffer zones ranging from 10 to 30 metres from the edge (MWH, 2015b). The applicant has internal buffers surrounding 97 caves and overhangs within the application area and the adjacent 100 metres surrounding area (Robe River Limited, 2025). Buffers proposed for Category 1-3 caves are 50 metres, while Categories 4 and 5 are 25 metres (Robe River Limited, 2025).

Pilbara leaf-nose bat

The Pilbara leaf-nose bat (PLNB) forages across diverse habitats, including *Triodia* hummock grasslands and complex riparian zones where water is permanently available (Northover et al., 2023). During the day, this species roosts in dark sections of caves and underground mines that offer stable, warm (28-32 degrees Celsius), and humid (85-100 percent) microclimates (Bat Call WA, 2021b). They are known to forage up to 20 kilometres from their primary roosting caves (Bat Call WA, 2016). Mesa gully and breakaway habitat that has been recorded within the application area provide suitable habitat features including caves, rock crevices, moisture, and are within close proximity to permanent or semi-permanent water that occurs along the Robe River (MWH, 2015a).

Mesa breakaway and gullies within Mesa B and C are considered regionally significant and acoustic recordings confirmed presence at both sites (MWH, 2015a). No evidence of permanent daytime or maternal roosts were found at Mesa B and C, however, this species may utilise caves temporarily when foraging or as night roosts (Bat Call WA, 2016; MWH, 2015a). PLNB has also been detected along Warrambo Creek, approximately one kilometre west of Mesa A (MWH, 2015a). At Mesa D, 13 records of PLNB have been recorded within breakaway habitat (Rio Tinto, 2023) and likely to occur at Mesa F (Biota, 2018). Additionally, PLNB was recorded within breakaway habitat southeast of Mesa G, however, no suitable roosting caves were identified (Biota, 2018). The application area occurs within 750 metres of a roost, recorded in 2021, named 'Lower Robe River' potentially occurring adjacent area D (Bat Call WA, 2017; Rio Tinto, 2017; GIS Database).

Mesa C and G intersect the Robe River (Rio Tinto, 2018; GIS Database). Major river habitats are considered significant as they contain a complexity of habitats and both permanent and semi-permanent pools. Suitable foraging habitat occurs within the application area along the Robe River, breakaway and gully habitats. The applicant provided additional information of 97 recorded cave and overhang locations with buffers around these areas (Robe River Limited, 2025).

Northern quoll

The northern quoll occupies a range of habitats, with a strong preference for complex rocky areas within the Pilbara region (DNREAS, 2010). Daytime den sites are essential for shelter and protection from predators and harsh weather, and are typically found in rocky outcrops, tree hollows, logs, termite mounds, and goanna burrows (DNREAS, 2010).

A record of northern quoll (scat) was identified within the amendment area at Mesa A (Rio Tinto, 2024). Northern quolls have been recorded multiple times across Mesa B and Mesa C (MWH, 2015a). Several records also exist within the gorge habitat on the southern face of Mesa D, although fewer than those documented at Mesa C and Mesa F (Rio Tinto, 2023). Additionally, six records have been documented on the southern face of Mesa G (Biota, 2018). DBCA has recorded high activity of northern quolls on the top mesa tops during the night (DBCA, 2024). The species is considered to occur within the application area for denning, foraging, and dispersal.

Small mammals

The brush-tailed mulgara is mostly found in sandy/dune habitat (Menkhorst and Knight, 2011). This species has been recorded adjacent the application area (Rio Tinto, 2024). There is potential for this species to occur within the application area, however limited suitable habitat for this species occurs.

The long-tailed dunnart is known from remote and disparate locations throughout the arid zone in the Gibson Desert, southern Carnarvon Basin, Rangelands and Pilbara (Western Australian Museum, 2025a). Common habitat characteristics are described as elevated landforms such as hills, ridges, breakaways with sparse vegetation (Western Australian Museum, 2025a). Records of this species are patchy and limited, however where populations have been recorded, abundance of individuals is high (Western Australian Museum, 2025a). There is potential for this species to utilise habitat within the application area, however, has not previously been recorded within the application area (Biota, 2018, MWH, 2015a; Rio Tinto, 2024).

The northern short-tailed mouse occurs across northern Australia, from the Pilbara in the west to Cape York Peninsula in the east (Aplin et al., 2016). This species is found in areas of open tussock and hummock grassland, *Acacia* shrubland and savanna woodland, on alluvial clay or sandy soils (Aplin et al., 2016). There is potential for this species to occur within the application area, however limited suitable habitat occurs. This species has not been recorded during previous fauna surveys (Biota, 2018; MWH, 2015a; Rio Tinto, 2024).

The Western pebble-mound mouse has a distribution through the non-coastal, central and eastern parts of the Pilbara, with large populations recorded in the major national parks of the region (Burbidge, 2016). This species is found in areas of rocky, hummock grassland with little or no soil and an overstorey of *Acacia* (Burbidge, 2016). This species has been recorded within the application area (Biota, 2018; MWH, 2015a; Rio Tinto, 2024).

Reptiles

The Gane's blind snake is restricted to the Pilbara region, typically found between Newman and Pannawonica (Wilson and Swan, 2021). This species is generally associated with moist gullies and gorges (Wilson and Swan, 2021). Suitable habitat occurs within the application area and is considered likely to occur, however has not previously been recorded within the application area (Biota, 2018; MWH, 2015a; Rio Tinto, 2024).

The lined soil-crevice skink has a distribution encompassing most of the western Pilbara from Dampier Peninsula, Pannawonica and Karijini National Park (Wilson and Swan, 2021). This species is associated with spinifex-dominated areas near riparian vegetation, where it forages in leaf litter (Wilson and Swan, 2021). Suitable habitat occurs within the application area and is considered likely to occur, however has not been previously recorded within the application area (Biota, 2018; MWH, 2015a; Rio Tinto, 2024).

The Pilbara olive python is a subspecies of olive python that is endemic to the Pilbara and northern Gascoyne regions (Northover et al., 2023). Common habitat characteristics for this species are rocky gorges, gullies, and permanent waterholes (Northover et al., 2023). During warmer months, Pilbara olive python is typically encountered in riparian vegetation where they utilise water bodies to hunt and ambush prey from a submerged position, while other times of the year they are generally found in rocky habitats (Commonwealth of Australia, 2008). Minimal suitable habitat occurs at Mesa A, however, may be a transient visitor due to Warrambo Creek that is within one kilometre of the application area (Astron, 2017b; MWH, 2015a). One Pilbara olive python was recorded near the application area at an ephemeral water pool of the Robe River at Mesa B (MWH, 2015a). Pilbara olive python is considered likely to occur at Mesa F and Mesa G (Biota, 2018). Given the Robe River intersects the application area at Mesa G and consists of riparian vegetation, semi-permanent and permanent pools, this is considered critical habitat for the Pilbara olive python (Biota, 2018).

Birds

The grey falcon is an elusive species distributed through central, northern and north-western Australia, associated with arid to semi-arid lowland plains, particularly *Acacia* shrublands crossed by tree-lined watercourses (Commonwealth of Australia, 2008). The grey falcon has been recorded within 11 kilometres of the application area (Rio Tinto, 2024).

The peregrine falcon is found across Australia, and typically nests on rocky ledges in tall, vertical cliff faces and gorges, or in tall trees associated with drainage lines (Australian Museum, 2019). There are two local records approximately 40 kilometres southeast of the application area (GIS Database).

The red goshawk inhabits open-forest and woodland, especially along streams with one local record along the Robe River (Menkhorst et al., 2019; GIS Database). While suitable habitat for this species occurs within the application area, records for this species are typically from the Kimberley region, with only one record from the Pilbara region (GIS Database).

Eleven migratory bird species have been recorded within the local surrounds as listed in Appendix B.3 (GIS Database). Six of these species have the potential to occur within the application area due to suitable habitat. The eastern portion of the application area intersects the Robe River that contains a perennial lake (GIS Database). The habitat within the application area may support foraging habitat migratory bird species, however given the habitat extends beyond the application area and migratory birds do not breed in Australia, it is unlikely these species will be significantly impacted by the proposed clearing.

Fish

The blind cave eel is known from three localities; Cape Range peninsula, Barrow Island and Bungaroo Creek (Biota, 2019; GIS Database). The blind cave eel has been recorded four kilometres east of the application area near Mesa B in the Robe River (Biota, 2019; Rio Tinto, 2024).

The Fortescue grunter is only known from the Fortescue, Robe and Ashburton systems and considered endemic to the region (Astron, 2017a). However, it is considered to be reasonably common within its range and has been recorded from adjacent Mungarathoona creek and the Robe River between Mesa B and Mesa G (Astron, 2017a). Two areas intersect the Robe River at Mesa C and G (GIS Database), with Mesa G consisting of riparian vegetation communities that are sensitive to hydrological change (Rio Tinto, 2018; mapped in Appendix J).

Invertebrates

The Pilbara threadtail is a species of damselfly occurring in the Pilbara inhabiting permanent streams and pools with a very restricted range (ALA, 2025; GIS Database). One record from 2010 occurs along the Robe River approximately 15 kilometres east of the application area, however the remaining records are from 95 kilometres east at Palm Pool intersecting the Fortescue and mill stream systems (GIS Database).

Stygofauna

- *Nedsia hurlberti* (Hurlbert's freshwater amphipod, EN)
- *Nedsia sculptilis* (a freshwater amphipod, EN)

There are two species of endangered stygofauna that have been recorded within 15 kilometres of the application area (GIS Database). However, the distribution of these two species is restricted to Barrow Island and are not known to occur on the mainland (DBCWA, 2025a; King et al., 2022). It is assumed that the records for these species have been incorrectly identified and may require further investigation.

Troglobitic fauna

Troglobitic fauna are a group of subterranean fauna that are air-breathing and living in caves and voids below the surface of the earth (EPA, 2016b). They occur in the vadose zone that extends from two metres below ground to the watertable (Clark et al., 2021). The western part of Robe River catchment is known as the Robe Valley subterranean fauna hotspot (Clark et al., 2021). Seven threatened and priority species occur within and adjacent the application area (Western Australian Museum, 2025b; GIS

Database). Two PECs that intersect the application area are associated with troglofauna (detailed in 3.2.1). Additionally, there is a large number of troglofaunal species that have been recorded at Mesa A, B and C that are not conservation listed (Clark et al., 2021).

- Linnaeus' pseudoscorpion was described in 2008 and has only been found within an iron-bearing pisolite mesa and co-occurs with *Ideoblothrus pseudoscorpion* (Mesa A), however, differs in size (Harvey and Leng, 2008). Only one record occurs for this specimen that occurs within 200 metres of the application area and is only known to occur at Mesa A (GIS Database).
- *Ideoblothrus pseudoscorpion* (Mesa A) has only been recorded once, within 200 metres of the application area at Mesa A (Western Australian Museum, 2025b; GIS Database). Only one juvenile specimen was recorded and is now considered as indeterminate (Western Australian Museum, 2025b).
- Mesa A *Lagynochthonius pseudoscorpion* has been recorded 19 times, within 200 metres of the application area at Mesa A (GIS Database).
- Mesa A *draculoides* has been recorded 177 times, within 200 metres of the application area at Mesa A (GIS Database).
- Mesa B/C *draculoides* has been recorded 148 times within the application area at Mesa B and Mesa C and 53 times outside of the application area in the local surrounds (GIS Database). Mesa B and Mesa C consist of a restricted clearing condition, however, have been disturbed by mining activities approved under Ministerial Statement 1112.
- Mesa G *draculoides* has been recorded 35 times within the application area at Mesa G (GIS Database). No records occur outside of the application area (GIS Database).
- *Tyrannochthonius pseudoscorpion* (Mesa A) has only been recorded once, within 150 metres of the application area at Mesa A (Western Australian Museum, 2025b; GIS Database). Only one specimen has been recorded and not much is known about this species (Western Australian Museum, 2025b).

Mesa A *draculoides*, Mesa B/C *draculoides* and Mesa G *draculoides* mapped distribution can be found in Appendix I (Abrams and Harvey, 2015).

Conclusion

Based on the above assessment, the proposed clearing will result in the following impacts:

Ghost bat: large permanent populations are known to occur within the application area, including critical breeding habitat and foraging habitat.

PLNB: it is unlikely roosting or breeding habitat occurs within the application area; however, caves may be utilised as night roosts or temporarily while foraging. It is likely this species is a transient visitor and forages within the application area.

Northern quoll: this species is known to occur within the application area and would likely use habitats for denning, dispersal and foraging.

Small mammals:

- brush-tailed mulgara, long-tailed dunnart and Northern short-tailed mouse: there is potential for these species to occur within the application area, however, limited suitable habitat is available, therefore unlikely to be significantly impacted by the proposed clearing.
- Western pebble-mound mouse: it is unlikely this species will be significantly impacted by the proposed clearing, however active mounds should be avoided, where practicable.

Reptiles:

- Gane's blind snake and lined soil-crevice skink: suitable habitat occurs within the application area, and both these species are considered likely to occur.
- Pilbara olive python: this species is likely to occur within application area and critical habitat occurs within gorge/gully habitat and riparian vegetation surrounding the Robe River.

Birds: there is potentially suitable nesting and foraging habitat within the application area for grey falcon, peregrine falcon, red goshawk and numerous migratory birds, particularly within the riparian vegetation along the Robe River and gorge/gully habitat.

Fish: the blind cave eel and Fortescue grunter are both likely to occur within the application area, primarily within pools along the Robe River. Clearing riparian vegetation that is sensitive to hydrological change has the potential to impact these species.

Invertebrates:

- Pilbara threadtail: suitable habitat for this species to occur within the application area, however given the distance to known records, it is unlikely this species will be impacted by the proposed clearing.
- stygofauna (*Nedsia hurlberti* and *Nedsia sculptilis*): these species are unlikely to occur and not likely to be impacted.
- all troglofaunal records that occur within the application area are within the restricted clearing area. Extractive activities that contribute to disturbances occurring over the application area are managed under Ministerial Statement 1112. Mining exclusion zones have been established under Ministerial Statement 1112 surrounding Mesa A, B and C that partially intersect the application area and extend beyond the boundary.

Conditions

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

- undertake slow, progressive one-directional clearing, in daylight hours to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity and minimise impacts on nocturnal species;
- restricted clearing condition – no clearing within 25 to 50 metres from bat caves and overhangs;
- restricted clearing condition – no clearing within Mesa edges, breakaway, gully and Robe River groundwater dependent vegetation, except for the purpose of groundwater monitoring bores, surface water monitoring equipment and access tracks; and
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the application area within 12 months of clearing to ensure vegetation and fauna habitat is not permanently lost.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application for CPS 6689/7 was advertised on 9 August 2024, and CPS 4343/4 was advertised on 29 November 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to these applications.

There is one native title claim (WCD2018/003) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group (Kuruma Marthudunera Part B). There is one Indigenous Land Use Agreement (WI2012/006) registered between Hamersley Iron Pty Ltd and Kuruma Marthudunera People, inclusive of Robe River Limited. 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 40 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.

Relevant mining projects intersecting the application area that involve other agencies and may contribute to cumulative disturbances:

- Extension of Mesa A Warramboe Iron Ore Project (EPBC 2016/7843) was referred to the Commonwealth Department of Environment and Energy (now Department of Climate Change, Energy, Environment and Water (DCCEEW)) on 12 December 2016. Conditional approval granted 16 October 2019.
- Robe Valley Iron Ore Mine Project (2025/10135) was referred to the DCCEEW on 11 March 2025 and is under assessment.
- Mesa A / Warramboe Iron Ore Mining Project (Mesa A Hub Revised Proposal) (Ministerial Statement 1112) was referred to the Environmental Protection Authority (EPA) on 14 November 2016. Conditional approval granted 21 August 2019.
- Robe Valley Iron Ore Mine Project (2494) was referred to the EPA on 6 March 2025 and is currently under assessment.

It is noted that the proposed clearing may impact on ghost bat, Northern quoll, Pilbara leaf-nose bat, Pilbara olive python, grey falcon, red goshawk, blind cave eel, which are a protected matter under the EPBC Act. The proponent may be required to refer the project to the (Federal) Department of Climate Change, Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

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. Additional information provided by applicant (Robe River Limited, 2025)

Date	Summary of comments	Consideration of comment
28 February 2025	The applicant provided amended shapefile boundary to reflect an increase in boundary of 9.61 hectares.	This information was incorporated as part of the amendment and detailed in 1.2 Description of clearing activities.
26 March 2025	Updated amendment of purpose to include fauna/flora monitoring access; groundwater/hydrogeological monitoring access; infrastructure access; and Aboriginal Heritage survey/access.	
10 July 2025	The applicant agreed to amalgamate CPS 4343/4 and CPS 6689/7 to allow the Department to assess impacts together due to overlapping application area.	
10 July 2025	<p>The applicant proposed the areas within the application area consisting of sensitive groundwater dependent vegetation associated with the Robe River surrounding Mesa G are utilised for tracks, to support monitoring programs and survey activities.</p> <p>The applicant stated all known records of <i>Rhynchosia bungarensis</i> (P4) will be avoided.</p> <p>The applicant estimated up to 1,000 individuals of <i>Triodia pisolitica</i> (P3) may be directly impacted from the proposed clearing.</p> <p>The applicant noted that Biologic (2023) confirms <i>Triodia pisolitica</i> occurs in this location and further analysis of the species composition will be required to determine if the associated PEC occurs in these locations. Any new locations of the PEC identified as part of the final survey report will be placed in a restricted layer on the internal company database, with review and avoidance of PEC prior to clearing.</p>	This information was used during the assessment of Principle (a) and Principle (b).
30 September 2025	The applicant provided shapefiles for exclusion zones consistent with Ministerial Statement 1112.	This information was incorporated as a permit condition for the protection of fauna and <i>Triodia pisolitica</i> habitat.
26-28 November 2025	<p>The applicant provided shapefiles for</p> <ul style="list-style-type: none"> • amalgamated CPS 6689/7 and CPS 4343/4 area; • new records of priority flora identified within the application area since the application was submitted; • cave and overhang locations within the application area and the adjacent 100 metre surrounds; and • cave and overhang avoidance buffers. <p>The applicant provided amalgamated maps for broad scale vegetation types and broad scale fauna habitat types mapped over the application area.</p> <p>The applicant provided the number of new priority flora individual recorded within the application area, proposed impacts and proposed risk level to each species.</p> <p>The applicant estimated up to 5,000 individuals of <i>Triodia pisolitica</i> (P3) may be directly impacted from the proposed clearing.</p>	This information was used during the assessment of Principle (a) and Principle (b).

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia adjacent to the existing Mesa A / Warranboo Iron Ore Project (GIS Database). The predominant land use in the region is grazing of native pastures, Unallocated Crown Land and Crown reserves, Aboriginal lands and reserves, conservation, mining activities and urban development (CALM, 2002).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages, however forms part of a series of isolated mesas occurring in the Robe valley in the Pilbara region (DBCA, 2025a; GIS Database).
Conservation areas	The nearest conservation area is Cane River Conservation Park located approximately 23 kilometres southwest of the application area (GIS Database).
Vegetation description	The application area occurs within the Hamersley (PIL03) and Roebourne (PIL04) subregions of the Pilbara bioregion (GIS Database). The vegetation of the application area is broadly mapped as the following Beard vegetation associations: 29, 82, 93, 583, 600, 604, 605 and 620 (detailed in decision reports CPS 6689/6 and CPS 4343/3).

	<p>There are 83 vegetation associations that have been recorded within the application area (detailed in decision reports CPS 6689/6 and CPS 4343/3), with an additional one new vegetation association described in the amended boundary area (Rio Tinto, 2024):</p> <ul style="list-style-type: none"> • EIAatAarTw: <i>Eucalyptus leucophloia</i> low scattered trees over <i>Acacia atkinsiana</i> (<i>A. arida</i>) open shrubland to tall shrubland over <i>Triodia wiseana</i> hummock grassland (0.8 hectares), <p>The vegetation types within the application area have been consolidated into a map derived from a number of consultant and internal ecological studies over 20 years (Robe River Limited, 2025; map in Appendix F).</p>
Vegetation condition	Aerial imagery indicates the vegetation within the proposed clearing area is in Excellent to Completely Degraded (Trudgen, 1991) condition. The full Trudgen (1991) condition rating scale is provided in Appendix D.
Climate and landform	The application area is mapped within elevations of 50 to 180 meters Australian Height Datum (GIS Database). The climate for the Pilbara region is semi-arid to tropical with an annual average rainfall of approximately 404.4 millimetres recorded at Pannawonica (BoM, 2025; CALM, 2002).
Soil description and land degradation risk	<p>The land systems are mapped, and soils described as (DPIRD, 2025; Van Vreeswyk et al., 2004; GIS Database):</p> <ul style="list-style-type: none"> • Boolgeeda system: stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands. This system covers approximately 293.79 hectares of the application area and is not susceptible to erosion. • Cane system: alluvial plains and flood plains supporting snakewood shrublands, soft and hard spinifex grasslands and tussock grasslands. This system covers approximately 253.77 hectares of the application area. Flood plains with duplex soils and gilgai plains with few surface mantles are highly susceptible to erosion if vegetation is depleted. • Capricorn system: hills and ridges of sandstone and dolomite supporting shrubby hard and soft spinifex grasslands. This system covers approximately 69.70 hectares of the application area. Stoniness confers resistance to erosion. • Newman system: rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands. This system covers approximately 1,761.43 hectares of the application area and is not generally prone to erosion. • Peedamulla system: gravelly plains supporting hard spinifex grasslands and minor snakewood shrublands. This system covers approximately 2,480.25 hectares of the application area. The tussock grasslands and grassy snakewood shrub communities on the system are prone to degradation. • River system: active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands. This system covers approximately 367.89 hectares of the application area and has a high or very high susceptibility to erosion if vegetation cover is removed. • Robe system: low plateaux, mesas and buttes of limonite supporting soft spinifex and occasionally hard spinifex grasslands. This system covers approximately 2,549.83 hectares of the application area and is not generally susceptible to vegetation degradation or erosion. • Sherlock system: Stony alluvial plains supporting snakewood shrublands with patchy tussock grasses and spinifex grasslands. This system covers approximately 81.34 hectares of the application area and is not generally susceptible to vegetation degradation or erosion. • Stuart system: gently undulating stony plains supporting hard and soft spinifex grasslands and snakewood shrublands. This system covers approximately 112.24 hectares of the application area. • Urandy system: Stony plains, alluvial plains and drainage lines supporting shrubby soft spinifex grasslands. This system covers approximately 37.58 hectares of the application area and most of the system is not susceptible to erosion or vegetation degradation.
Waterbodies	The desktop assessment and aerial imagery indicated that one major, non-perennial river, Robe River intersects the eastern portion of the application area and consists of semi-permanent and permanent pools, and several ephemeral drainage lines (Biota, 2018; GIS Database).
Hydrogeography	The application area is located within Pilbara Ground Water Area and Pilbara Surface Water Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database). The nearest Public Drinking Water Source Area (PDWSA) is Bungaroo Creek Water Reserve, located approximately 8.5 kilometres southeast of the application area (GIS Database). There are no Wetlands of International Importance or Nationally Important Wetlands that occur within the application area or surrounding area (50 kilometres) (GIS Database). The application area intersects seven aquifers and the Robe paeleovalley (GIS Database). The mapped groundwater salinity is 500-1,000 milligrams per litre total dissolved solids (mg/TDS) which is described as marginal, with approximately 10 hectares mapped as 3,000-7,000 mg/TDS) in the northwestern portion of the application area, which is described as saline (BoM, 2019; GIS Database).
Flora	There are no records of threatened flora within the application area or local surrounds (50 kilometres) (Rio Tinto, 2024; GIS Database). There are records of five priority flora within the application area (Rio Tinto, 2024; Robe River Limited, 2025) and 22 within the local surrounds (50 kilometres) (GIS Database). A species list of priority flora species that occur within the application area and local surrounds is detailed in Appendix B.2.

Ecological communities	<p>There are no records of Threatened Ecological Community (TEC) within the application area or the local surrounds (50 kilometres) (Rio Tinto, 2024; GIS Database). There are records of three Priority Ecological Communities (PECs) that occur within the application area (GIS Database):</p> <ul style="list-style-type: none"> • Subterranean invertebrate communities of mesas in the Robe Valley region (Priority 1) • Subterranean invertebrate community of pisolitic hills in the Pilbara (Priority 1) • <i>Triodia pisolitica</i> (previously <i>Triodia</i> sp. Robe River) assemblages of mesas of the West Pilbara (Priority 3) <p>Further details are outlined in Appendix B.4.</p>
Fauna	<p>There are 10 conservation significant fauna species that have been recorded within the application area (GIS Database). There are 30 records of conservation significant fauna that have been recorded within the local surrounds (GIS Database). A species list of threatened and priority fauna that occur within the application area and local surrounds is detailed in Appendix B.3</p>
Fauna habitat	<p>Seventeen fauna habitat types have been recorded within the application area as detailed in previous decision reports CPS 6689/6 and 4343/3: <i>Acacia</i> on stony plain, creek line, drainage, gullies, hardpan, hills and slope, major river, mesa breakaway, mesa plateau/mesa tops, minor rocky gullies, plains, rocky mesa edges, rocky slopes, scree slope, steep stony slope, stony hills and rises, and stony plain.</p> <p>With an additional three fauna habitat types described in the amended boundary area (Rio Tinto, 2024):</p> <ul style="list-style-type: none"> • low hills and slopes (0.8 hectares) • minor drainage (0.7 hectares) • stony plain (4.6 hectares) and • disturbed (22.9 hectares) <p>The fauna habitat types within the application area have been consolidated into a map derived from a number of consultant and internal ecological studies over 20 years (Robe River Limited, 2025; map in Appendix G).</p>

B.2. Flora analysis table

Conservation significant flora recorded within 50 kilometres of the application area (Western Australian Herbarium, 1998-; GIS Database).

Species name	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)
Priority 1					
<i>Bothriochloa decipiens</i> var. <i>cloncurrans</i>	Possible	Possible	Possible	<31	1
<i>Triodia mallota</i>	Y	Possible	Y	<17	2
<i>Triodia</i> sp. Pannawonica shale (P.J. Davidson PJD 2026)	Possible	Y	Y	<12	1
Priority 2					
<i>Dicladantha glabra</i>	Y	Y	Y	<16	22
<i>Trianthema</i> sp. Python Pool (G.R. Guerin & M.E. Trudgen GG 1023)	N	N	N	<33	9
Priority 3					
<i>Abutilon</i> sp. Onslow (F. Smith s.n. 10/9/61)	Y	Y	Y	0	14
<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	Y	Possible	Y	<27	45
<i>Eragrostis surreyana</i>	Y	Possible	Y	<19	11
<i>Euphorbia australis</i> var. <i>glabra</i>	N	N	N	<24	23
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>	N	N	Y	<6	17
<i>Euphorbia stevenii</i>	N	N	N	<27	17
<i>Goodenia obscurata</i>	Y	Y	Y	<3	29
<i>Gymnanthera cunninghamii</i>	N	N	Y	<43	45
<i>Indigofera rivularis</i>	Y	Y	Y	<12	65

Species name	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)
<i>Owenia acidula</i>	Y	Y	Y	<39	14
<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i>	Y	Y	Y	0	15
<i>Solanum</i> sp. Red Hill (S. van Leeuwen et al. PBS 5415)	Y	Y	Y	0	20
<i>Stylidium weeliwollii</i>	Y	Possible	Y	<12	29
<i>Swainsona thompsoniana</i>	N	Possible	Y	<27	32
<i>Terminalia supranitifolia</i>	Y	Possible	Y	<18	54
<i>Triodia basitricha</i>	Y	Y	Y	<48	43
<i>Triodia pisoliticola</i>	Y	Y	Y	0	65
<i>Triumfetta echinata</i>	N	N	N	<47	7
Priority 4					
<i>Livistona alfredii</i>	Y	Y	Y	<4	36
<i>Ptilotus mollis</i>	Y	Y	Y	<25	48
<i>Rhynchosia bungarensis</i>	Y	Y	Y	0	108
<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	Y	Possible	Y	<40	60

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

B.3. Fauna analysis table

Conservation significant fauna recorded within 50 kilometres of the application area (Menkhorst et al., 2019; Wilson and Swan, 2021; GIS Database).

Species name	Conservation status	Suitable habitat features?	Suitable vegetation type?	Distance of closest record to application area (km)
Mammal				
Brush-tailed mulgara (<i>Dasyercus blythi</i>)	P4	Y	Y	<12
Ghost bat (<i>Macroderma gigas</i>)	VU	Y	Y	0
Long-tailed dunnart (<i>Antechinomys longicaudata</i> formerly <i>Sminthopsis longicaudata</i>)	P4	Y	Y	<43
Northern short-tailed mouse (<i>Leggadina lakedownensis</i>)	P4	Y	Y	<14
Northern quoll (<i>Dasyurus hallucatus</i>)	VU	Y	Y	0
Pilbara leaf-nosed bat (<i>Rhinonictis aurantia</i> (Pilbara))	VU	Y	Y	0
Western pebble-mound mouse (<i>Pseudomys chapmani</i>)	P4	Y	Y	0
Reptile				
Gane's blind snake (Pilbara) (<i>Anilius ganei</i>)	P1	Y	Y	<2
Lined soil-crevice skink (Dampier) (<i>Notoscincus butleri</i>)	P4	Y	Y	<6
Pilbara olive python (<i>Liasis olivaceus barroni</i>)	VU	Y	Y	<1
Bird				
Common sandpiper (<i>Actitis hypoleucos</i>)	MI	Y	Y	<20
Crested tern (<i>Thalasseus bergii</i>)	MI	N (coastal)	N	<43
Eastern osprey (<i>Pandion cristatus</i>)	MI	N (coastal/large streams)	N	<43
Glossy ibis (<i>Plegadis falcinellus</i>)	MI	Y	Y	<43
Grey falcon (<i>Falco hypoleucos</i>)	VU	Y	Y	<11
Letter-winged kite (<i>Elanus scriptus</i>)	P4	Y	Y	<11
Night parrot (<i>Pezoporus occidentalis</i>)	CR	N	N	<6 (historical)

Species name	Conservation status	Suitable habitat features?	Suitable vegetation type?	Distance of closest record to application area (km)
Peregrine falcon (<i>Falco peregrinus</i>)	OS	Y	Y	<37
Oriental plover (<i>Charadrius veredus</i>)	MI	Y	Y	<27
Oriental pratincole (<i>Glareola maldivarum</i>)	MI	Y	Y	0
Red goshawk (<i>Erythrotriorchis radiatus</i>)	VU	Y	Y	<5
Ruddy turnstone (<i>Arenaria interpres</i>)	MI	N (coastal)	N	<43
Sharp-tailed sandpiper (<i>Actitis hypoleucos</i>)	MI	Y	Y	<20
Wedge-tailed shearwater (<i>Ardenna pacifica</i>)	MI	N (coastal)	N	<43
Whimbrel (<i>Numenius phaeopus</i>)	MI	N (coastal)	N	<43
Wood sandpiper (<i>Tringa glareola</i>)	MI	Y	Y	<5
Fish				
Blind cave eel (<i>Ophisternon candidum</i>)	VU	Y	N/A	<5
Fortescue grunter (<i>Leiopotherapon aheneus</i>)	P4	Y	N/A	<1
Invertebrate				
Ideoblothrus pseudoscorpion (Mesa A) (<i>Ideoblothrus</i> sp. 'Mesa A' (WAM T81374))	P1	Y (restricted to Mesa A)	N/A	<1
Linnaeus' pseudoscorpion (Mesa A) (<i>Ideoblothrus linnaei</i>)	P1	Y (restricted to Mesa A)	N/A	0
Mesa A Lagynochthonius pseudoscorpion (<i>Lagynochthonius asema</i>)	P1	Y (restricted to Mesa A)	N/A	0
Mesa A draculoides (<i>Draculoides anachoretus</i>)	VU	Y (restricted to Mesa A)	N/A	0
Mesa B/C draculoides (<i>Draculoides bythius</i>)	VU	Y (found at Mesa B and C)	N/A	0
Mesa G draculoides (<i>Draculoides gnophicola</i>)	VU	Y (found at Mesa G)	N/A	0
Mesa K draculoides (<i>Draculoides kryptus</i>)	VU	N (found at Mesa K)	N/A	<10
Middle Robe draculoides (<i>Draculoides mesozeirus</i>)	VU	N (restricted to Middle Robe Mesa)	N/A	<38
<i>Nedsia hurlberti</i> (Hurlbert's freshwater amphipod)	EN	N	N	<15
<i>Nedsia macrosculptilis</i> (a freshwater amphipod)	EN	N	N	<15
Pilbara threadtail (<i>Nososticta pilbara</i>)	P2	Y (streams and pools)	N/A	<29
Tyrannochthonius pseudoscorpion (Mesa A) (<i>Tyrannochthonius</i> sp. 'Mesa A' (WAM T81480))	P1	Y (restricted to Mesa A)	N/A	<1

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

B.4. Ecological community analysis table

Ecological communities recorded within 50 kilometres of the application area (GIS Database).

Community name	Conservation status	Suitable habitat features?	Suitable vegetation type?	Suitable soil type?	Extent of DBCA mapped occurrence within application area (ha)	Total extent of DBCA mapped occurrence (ha)
Sand sheet vegetation (Robe Valley)	Priority 1	N	N	Y	0	153.74
Subterranean invertebrate communities of mesas in the Robe Valley region	Priority 1	Y	N/A	Y	2,482.69	6,715.53
Subterranean invertebrate community of pisolitic hills in the Pilbara	Priority 1	Y	N/A	Y	1,286.65	6,498.13
<i>Triodia pisolitica</i> (previously <i>Triodia</i> sp. Robe River) assemblages of mesas of the West Pilbara	Priority 3	Y	Y	Y	9.43 ha	3,368.33

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u> The area proposed to be cleared contains conservation significant flora, fauna, habitats and ecological communities.</p>	At variance (changed from CPS 6689/6)	Yes <i>Refer to Section 3.2.1 and 3.2.2, above.</i>
<p><u>Principle (b):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</p> <p><u>Assessment:</u> The area proposed to be cleared contains foraging, roosting, breeding habitat for several conservation significant fauna.</p>	At variance (changed from CPS 6689/6)	Yes <i>Refer to Section 3.2.1 and 3.2.2, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u> The area proposed to be cleared is unlikely to contain Threatened flora species listed under the BC Act (Biologic, 2023; Rio Tinto, 2024; GIS Database).</p>	Not likely to be at variance (as per CPS 6689/6)	No
<p><u>Principle (d):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."</p> <p><u>Assessment:</u> The application area is not located within and known or mapped Threatened Ecological Communities (Rio Tinto, 2024; GIS Database).</p>	Not likely to be at variance (changed from CPS 6689/6)	No
Environmental value: significant remnant vegetation and conservation areas		

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (i):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</p> <p><u>Assessment:</u></p> <p>The nearest PDWSA is Bungaroo Creek Water Reserve, located approximately 8.5 kilometres southeast of the application area (GIS Database). Bungaroo Creek flows northward into the Robe River (Astron, 2017a). The proposed clearing is unlikely to deteriorate the water quality within this PDWSA.</p> <p>Mapped vegetation unit (EcEvAtrApyPITw) identified at Mesa G comprises of 235.3 hectares of groundwater dependent vegetation with varying levels of sensitivity to hydrographical change (Biota, 2018; Appendix J; Appendix K). This vegetation consists of <i>Eucalyptus camaldulensis</i>, which is known to be associated with areas of shallow groundwater (less than 10 metres) and areas typically inundated during flooding (DoW, 2012). Several vegetation associations have been mapped within the application area that are associated with drainage and creek lines. A number of permanent and semi-permanent pools occur along the stream where shallow sections of the aquifer intersect the river channel (Astron, 2017a; GIS Database).</p> <p>Potential impacts can be reduced by maintaining the following conditions:</p> <ul style="list-style-type: none"> • watercourse management condition requiring that surface water flows are not impacted by the proposed clearing and avoid riparian vegetation, where practicable; and • restricted clearing condition, with an increase in restricted areas allowing installation of groundwater monitoring bores, surface water monitoring equipment and tracks only within groundwater dependent vegetation surrounding the Robe River that is sensitive to hydrographical change. 	<p>May be at variance</p> <p>(changed from CPS 6689/6)</p>	<p>No</p>
<p><u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours within the application area and surrounding area, as well as the intersection of the Robe River, the proposed clearing may contribute to increased incidence or intensity of flooding, however given the purpose and extent of clearing, it is unlikely to be significant.</p> <p>Surface flow in the Robe River and tributary rivers is naturally ephemeral, typically only occurring in response to significant rainfall events and continuing for one to two months (Astron, 2017a).</p> <p>Potential impacts can be reduced by maintaining the following conditions:</p> <ul style="list-style-type: none"> • staged clearing condition to avoid areas being devoid of vegetation for extended periods; • watercourse management condition requiring that surface water flows are not impacted by the proposed clearing; and • restricted clearing condition, with an increase in restricted areas allowing only installation of groundwater monitoring bores, surface water monitoring equipment and tracks within groundwater dependent vegetation surrounding the Robe River. 	<p>May be at variance</p> <p>(changed from CPS 6689/6)</p>	<p>No</p>

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

Appendix E. Map of Rio Tinto broader Mesa project area

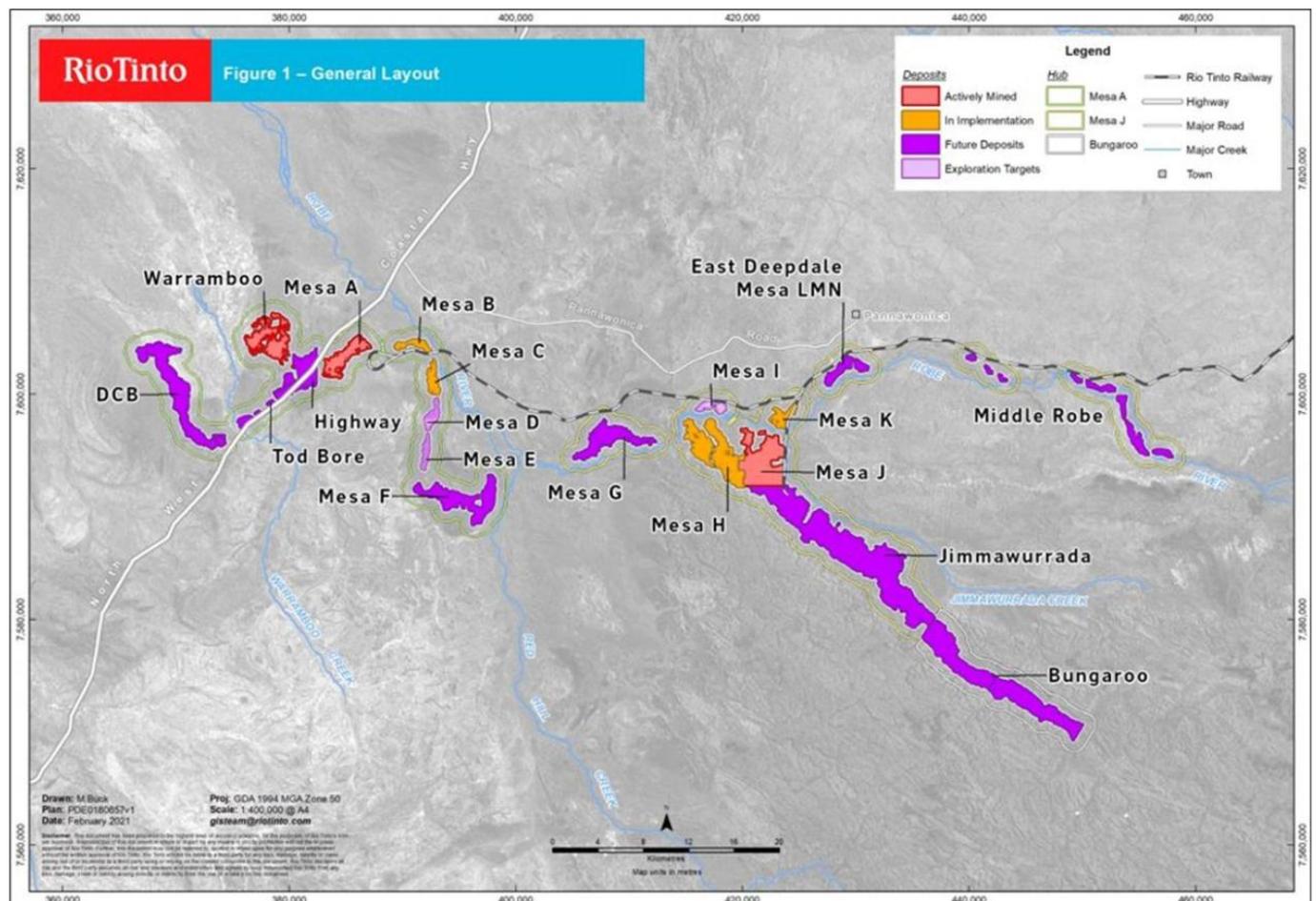


Figure 4. Map of the Rio Tinto broader Mesa project (Robe River Limited, 2025).

Appendix F. Map of consolidated broad scale vegetation types

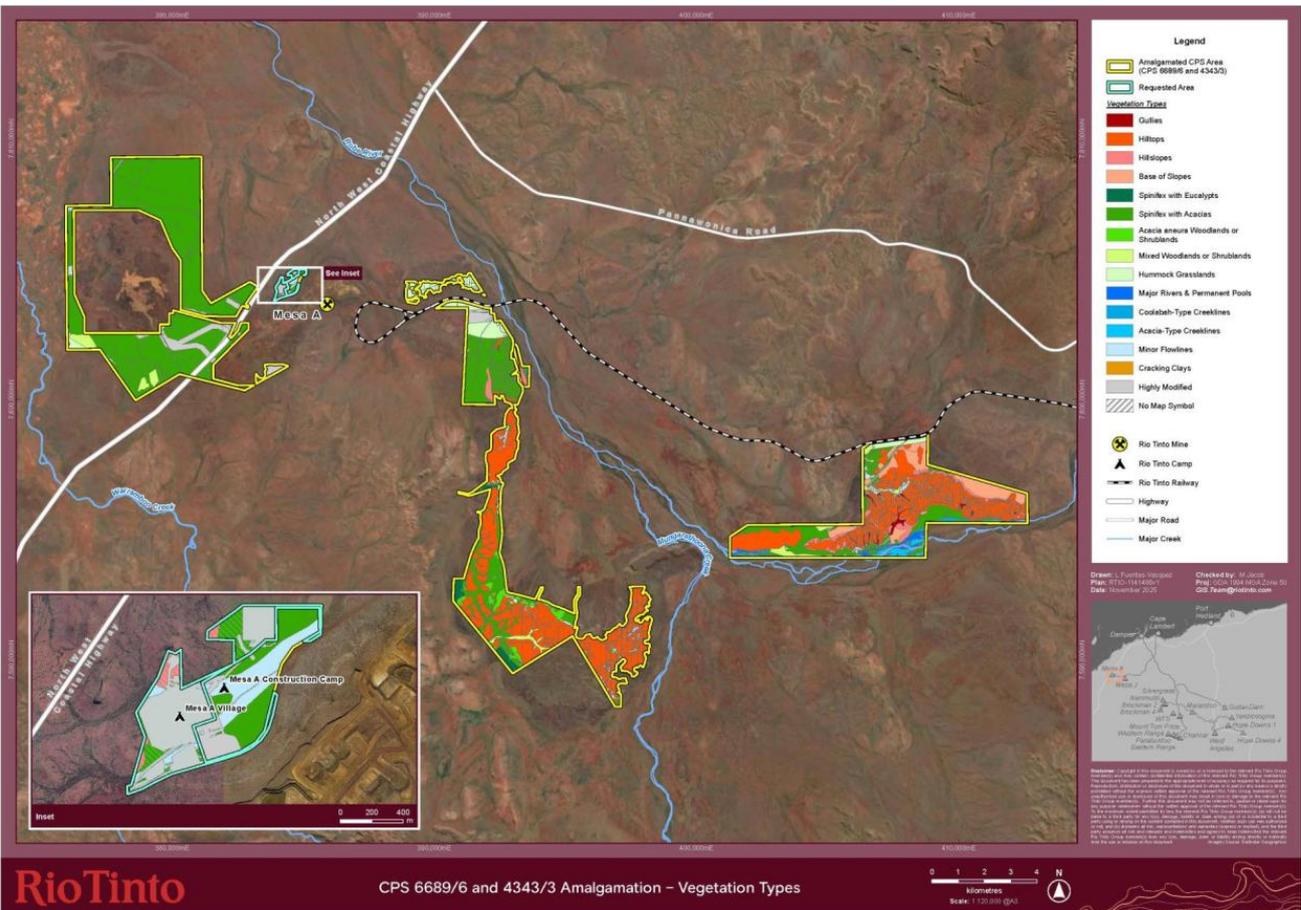


Figure 5. Consolidated broad scale vegetation types within the application area (Robe River Limited, 2025).

Appendix G. Map of consolidated broad scale fauna habitat types

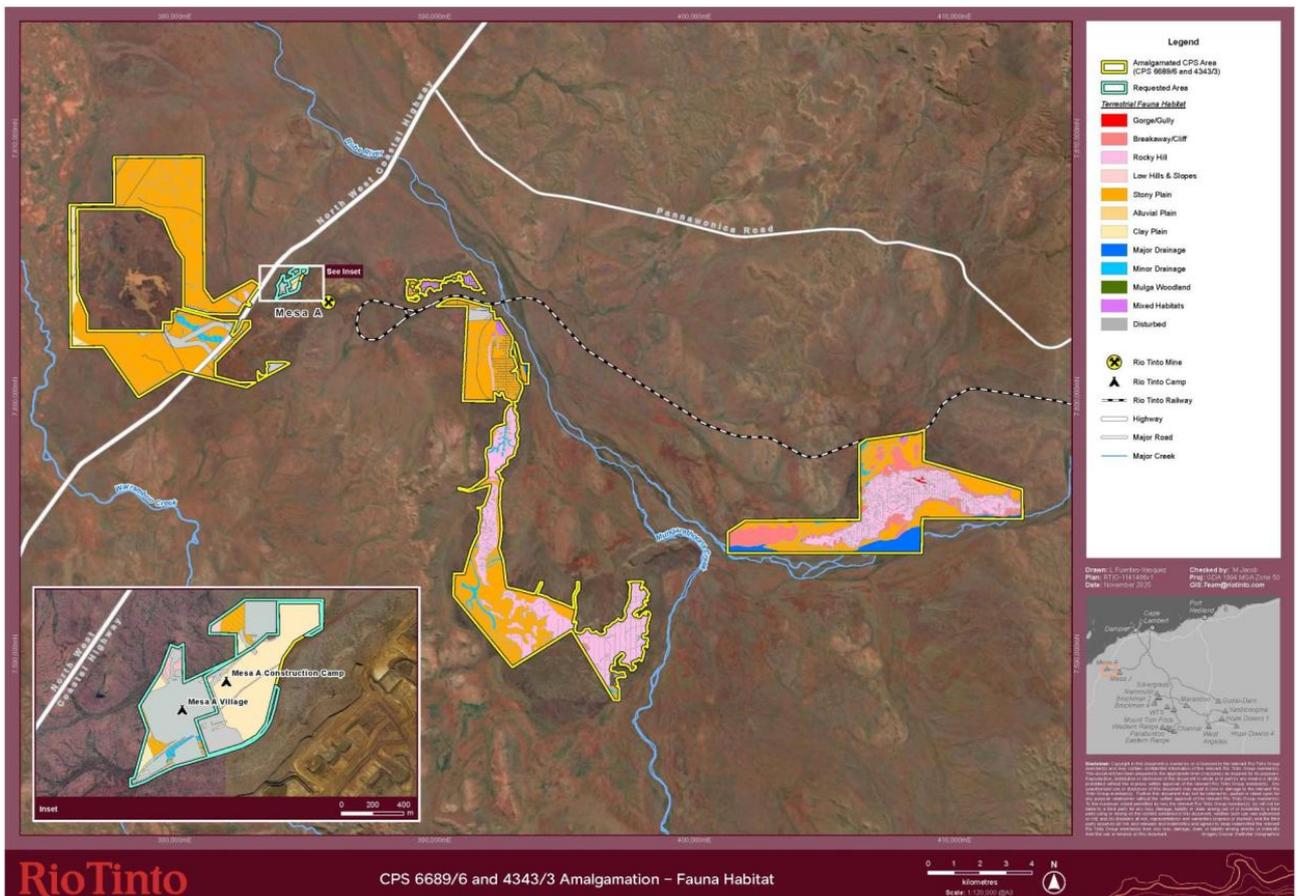


Figure 6. Consolidated broad scale fauna habitat types within the application area (Robe River Limited, 2025).

Appendix H. Representative photos of fauna habitat features

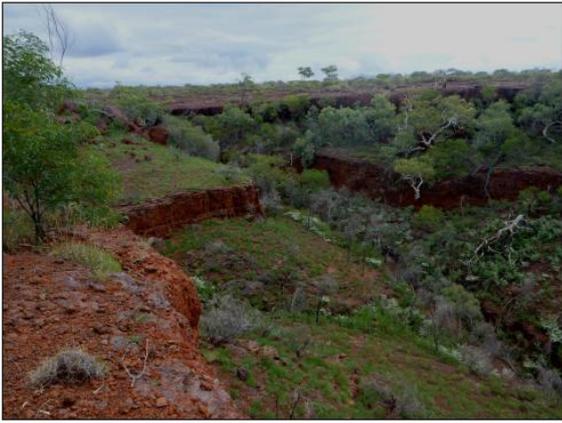


Photo 1: Gully at Mesa C (MHW, 2015b).



Photo 2: Robe River adjacent Mesa B and Mesa C (MHW, 2015a).



Photo 3: Mesa plateau at Mesa C (Biota, 2014).



Photo 4: Mesa edge at Mesa C (MHW, 2015a).

Appendix I. Distribution of *Draculoides* (formerly *Paradraculoides*) genus in the Robe Valley region

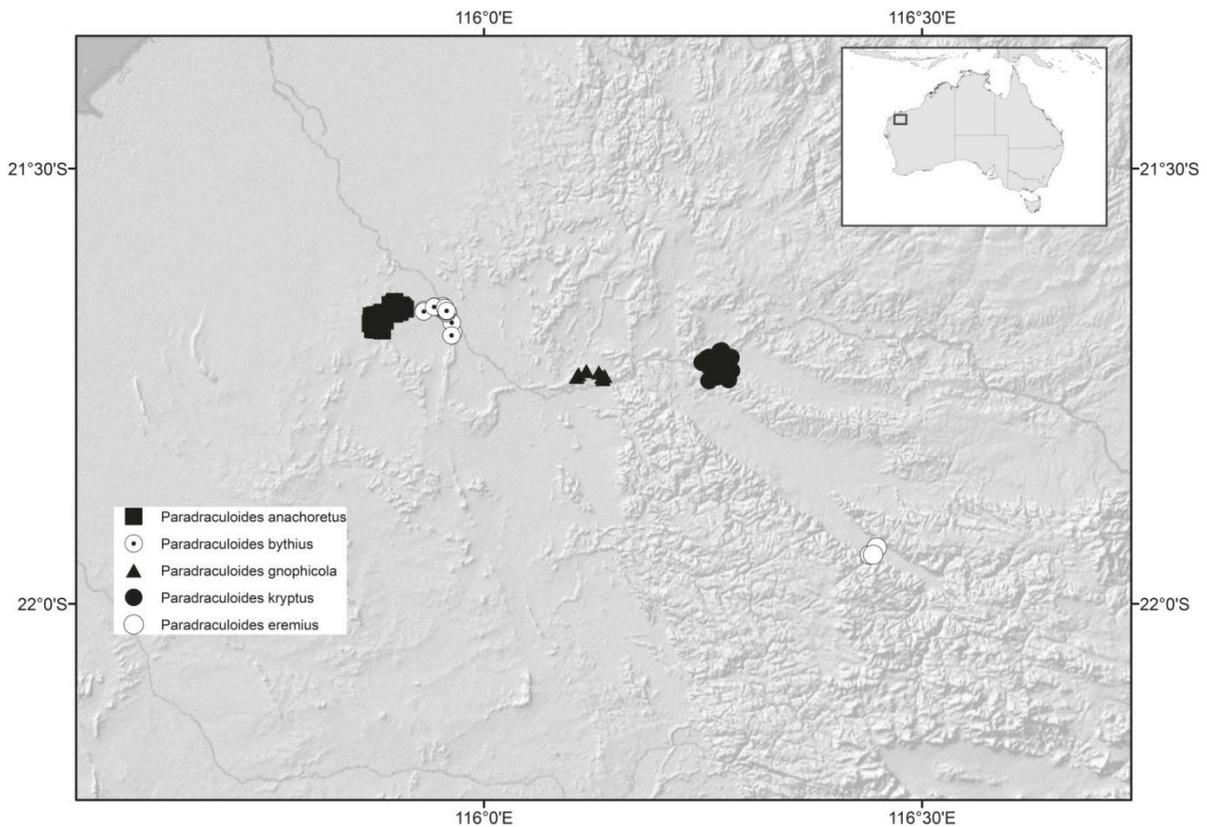


Figure 7. Distribution of *Draculoides* (formerly *Paradraculoides*) genus in the Robe Valley region (Abrams and Harvey, 2015).

Appendix J. Mapped riparian vegetation communities of the Robe River sensitive to hydrological change

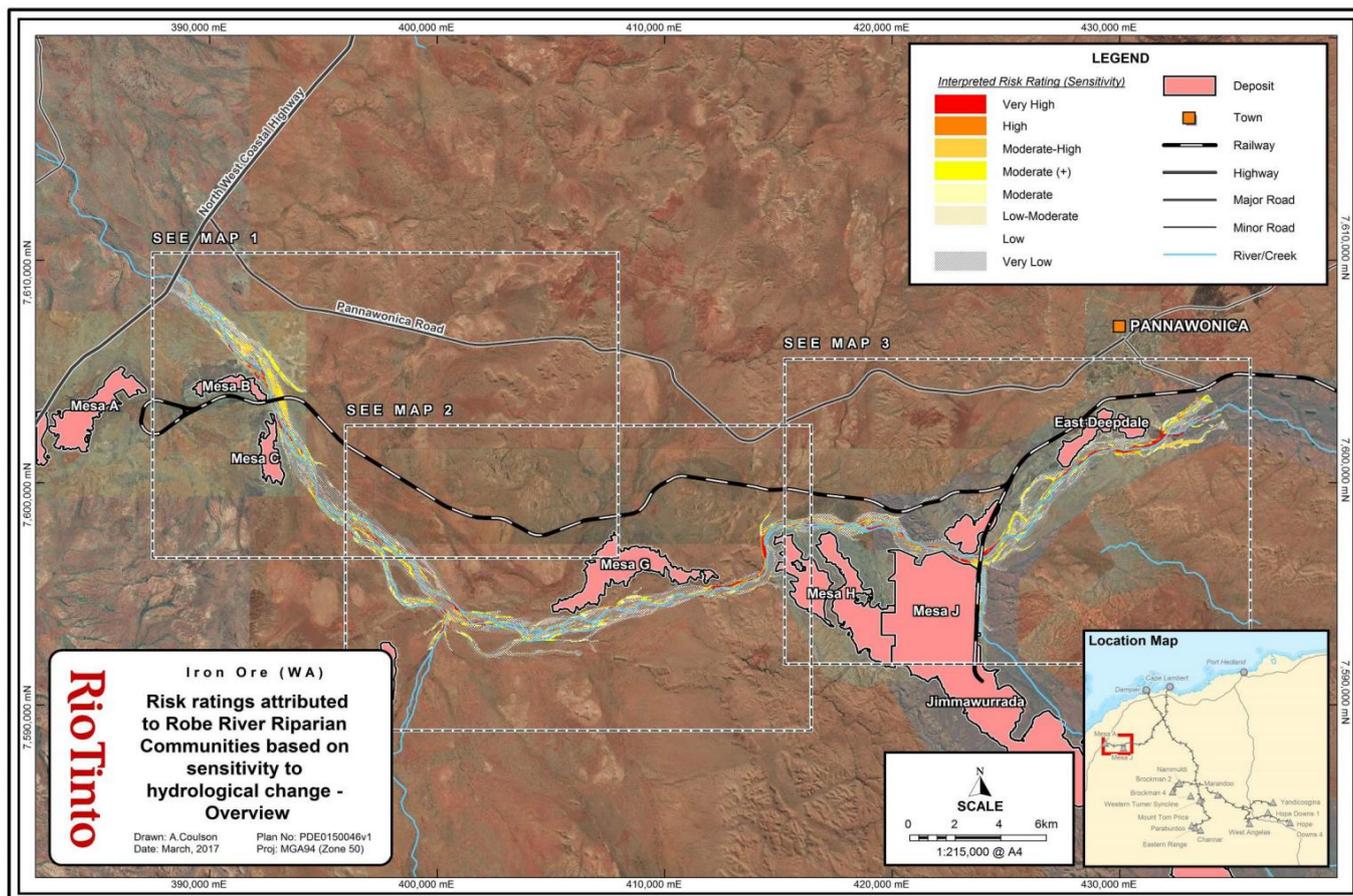


Figure 8: Mapped riparian vegetation communities of the Robe River sensitive to hydrological change (Rio Tinto, 2018)

Appendix K. Vegetation association and description

Amalgamation of vegetation associations previously described in CPS 6689/6 and CPS 4343/3.

Broad scale vegetation type	Vegetation association	Vegetation description
Vegetation of flood plains and drainage	ChCfEcTe	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia ancistrocarpa</i> mid open shrubland, over <i>Chrysopogon fallax</i> and <i>Eragrostis cumingii</i> tussock grassland with <i>Triodia epactia</i> sparse hummock grassland
Vegetation of flowlines	F1	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia tumida</i> var. <i>pilbarensis</i> tall open shrubland over <i>Triodia wiseana</i> open hummock grassland
Vegetation of hardpans/claypans	AanAsyTe	<i>Acacia ancistrocarpa</i> and <i>Acacia synchronicia</i> mid sparse shrubland over <i>Triodia epactia</i> open to sparse hummock grassland
	CcAanAiAsyTe	<i>Corymbia candida</i> low open woodland over <i>Acacia ancistrocarpa</i> , <i>Acacia inaequilatera</i> and <i>Acacia synchronicia</i> mid sparse shrubland over <i>Triodia epactia</i> hummock to open hummock grassland
Vegetation of hills	AacTw	<i>Acacia acradenia</i> open shrubland to open heath over <i>Triodia wiseana</i> hummock grassland
	AatTEuTw	<i>Acacia atkinsiana</i> , <i>A. inaequilatera</i> , <i>Petalostylis labicheoides</i> tall shrubland over <i>Tephrosia uniovulata</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
	AbTw	<i>Acacia bivenosa</i> scattered shrubs to open shrubland over <i>Triodia wiseana</i> hummock grassland
	AiAbTw	<i>Acacia inaequilatera</i> scattered tall shrubs over <i>A. bivenosa</i> scattered shrubs over <i>Triodia wiseana</i> hummock grassland
	AtuPIAacTw	<i>Acacia tumida</i> var. <i>pilbarensis</i> , (<i>Petalostylis labicheoides</i>) tall, closed scrub over <i>Acacia acradenia</i> low open shrubland over <i>Triodia wiseana</i> , (<i>Triodia</i> sp. Robe River (M.E. Trudgen et al. MET 12367)) very open hummock grassland
	EIGWAacTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Grevillea wickhamii</i> scattered tall shrubs to tall shrubland over <i>Acacia acradenia</i> scattered shrubs to shrubland over <i>Triodia wiseana</i> hummock grassland

Vegetation of hills and slopes	H1	<i>Acacia acradenia</i> scattered shrubs to open heath over <i>Triodia wiseana</i> hummock grassland
	H2	<i>Acacia arida</i> scattered shrubs to open heath over <i>Triodia wiseana</i> hummock grassland
	H3	<i>Acacia atkinsiana</i> tall shrubland over <i>Tephrosia uniovulata</i> open shrubland over <i>Triodia wiseana</i> mid-dense hummock grassland
	H4	<i>Acacia tumida</i> var. <i>pilbarensis</i> (<i>Petalostylis labicheoides</i>) tall, closed scrub over <i>Acacia acradenia</i> low open shrubland over <i>Triodia wiseana</i> (<i>Triodia</i> sp. Robe River (M.E. Trudgen et al. MET 12367)) very open hummock grassland
	H5	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia acradenia</i> open heath over <i>Triodia wiseana</i> hummock grassland
	H6	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia wiseana</i> , <i>Triodia</i> sp. Robe River (M.E. Trudgen et al. MET 12367) very open to open hummock grassland
Vegetation of mesa gullies	ChAarTw	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia arida</i> shrubland over <i>Triodia wiseana</i> open hummock grassland
	EIAtuTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia tumida</i> var. <i>pilbarensis</i> tall open shrubland over <i>Triodia wiseana</i> sparse hummock grassland
Vegetation of mesa plateau and rocky slopes	AarAbTw	<i>Acacia arida</i> and <i>Acacia bivenosa</i> mid open shrubland over <i>Triodia wiseana</i> hummock grassland
	AarTw	<i>Acacia arida</i> mid open shrubland over <i>Triodia wiseana</i> hummock grassland
	AatAanCtTw	<i>Acacia atkinsiana</i> and <i>Acacia ancistrocarpa</i> mid to low open to sparse shrubland over <i>Corchorus tectus</i> low open to sparse shrubland over <i>Triodia wiseana</i> sparse hummock grassland
	EIAarTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia arida</i> low open shrubland over <i>Triodia wiseana</i> open hummock grassland
	EIAbAsyTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia bivenosa</i> and <i>Acacia synchronicia</i> mid sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	EIAciTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia citrinoviridis</i> tall open shrubland over <i>Triodia wiseana</i> very open hummock grassland
Vegetation of mesas, hills and slopes	EITwTsr	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> scattered low trees over <i>Triodia wiseana</i> , <i>Triodia</i> sp. Robe River very open to open hummock grassland
Vegetation of minor creeks and drainage lines	AanAsclAatTwTe	<i>Acacia aneura</i> scattered low trees over <i>A. sclerosperma</i> , <i>A. atkinsiana</i> tall shrubland over <i>Triodia wiseana</i> , <i>T. epactia</i> hummock grassland
	ChAacTw	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia acradenia</i> open heath over <i>Triodia wiseana</i> open hummock grassland
	ChAtuTwTe	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia tumida</i> var. <i>pilbarensis</i> tall open scrub over <i>Triodia wiseana</i> , <i>T. epactia</i> open hummock grassland
	EIChPIGwAacTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> , <i>Corymbia hamersleyana</i> scattered low trees to low open woodland over <i>Petalostylis labicheoides</i> , <i>Grevillea wickhamii</i> tall open shrubland over <i>Acacia acradenia</i> open heath over <i>Triodia wiseana</i> hummock grassland
Vegetation of plains	AarAbTw	<i>Acacia arida</i> and <i>Acacia bivenosa</i> mid open shrubland over <i>Triodia wiseana</i> hummock grassland
	AatAbTe	<i>Acacia atkinsiana</i> open heath to tall shrubland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia epactia</i> hummock grassland
	AatAbTw	<i>Acacia atkinsiana</i> open tall shrubland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
	AatAbTw/AatAbTe	Mosaic of <i>Acacia atkinsiana</i> tall open shrubland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia wiseana</i> hummock grassland / <i>Acacia atkinsiana</i> open heath to tall shrubland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia epactia</i> hummock grassland
	AatCtTw	<i>Acacia atkinsiana</i> tall to mid open shrubland over <i>Corchorus tectus</i> low sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AbAanAatTw	<i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> , <i>Acacia atkinsiana</i> and <i>Acacia arida</i> mid open to sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AbAanAiTw	<i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> and <i>Acacia inaequilatera</i> mid sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AbTw	<i>Acacia bivenosa</i> mid sparse to open shrubland over <i>Triodia wiseana</i> hummock grassland
	AiAaAbTw	<i>Acacia inaequilatera</i> scattered tall shrubs over <i>Acacia ancistrocarpa</i> , <i>A. bivenosa</i> open shrubland to shrubland over <i>Triodia wiseana</i> hummock grassland
	AsclAbTeTw	<i>Acacia sclerosperma</i> tall open scrub over <i>A. bivenosa</i> open shrubland over <i>Triodia epactia</i> , <i>T. wiseana</i> open hummock grassland

	AsyAbAaTw	<i>Acacia synchronicia</i> , <i>A. bivenosa</i> , <i>A. ancistrocarpa</i> open shrubland over <i>Triodia wiseana</i> open hummock grassland
	AxTw	<i>Acacia xiphophylla</i> low woodland to tall shrubland over <i>Triodia wiseana</i> open hummock grassland
	ChAanTe	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia ancistrocarpa</i> mid sparse shrubland over <i>Triodia epactia</i> open hummock grassland
	ChAbAtrTw	<i>Corymbia hamersleyana</i> low isolated trees over <i>Acacia bivenosa</i> and <i>Acacia trachycarpa</i> mid sparse to open shrubland over <i>Triodia wiseana</i> hummock grassland to open hummock grassland
	ChAbTw	<i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> open shrubland to open heath over <i>Triodia wiseana</i> hummock grassland
	ChAbTw/AsyAbAaTw	Mosaic of <i>Corymbia hamersleyana</i> scattered low trees over <i>Acacia bivenosa</i> open shrubland to open heath over <i>Triodia wiseana</i> hummock grassland / <i>Acacia synchronicia</i> , <i>A. bivenosa</i> , <i>A. ancistrocarpa</i> open shrubland over <i>Triodia wiseana</i> open hummock grassland
	ChAbTwTe	<i>Corymbia hamersleyana</i> scattered low trees to low woodland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia wiseana</i> , <i>T. epactia</i> hummock grassland
	ChAtuTwTe	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia tumida</i> var. <i>pilbarensis</i> tall open scrub over <i>Triodia wiseana</i> , <i>T. epactia</i> open hummock grassland
	ChGrTuTw	<i>Corymbia hamersleyana</i> low open woodland over <i>Gossypium robinsonii</i> tall sparse shrubland over <i>Tephrosia uniovulata</i> and <i>Hibiscus sturtii</i> var. <i>campylochlamys</i> low sparse shrubland over <i>Triodia wiseana</i> and <i>Triodia epactia</i> open hummock grassland
	ChGwAtuAiTw	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia tumida</i> var. <i>pilbarensis</i> , <i>Acacia inaequilatera</i> and <i>Grevillea wickhamii</i> subsp. <i>macrodonta</i> mid open shrubland over <i>Triodia wiseana</i> sparse hummock grassland
	EIAaAarTw	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia atkinsiana</i> (<i>A. arida</i>) open shrubland to tall shrubland over <i>Triodia wiseana</i> hummock grassland
	P1	<i>Acacia atkinsiana</i> tall open shrubland over <i>Acacia bivenosa</i> open shrubland over <i>Triodia wiseana</i> hummock grassland
	P2	<i>Acacia inaequilatera</i> scattered tall shrubs over <i>Acacia ancistrocarpa</i> , <i>A. bivenosa</i> open shrubland to shrubland over <i>Triodia wiseana</i> hummock grassland
	P3	<i>Acacia inaequilatera</i> scattered tall shrubs over <i>Acacia ancistrocarpa</i> and <i>Acacia bivenosa</i> shrubland over <i>Acacia atkinsiana</i> low open shrubland over <i>Triodia wiseana</i> hummock grassland
	P4	<i>Acacia synchronicia</i> , <i>A. bivenosa</i> , <i>A. ancistrocarpa</i> open shrubland over <i>Triodia wiseana</i> open hummock grassland
	P5	<i>Eucalyptus leucophloia</i> scattered low trees over <i>Acacia trachycarpa</i> , <i>A. atkinsiana</i> , <i>A. arida</i> tall shrubland over <i>Triodia wiseana</i> hummock grassland
	P6	<i>Acacia xiphophylla</i> low woodland to tall shrubland over <i>Triodia wiseana</i> , <i>Triodia epactia</i> open hummock grassland
	P7	<i>Corymbia candida</i> scattered low trees to low open woodland over <i>Acacia ancistrocarpa</i> open shrubland over <i>Triodia epactia</i> hummock grassland
	P8	<i>Corymbia zygophylla</i> scattered low trees over <i>Acacia trachycarpa</i> , <i>Acacia ancistrocarpa</i> shrubland over <i>Triodia epactia</i> , <i>Triodia wiseana</i> hummock grassland
	Scald	<i>Triodia wiseana</i> , <i>T. epactia</i> scattered hummock grasses with scattered herbs
Vegetation of slopes	AarTwTRR	<i>Acacia arida</i> mid open shrubland over <i>Triodia wiseana</i> and <i>Triodia</i> sp. Robe River (M.E. Trudgen et al. MET 12367) hummock grassland
	AbAanAatTw	<i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> and <i>Acacia atkinsiana</i> mid open to sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	EIAarTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia arida</i> low open shrubland over <i>Triodia wiseana</i> open hummock grassland
Vegetation of stony plains	AanAbSspTe	<i>Acacia ancistrocarpa</i> and <i>Acacia bivenosa</i> mid open shrubland over <i>Sida</i> sp. <i>Pilbara</i> (A.A. Mitchell PRP 1543) low sparse shrubland over <i>Triodia epactia</i> open hummock grassland
	AatCtTw	<i>Acacia atkinsiana</i> tall to mid open shrubland over <i>Corchorus tectus</i> low sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AbAanAatTw	<i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> , <i>Acacia atkinsiana</i> and <i>Acacia arida</i> mid open to sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AbAanAiTw	<i>Acacia bivenosa</i> , <i>Acacia ancistrocarpa</i> and <i>Acacia inaequilatera</i> mid sparse shrubland over <i>Triodia wiseana</i> hummock grassland
	AsyAbAanTw	<i>Acacia synchronicia</i> , <i>Acacia bivenosa</i> and <i>Acacia ancistrocarpa</i> low to mid sparse shrubland over <i>Triodia wiseana</i> open hummock grassland

	AxBp	<i>Acacia xiphophylla</i> mid isolated shrubs over <i>Brachyachne prostrata</i> and <i>Sclerolaena costata</i> open herbland with <i>Triodia epactia</i> isolated hummock grasses
	AxTe	<i>Acacia xiphophylla</i> tall open shrubland over <i>Triodia epactia</i> open hummock grassland
	AxTw	<i>Acacia xiphophylla</i> tall open to sparse shrubland over <i>Triodia wiseana</i> open hummock grassland
	CcAanAbTe	<i>Corymbia candida</i> low open woodland over <i>Acacia ancistrocarpa</i> and <i>Acacia bivenosa</i> tall to mid open to sparse shrubland over <i>Triodia epactia</i> with occasional <i>Triodia wiseana</i> hummock grassland to open hummock grassland
	CcAanAiAsyTe	<i>Corymbia candida</i> low open woodland over <i>Acacia ancistrocarpa</i> , <i>Acacia inaequilatera</i> and <i>Acacia synchronicia</i> mid sparse shrubland over <i>Triodia epactia</i> hummock grassland
	ChAanTe	<i>Corymbia hamersleyana</i> low open woodland over <i>Acacia ancistrocarpa</i> mid sparse shrubland over <i>Triodia epactia</i> open hummock grassland
Vegetation of creeks and rivers	CcAciAaAbTwTe	<i>Corymbia candida</i> low open woodland over <i>Acacia citrinoviridis</i> tall open shrubland over <i>Acacia ancistrocarpa</i> , <i>A. bivenosa</i> open shrubland over <i>Triodia wiseana</i> , <i>T. epactia</i> hummock grassland
	EcEvAtrApyPITw	<i>Eucalyptus camaldulensis</i> woodland over <i>Eucalyptus victrix</i> low woodland over <i>Acacia trachycarpa</i> , <i>A. pyrifolia</i> , <i>Petalostylis labicheoides</i> tall open shrubland over mixed open herbland and <i>Triodia wiseana</i> very open hummock grassland
	EIAciTw	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> low open woodland over <i>Acacia citrinoviridis</i> tall open shrubland over <i>Triodia wiseana</i> very open hummock grassland

Appendix L. Sources of information

L.1. GIS datasets

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

- 10 metre contours (DPIRD-073)
- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- 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)
- Directory of Important Wetlands in Australia - Western Australia (DBCA-045)
- EPA Referred Significant Proposals (DWER-120)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Medium Scale Topo Contour (Line) (LGATE-015)
- Medium Scale Topo Elevation (Point) (LGATE-014)
- Medium Scale Topo Water (Line) (LGATE-018)
- Medium Scale Topo Water (Point) (LGATE-017)
- Medium Scale Topo Water (Polygon) (LGATE-016)
- Mineral Field Boundaries (DMIRS-005)
- Native Title (Determination) (LGATE-066)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Reserves (LGATE-227)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

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)

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Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
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	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

DBCAs (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.

DBCA (2023) Conservation Codes for Western Australian Ecological Communities. Department of Biodiversity, Conservation and Attractions, Western Australia:

Listed Ecological Communities

Assessment of the conservation status of ecological communities is carried out in accordance with the BC Act listing criteria and the requirements of [Ministerial Guideline Number 1](#) and [Ministerial Guideline Number 4](#) that adopt the use of the International Union for Conservation of Nature (IUCN) [Red List of Ecosystems Categories and Criteria](#).

CO Collapsed ecological communities

An ecological community listed by order of the Minister as collapsed under section 31(1) of the BC Act. As determined by criteria set out in section 32 of the BC Act, an ecological community is eligible for listing as a collapsed ecological community at a particular time if, at that time —

- (a) there is no reasonable doubt that the last occurrence of the ecological community has collapsed; or
- (b) the ecological community has been so extensively modified throughout its range that no occurrence of it is likely to recover —
 - (i) its species composition or structure; or
 - (ii) its species composition and structure.

CR Critically endangered ecological communities

A threatened ecological community listed in the category of critically endangered under section 27(1)(a) of the BC Act, as determined by criteria set out in section 28 of the BC Act and the ministerial guidelines. A critically endangered ecological community faces an extremely high risk of becoming eligible for listing as a collapsed ecological community in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines.

EN Endangered ecological communities

A threatened ecological community listed in the category of endangered ecological community under section 27(1)(b) of the BC Act, as determined by criteria set out in section 29 of the BC Act and the ministerial guidelines. A threatened ecological community faces a very high risk of becoming eligible for listing as a collapsed ecological community in the near future, as determined in accordance with criteria set out in the ministerial guidelines.

VU Vulnerable ecological communities

A threatened ecological community listed in the category of vulnerable ecological community under section 27(1)(c) of the BC Act, as determined by criteria set out in section 30 of the BC Act and the ministerial guidelines. A vulnerable ecological community faces a high risk of becoming eligible for listing as a collapsed ecological community in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines.

Priority Ecological Communities

Priority is not a listing category under the BC Act. The Priority Ecological Communities list is maintained by the department and is published on the department's website.

All fauna and flora that may be present in an ecological community are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when these species occur in an ecological community that is not listed as threatened, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Possible threatened ecological communities that do not meet survey criteria or are not adequately defined to enable listing are added to the department's [Priority Ecological Communities for Western Australia list](#) under priority 1, 2 or 3. Ecological communities that are adequately known and not threatened but rare, near threatened, or have recently been removed from the threatened list are placed in priority 4. Conservation dependent ecological communities are placed in priority 5.

P1 Priority 1: Poorly known ecological communities – very few occurrences, very restricted distribution

Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100 ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g., within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet

adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

P2 Priority 2: Poorly known ecological communities – few occurrences, restricted distribution

Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200 ha). At least some occurrences are not believed to be under immediate threat (within approximately 10 years) of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

P3 Priority 3: Poorly known ecological communities – inadequately surveyed or not well defined

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them. This category includes three sub-categories:

- (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation.
- (ii) Communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years).
- (iii) Communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, inappropriate fire regimes, clearing, hydrological change, etc.

P4 Priority 4: Adequately known ecological communities – rare, near threatened, or recently removed from the threatened list

Ecological communities that are adequately known and either rare but not threatened, near threatened, or have recently been removed from the threatened list. These communities require regular monitoring.

- (i) Rare: ecological communities known from few occurrences 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 communities are usually represented on conservation lands.
- (ii) Near threatened: ecological communities that are considered to have been adequately surveyed and that do not qualify as conservation dependent, but that are close to qualifying for a higher threat category.
- (iii) Ecological communities that have been removed from the list of threatened communities during the past five years.

P5 Priority 5: Conservation dependent ecological communities

Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years

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.