Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11375/1
Permit type:	Purpose permit
Applicant name:	North West Quarries Pty Ltd
Application received:	3 December 2025
Application area:	85 hectares
Purpose of clearing:	Sand mining and associated activities
Method of clearing:	Mechanical removal
Tenure:	Mining Lease 47/1495
Location (LGA areas):	Town of Port Hedland and City of Karratha
Colloquial name:	Red Hill Sand Quarry

1.2. Description of clearing activities

North West Quarries Pty Ltd proposes to clear up to 85 hectares of native vegetation within a boundary of approximately 94.5 hectares, for the purpose of sand mining and associated activities (North West Quarries, 2025a; 2026). The project is located approximately 77 kilometres south-west of Port Hedland, within the Town of Port Hedland and City of Karratha (North West Quarries, 2025b; GIS Database).

North West Quarries Pty Ltd held a now expired clearing permit, over a boundary in the same location approximately 2.15 hectares smaller than the boundary applied for in CPS 11375/1. Expired clearing permit CPS 8647/1 was granted by the Department of Mines, Industry Regulation and Safety (now the Department of Mines, Petroleum and Exploration (DMPE)) on 26 September 2019 and was valid from 19 October 2019 to 18 October 2024. The permit authorised the clearing of up to 52.51 hectares of native vegetation within a boundary of approximately 92.35 hectares, for the purpose of sand mining. A total of approximately 12 hectares of native vegetation was cleared under CPS 8647/1 (North West Quarries, 2025b). This replaced expired clearing permit CPS 6262/1, where a total of approximately eight hectares of native vegetation was cleared (North West Quarries, 2019).

This application is to allow for the continuation of the sand mining project begun under CPS 8647/1, of which the sand products will supply local construction, civil and concrete projects within the Pilbara Region (North West Quarries, 2025b). The same Mining Proposal and Mine Closure Plan will be used (North West Quarries, 2025b).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	20 October 2026
Decision area:	85 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) advertised the application for a public comment for a period of 21 days, and one submission was received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix C), relevant datasets (Appendix H), supporting information provided by the applicant (Appendix A) including the results of a flora and vegetation survey (Appendix F), the clearing principles set out in Schedule 5 of the EP Act (Appendix D), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- potential clearing of *Abutilon* sp. Pritzelianum (P3) that occurs within the application area, however, unlikely to be significantly impacted at a regional or species level by the proposed clearing;

- local impacts to the Gregory Land System PEC;
- loss of potentially suitable habitat for brush-tailed mulgara;
- loss of potentially suitable foraging and dispersal habitat for northern quoll;
- loss of potentially suitable foraging habitat for ghost bat;
- loss of potentially suitable foraging and dispersal habitat for greater bilby;
- loss of potentially suitable foraging and dispersal habitat for Pilbara olive python;
- loss of potentially suitable habitat for grey falcon;
- loss of potentially suitable habitat for peregrine falcon; and
- potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- no clearing of *Eucalyptus* trees 1.5 meters or greater in height within the river zone, and no clearing of native vegetation in the drip line of those trees;
- watercourse management (avoid clearing riparian vegetation where practicable, and where a watercourse is to be impacted by clearing the permit holder shall ensure that the existing surface flow is maintained);
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- restrict clearing activities to daytime hours; and
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

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

Relevant agreements (treaties) considered during the assessment include:

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

The key guidance documents which inform this assessment are:

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

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant outlined the following management commitments and operational measures for the proposed clearing (North West Quarries, 2025a):

- Clearing native vegetation will be on an 'as needed' basis only when more material is required.
- Alternatives to conducting open pit excavation of sand, such as underground excavation, were determined as not practical or feasible for the quantity and type of material recovery.

- Existing access roads at the site will be utilised to minimise ground disturbance, where possible. This includes the shared use of the existing pastoral access from the highway into the site, existing tracks from pastoralist and cattle movements within the site and an existing track to the riverbed.
- The existing cleared footprint on the flat between the sand dune and Peawah River will be utilised for material stockpiling, but additional space is required.
- Topsoil stripping and stockpiling and stockpile management will occur to ensure that viable seed storage is retained for later rehabilitation works.
- No *Eucalyptus* trees 1.5 metres or greater in height will be impacted within the river zone, as sand extraction will be conducted around trees with a buffer to the root zone whilst leaving the trees intact. Excavations within the stream bed have a buffer distance of the drip line of any significant riparian vegetation.
- Excavations will not be undertaken within 2 metres of the river bank to avoid bank erosion. Riverine excavation is limited to 2 metres below the riverbed surface level and always above the perched water table in the sediments that fluctuate from year to year.
- Spinifex grasses will be reintroduced to areas previously devoid of native vegetation, to provide fewer opportunities for weeds to develop and spread.
- Rehabilitation will be undertaken progressively at the site.
- Strategies will be developed for conservation significant flora species *Abutilon* sp. Pritzelianum (S. van Leeuwen 5095; P3) (occurring in 13 locations within the application area (MMWC, 2014)) to review relocation options, collect seed and attempt to re-establish the species as part of progressive rehabilitation during the mining programme. If individuals are to be cleared, they will be photographed and relocated away from the application area (North West Quarries, 2026).

Additionally, to minimise environmental impacts in the reduced permit boundary, the applicant proposed to reduce the area of authorised clearing from 86.1 hectares to 85 hectares during the assessment (North West Quarries, 2026).

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

3.2. Assessment of impacts on environmental values

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

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

3.2.1. Biological values (flora and priority ecological community) - Clearing principle (a)

Assessment

One survey occurred over the application area. A level 2 flora and vegetation assessment and level 1 fauna assessment was undertaken by MMWC (2014) during October 2013. However, the flora and vegetation portion of the survey was not conducted during the time recommended by EPA (2016) for a primary survey in the Eremaean Botanical Province, which is six to eight weeks post wet season in March to June.

***Abutilon* sp. Pritzelianum**

Abutilon sp. Pritzelianum (P3) occurs on sandplains, sand dunes, coastal estuaries and floodplains (MMWC, 2014; WAH, 1998-). The species was recorded from 23 locations totalling 108 individuals within the surveyed area, along the two sand dunes (MMWC, 2014). Of these, the entire southern population comprising approximately 62 per cent of the local population (13 locations with 67 individuals) are within the application area (MMWC, 2014; GIS Database). The southern population are all within vegetation type AsaAstTeEe and within the Gregory Land System Priority Ecological Community (PEC) (MMWC, 2014; GIS Database). The entire northern population comprising approximately 38 per cent of the local population (10 locations with 41 individuals) is not within the application area, found within vegetation type AssAtAstTe (MMWC, 2014).

Abutilon sp. Pritzelianum has been recorded in six Interim Biogeographic Regionalisation for Australia (IBRA) subregions and is widely distributed along the north-west of Western Australia (WAH, 1998-). A more recent flora and vegetation survey which has identified *Abutilon* sp. Pritzelianum was undertaken by Biologic (2024) approximately 45 kilometres north-east of the application area. *Abutilon* sp. Pritzelianum was recorded from 321 locations, comprising over 1,200 individuals, within the Roebourne IBRA subregion (Biologic, 2024; GIS Database). The species was primarily located along tracks, roads and other areas of disturbance, as well as floodplain and drainage areas (Biologic, 2024). The species has no other known records within the Gregory Land System PEC except for the southern population within the application area, so does not appear to be restricted to the PEC (Biologic, 2024; GIS Database).

No *Abutilon* sp. Pritzelianum individuals have been cleared under CPS 8647/1 and CPS 6262/1, the two previously expired permits under the application area (North West Quarries, 2026). North West Quarries (2025b) proposes to remove the entire southern population and states that strategies will be developed to review relocation options, collect seed and attempt to re-establish the species as part of progressive rehabilitation during the mining programme. If individuals are to be cleared in the proposed clearing under CPS 11375/1, North West Quarries (2026) will mitigate impacts by photographing and relocating away from the application area.

Additionally, there are 52 herbarium records of *Abutilon* sp. Pritzelianum (WAH, 1998-). Impacts to this species through clearing of the entire southern population in the application area are unlikely to be significant on a regional or species level, given this species distribution, abundance in the local surrounds, variability of habitat and success in disturbed areas (Biologic, 2024; WAH, 1998-; GIS Database).

***Tephrosia rosea* var. Port Hedland**

Tephrosia rosea var. Port Hedland (P1) inhabits sandy soils on plains or dunes, including coastal and near-coastal locations (Butcher et al., 2017; WAH, 1998-). The species has records from along the Peawah River, which the application area intersects, and these records are within 10 kilometres of the coast (Butcher et al., 2017; WAH, 1998-). Suitable habitat for this species occurs within the application area and the species was not considered in the flora survey (MMWC, 2014; WAH, 1998-). *Tephrosia rosea* var. Port Hedland is a disturbance specialist and is hypothesised to establish two to three years after a disturbance event, before being outcompeted by other vegetation in five to seven years (Butcher et al., 2017). There are 53 WAH (1998-) records of *Tephrosia rosea* var. Port Hedland, and the species is a disturbance specialist, so it is unlikely that the species will be significantly impacted by the proposed clearing if it were to be present within the application area (Butcher et al., 2017).

However, the species may be impacted through competition with weed species (Adair and Groves, 1998). There were six weed species recorded within the application area and surrounds (MMWC, 2014). Potential impacts to this species as a result of the proposed clearing may be minimised by the implementation of a weed management condition. Additionally, the applicant is reintroducing spinifex grasses to areas previously devoid of native vegetation, to provide fewer opportunities for weeds to develop and spread as a mitigation measure (North West Quarries, 2025a).

Euploca mutica

Euploca mutica (P3) inhabits sandplains, calcareous plains and bedrock outcrops with a steep slope, in sandy loam and sandy clay (Biologic, 2024; MMWC, 2014). The species is often recorded within *Corymbia* spp. and *Acacia* spp. low open woodlands over hummock grasslands (Biologic, 2024; WAH, 1998-). Suitable habitat for this species occurs within the application area and it is within the known range of the species (MMWC, 2014; WAH, 1998-). There are 77 WAH (1998-) records of *Euploca mutica* within two IBRA subregions. If the species were to occur within the application area, it is unlikely that the species will be significantly impacted by the proposed clearing given the number of records (WAH, 1998-).

Introduced species

There were six weed species recorded within the application area and surrounds; *Aerva javanica* (kapok bush), *Cucumis melo* subsp. *agrestis* (ulcardo melon), *Malvastrum americanum* (spiked malvastrum), *Cenchrus ciliaris* (buffel grass), *Cenchrus setiger* (birdwood grass), and *Vachellia farnesiana* (mimosa bush) (MMWC, 2014). None of the species are listed as Weeds of National Significance (WoNS) or Declared Pests in Western Australia under the *Biosecurity and Agriculture Management Act 2007* (DPIRD, 2026b; Weeds Australia, 2026), however weeds have potential to out compete native flora, significantly change the dynamics of a natural ecosystem and reduce biodiversity of an area. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Gregory Land System PEC

The Gregory Land System PEC is described as linear dunes and restricted sandplains supporting shrubby hard spinifex (and occasionally soft spinifex) grasslands (DBCA, 2025). The Gregory Land System has been mapped by DPIRD (2026a), and therefore it is assumed that the Gregory Land System as mapped by van Vreeswyk et al. (2004) is analogous to the listed PEC of the same name. The land system is described as linear dunes of deep red sands and swales and sandplains with concave, gently inclined marginal slopes near dunes with deep red sands (van Vreeswyk et al., 2004). The PEC is known from two Interim Biogeographic Regionalisation for Australia (IBRA) subregions, Roebourne and Chichester, and is mapped as a total occurrence of approximately 7,017 hectares (DBCA, 2025; GIS Database). This PEC was listed in May 2020, after the flora and vegetation survey occurred, so was not targeted in the survey (DBCA, 2020).

Approximately 72.2 hectares of the application area is mapped as this PEC (GIS Database). This comprises approximately 54 per cent of the local occurrence of the PEC, and 1 per cent of the total mapped occurrence of the PEC (GIS Database). The flora survey described the area mapped as the PEC as majority AsaAstTeEe vegetation type, which is in Good condition (Trudgen, 1991) and described as a sand dune containing hummock grassland of *Triodia epactia* over very open tussock grassland of *Eragrostis eriopoda* (MMWC, 2014). *Triodia epactia* is a soft spinifex and the area can be seen from satellite imagery as a linear dune, therefore it is possible that this is representative of the Gregory Land System PEC (Fletcher et al., 2025; DBCA, 2025; MMWC, 2014). However, very limited information is available for this PEC. The proposed clearing may potentially cause local impacts to the Gregory Land System PEC, including spread of weeds and fragmentation. Risks can be minimised through the implementation of a weed management condition and reduction of the area of authorised clearing (North West Quarries, 2026).

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora occurring or potentially occurring in the application area and the Gregory Land System PEC can be managed the applicant's avoidance, minimisation and mitigation measures.

The proposed clearing may contribute to the spread of invasive weed species within the application area and negatively impact biodiversity within and adjacent to the application area, including to the Gregory Land System PEC.

Conditions

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

- no clearing of *Eucalyptus* trees 1.5 meters or greater in height within the river zone, and no clearing of native vegetation in the drip line of those trees;
- watercourse management (avoid clearing riparian vegetation where practicable, and where a watercourse is to be impacted by clearing the permit holder shall ensure that the existing surface flow is maintained); and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

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

Assessment

One survey occurred over the application area. A level 2 flora and vegetation assessment and level 1 fauna assessment was undertaken by MMWC (2014) during October 2013. The survey identified potential habitat for several species of conservation significance.

Brush-tailed mulgara

Brush-tailed mulgara (*Dasycercus blythi*; P4) are distributed across mature hummock grasslands (*Triodia* spp.) in sand plains and gibber plains of arid Australia (NESP, 2021; Pavey et al., 2012). The species also utilises drainage lines in sandplain or sand dune habitats (NESP, 2021). This species is mostly active at night, resting in burrows at the base of grass clumps or bushes during the day (NESP, 2021). There are 96 recent records of brush-tailed mulgara in the local surrounds (50 kilometres) and many in the broader region (GIS Database). The sand dune, sand plain with hummock grassland and riverine fauna habitats provide suitable habitat for this species within the application area (MMWC, 2014). Potential impacts to this species can be minimised by restricting clearing activities to daytime hours and riparian vegetation management conditions.

Northern quoll

Northern quoll (*Dasyurus hallucatus*; EN) can be found in a variety of habitats, including rocky areas, eucalypt forest and woodlands, rainforests, sandy lowlands and beaches, shrubland, grasslands and desert (Commonwealth of Australia, 2008-; Northover et al., 2023). The species is predominantly nocturnal (Northover et al., 2023). Within the Pilbara, northern quoll has a preference for complex rocky areas (DNREAS, 2010; Northover et al., 2023). Watercourses facilitate connectivity for foraging and dispersal (Northover et al., 2023). There are 325 recent records of northern quoll in the local surrounds (50 kilometres) and many in the broader region (GIS Database). The riverine habitat within the application area may provide supporting foraging and dispersal habitat for northern quoll however, the application area lacks suitable refuge or denning habitat (MMCW, 2014). Potential impacts to this species can be minimised by restricting clearing activities to daytime hours and riparian vegetation management conditions.

Ghost bat

Ghost bat (*Macroderma gigas*; VU) has a patchy distribution within the Pilbara and Kimberley in Western Australia, and roosts within caves, rock crevices, deep overhangs and abandoned mines (Menkhorst and Knight, 2011; Northover et al., 2023). Within the Pilbara, the species is known to forage along drainage lines, alluvial plains, mulga woodlands, tussock grasslands, sparse woodlands along ridge lines, and cave entrances (Bat Call WA, 2021a; Northover et al., 2023). The application area lacks suitable roosting habitat for this species; however, the riverine habitat may provide suitable foraging habitat for this species. There are three records of ghost bat in the local surrounds (50 kilometres) (GIS Database). Given the typical nightly foraging range of 10 to 15 kilometres, occurrence within the application area is unlikely (Bat Call WA, 2021a). The clearing of suitable foraging habitat is unlikely to significantly impact ghost bat. Riparian vegetation management conditions can minimise the potential impact to species.

Greater bilby

Greater bilby (*Macrotis lagotis*; VU) is a nocturnal species that inhabits a wide range of substrates and vegetation types across northern Western Australia, including sandplains with typically low shrub cover of *Acacia* spp. with hummock (*Triodia* spp.) and tussock grasses (DBCA, 2017; Northover et al., 2023). Bilby distribution is limited by the presence of soil suitable for burrow construction, such as sandy areas where burrow excavation is easier (DCCEW, 2023; Northover et al., 2023). There are 61 recent records of greater bilby in the local surrounds (50 kilometres) and many in the broader region (GIS Database). However, the application area is on the western boundary of the species known range, which lies approximately 50 kilometres west of Port Headland (Northover et al., 2023; GIS Database). Greater bilby may utilise the application area for foraging and dispersal, however, potential impacts to this species can be minimised by restricting clearing activities to daytime hours.

Pilbara leaf-nosed bat

Pilbara leaf-nosed bat (PLNB) (*Rhinonicteris aurantia* [Pilbara form]; VU) roosts within warm, humid caves and underground mines (Bat Call WA, 2021b). PLNB forages in a variety of habitats, particularly highly productive hummock (*Triodia* spp.) grasslands with complex riparian zones where water is permanently available (Northover et al., 2023). Suitable roosting habitat is absent from the application area, however, suitable foraging habitat for PLNB may be present. There are 23 records of PLNB in the local surrounds (50 kilometres) (GIS Database). PLNB typically forage up to 20 or 30 kilometres from diurnal roost sites (Bat Call WA, 2021b). The nearest known PLNB roost site is located approximately 45 kilometres from the application area (GIS Database). Given the distance of the roost site is further than the typical foraging range of PLNB, occurrence within the application area is unlikely. The clearing of suitable foraging habitat is unlikely to significantly impact PLNB.

Pilbara olive python

Pilbara olive python (*Liasis olivaceus barroni*; VU) is typically observed in rocky gorges, gullies, and semi-permanent and permanent waterholes (Commonwealth of Australia, 2008-; Northover, et al., 2023). During warmer months this species inhabits riparian areas, and rocky habitats during cooler months (Northover et al., 2023). There is one record of Pilbara olive python in the local surrounds (50 kilometres) (GIS Database). The riverine habitat within the application area may provide some suitable foraging and dispersal habitat. However, given the absence of permanent water or rocky areas, the proposed clearing is unlikely to significantly impact the species. The proposed clearing overlaps only a small portion of Peawah River (MMWC, 2014; GIS Database). Riparian vegetation management conditions can minimise the potential impact to species.

Migratory shorebirds and seabirds

Migratory shorebirds typically arrive at their staging areas in northern Australia in September and disperse across Australia, returning to staging areas in March to fly north (DCCEEW, 2025). The application area is located approximately 35 kilometres from the coast and provides potentially suitable foraging habitat for migratory shorebirds that utilise inland waterways. Habitat

suitability within the application area varies between species. Preferred habitat is largely absent for predominantly coastal species. Given the proposed clearing overlaps only a small portion of Peawah River, the river extends beyond the application area, and there are various other watercourses within the surrounds, the proposed clearing is unlikely to significantly impact these species (GIS Database).

Fork-tailed swift

Fork-tailed swift (*Apus pacificus;* MI) are entirely aerial migratory birds present in Australia from October to April (Menkhorst et al., 2019). The species may forage sporadically over the application area, however, are unlikely to be reliant on the terrestrial habitat within the application area (Commonwealth of Australia, 2008-).

Grey falcon

Grey falcon (*Falco hypoleucos*; VU) occurs in low densities across arid and semi-arid inland Australia (TSSC, 2019). This species frequents timbered lowland plains, *Acacia* shrublands, tree-lined watercourses, open woodlands, treeless areas and tussock grasslands (TSSC, 2019). Grey falcon nest in the tallest trees along watercourses, particularly in river red gum (*Eucalyptus camaldulensis*) and coolibah (*Eucalyptus coolabah*), or in old nests of other large birds (TSSC, 2019). River red gum occurs within the riverine fauna habitat and may provide suitable nesting habitat for grey falcon (MMWC, 2014). The application area also contains suitable foraging habitat for the species. Impacts to potentially suitable habitat can be minimised through the riparian vegetation management conditions.

Peregrine falcon

Peregrine falcon (*Falco peregrinus*; OS) is widespread throughout much of Australia. Its preferred habitat is coastal and inland cliffs, or open woodlands near waterbodies and watercourses (Australian Museum, 2019). This species nests in rocky ledges in tall, vertical cliff faces, and tall trees adjacent to drainage lines in tree hollows or in abandoned nests of other large bird species (Australian Museum, 2019). The riverine habitat provides suitable foraging habitat for this species and potentially suitable nesting habitat within large trees. Impacts to potentially suitable habitat can be minimised through the riparian vegetation management conditions.

Conclusion

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

- loss of potentially suitable habitat for brush-tailed mulgara;
- loss of potentially suitable foraging and dispersal habitat for northern quoll;
- loss of potentially suitable foraging habitat for ghost bat;
- loss of potentially suitable foraging and dispersal habitat for greater bilby;
- loss of potentially suitable foraging and dispersal habitat for Pilbara olive python;
- loss of potentially suitable habitat for grey falcon; and
- loss of potentially suitable habitat for peregrine falcon.

Pilbara leaf-nosed bat, migratory shorebirds and seabirds and fork-tailed swift are unlikely to be significantly impacted by the proposed clearing.

Large trees in the river zone may provide suitable habitat for conservation significant fauna, and the applicant has proposed to not clear any *Eucalyptus* trees 1.5 meters or greater in height within the river zone (North West Quarries, 2026).

The applicant may have notification responsibilities under the EPBC Act for impacts to northern quoll, ghost bat, greater bilby, Pilbara olive python, grey falcon and peregrine falcon and their habitats, as set out in the EPBC Act. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

Conditions

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

- restrict clearing activities to daytime hours;
- no clearing of *Eucalyptus* trees 1.5 meters or greater in height within the river zone, and no clearing of native vegetation in the drip line of those trees; and
- watercourse management (avoid clearing riparian vegetation where practicable, and where a watercourse is to be impacted by clearing the permit holder shall ensure that the existing surface flow is maintained).

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 17 April 2026 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. One submission was received in relation to this application. Consideration of the matters raised in the submission is provided in Appendix B.

There are two native title claims over the area under application (DPLH, 2026). One claim (WCD2018/015 – Kariyarra) has been determined by the Federal Court on behalf of the claimant group, and one claim (WC2023/002 – Kariyarra Pirnthurruna) has been registered with the National Native Title Tribunal on behalf of the claimant group. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2026). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on northern quoll, ghost bat, greater bilby, Pilbara olive python, grey falcon and peregrine falcon, which are protected matters under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Commonwealth) Department of Climate Change, Energy, the Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water for further information regarding notification and referral responsibilities under the EPBC Act.

Other relevant authorisations required for the proposed land use include:

- A Mining Development and Closure Proposal approved under the *Mining Act 1978*

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

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
On 17 June 2026, the applicant confirmed that no *Abutilon* sp. Pritzelianum individuals have been cleared under CPS 8647/1 and CPS 6262/1, the two previously expired permits under the application area.	This information is considered in the assessment of Section 3.2.1 and Principle (a).
On 19 August 2026, the applicant proposed to reduce the clearing area from 86.1 hectares to 85 hectares.	This information is considered in the assessment of Sections 3.2.1 and 3.2.2 and Principles (a) and (b).

Appendix B. Details of public submissions

Summary of comments	Consideration of comment
Concerns regarding impacts to biodiversity, fauna habitat, land and water resources, cumulative environmental impacts to the Pilbara, native title rights and interests, and potential impacts to Aboriginal cultural heritage values which have not yet been identified or formally recorded.	Environmental concerns raised are addressed in the assessment against the clearing principles in Appendix D. Cultural concerns raised are discussed in planning instruments and other matters in Section 3.3.

Appendix C. Site characteristics

C.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 and is surrounded by native vegetation and gold mines (GIS Database). The proposed clearing area intersects Peawah River (GIS Database). The predominant land uses in the region are grazing of native pastures, Aboriginal lands and reserves, conservation areas, mining leases and urban areas (CALM, 2002).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	There are no conservation areas within the application area, or within the local surrounds (50 kilometres) (GIS Database). The nearest conservation area is Mungaroona Range Nature Reserve located approximately 51 kilometres south of the application area (GIS Database).
Vegetation description	The application area occurs within the Roebourne subregion (PIL04) of the Pilbara bioregion (GIS Database). The vegetation of the application area is broadly mapped as the Beard vegetation association: • **589**: Mosaic: Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (GIS Database). A level 2 flora and vegetation survey was conducted over the application area (MMWC, 2014) during October 2013. Four vegetation associations were recorded within the application area (MMWC, 2014):

Fauna habitat	Vegetation code	Vegetation association
Sand dune	AsaAstTeEe	High shrubland of *Acacia sabulosa* over low open shrubland of *Acacia stellaticeps* over hummock grassland of *Triodia epactia* over very open tussock grassland of *Eragrostis eriopoda*.
Clay plain with tussock grassland	Ex	Open tussock grassland of *Eragrostis xerophila*.
Sand plain with hummock grassland	AssAtAstTe	Scattered low shrubs of *Acacia sclerosperma* subsp. s*clerosperma*, *Acacia trachycarpa* and *Acacia stellaticeps* over open hummock grassland of *Triodia epactia*.
Riverine	EcrMgMlAtTe*Cc*Cs	Low open woodland of *Eucalyptus camaldulensis* subsp. *refulgens* over high open shrubland of *Melaleuca glomerata*, *Melaleuca linophylla* and *Acacia trachycarpa* over very open hummock grassland of **Cenchrus ciliaris* and **Cenchrus setiger*.

Mapping of vegetation types is provided in Appendix F and representative photos are provided in Appendix G.

Characteristic	Details
Vegetation condition	The vegetation survey (MMWC, 2014) of the application area found the vegetation to be in Very Good to Poor condition (Trudgen, 1991). As approximately 12 hectares of the application area has been cleared under CPS 8647/1 (North West Quarries, 2025b) and approximately eight hectares of native vegetation was cleared under CPS 6262/1 (North West Quarries, 2019), the two previously expired permits, part of the application area is in Completely Degraded condition (Trudgen, 1991). Therefore, the vegetation within the proposed clearing area ranges from Very Good to Completely Degraded condition (Trudgen, 1991). The full Trudgen (1991) condition rating scale is provided in Appendix E.
Climate and landform	The climate of the Roebourne subregion is described as arid (semi-desert) tropical, with the nearest weather station recording an average annual rainfall of approximately 331.3 millimetres, with highly variable rainfall falling mainly in summer, and significant cyclonic activity (BoM, 2026; CALM, 2002). The application area is mapped with elevations ranging between 40 and 50 metres Australian Height Datum (GIS Database).
Soil description and land degradation risk	The soil within the application area is mapped as the following systems (DPIRD, 2026a; Van Vreeswyk et al., 2004; GIS Database): • **Gregory**: Linear dunes and restricted sandplains supporting shrubby hard spinifex (and occasionally soft spinifex) grasslands. May be susceptible to erosion following fire, particularly on dune crests and flanks. • **Mallina**: Sandy surfaced alluvial plains supporting soft spinifex grasslands and minor hard spinifex and tussock grasslands. Moderately to highly susceptible to erosion when vegetation cover is removed. The Gregory land system is considered to be restricted with a total area of 113 square kilometres, which is approximately 0.06 per cent of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (MMWC, 2014; Van Vreeswyk et al., 2004). The flora and vegetation survey and fauna habitat assessment described the soil as red sand (sites RH03/HA03 and RH04/HA04), brown silty clay (site RH16) and pale brown clay (site HA12) (MMWC, 2014).
Waterbodies	The desktop assessment and aerial imagery indicated that one major, non-perennial watercourse, Peawah River, intersects the area proposed to be cleared (GIS Database). There are no Wetlands of National or International Importance within the application area or local surrounds (50 kilometres) (GIS Database). The nearest Wetland of National or International Importance is Leslie (Port Hedland) Saltfields System, located approximately 86 kilometres north-east of the application area (GIS Database).
Hydrogeography	The application area is located within the Pilbara Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (GIS Database). The nearest Public Drinking Water Source Area is Yule River Water Reserve located approximately 13 kilometres east of the application area (GIS Database). The groundwater salinity is mapped as 1,000 to 3,000 milligrams per litre total dissolved solids which is described as brackish (BoM, 2019; GIS Database).
Flora	There are no records of threatened flora species within the application area or local surrounds (50 kilometres) (MMWC, 2014; GIS Database). One priority flora was recorded within the application area (MMWC, 2014). Mapping of conservation significant flora locations is provided in Appendix F. There are records of five conservation significant flora species within the local surrounds (50 kilometres) as detailed in Appendix C.3 (GIS Database). Additional conservation significant flora identified by the flora and vegetation survey (MMWC, 2014) have also been considered.
Ecological communities	There are no Threatened Ecological Communities (TECs) within the application area or in the local surrounds (50 kilometres) (MMWC, 2014; GIS Database). A Priority Ecological Community (PEC), Gregory Land System (P3), is mapped over majority of the application area (GIS Database). In the local surrounds (50 kilometres), another PEC, Horseflat Land System of the Roebourne Plains (P3), is approximately 27 kilometres west of the application area (GIS Database).
Fauna	There are no records of conservation significant fauna species within the application area (MMWC, 2014; GIS Database). There are records of 21 conservation significant fauna species within the local surrounds (50 kilometres) as detailed in Appendix C.4 (GIS Database). Additional conservation significant fauna identified in the fauna habitat assessment (MMWC, 2014) have also been considered.
Fauna habitat	A level 1 fauna assessment was conducted over the application area (MMWC, 2014) during October 2013. Four fauna habitats were identified within the application area (MMWC, 2014): • Sand dune; • Clay plain with tussock grassland;

Characteristic	Details
	• Sand plain with hummock grassland; and • Riverine. Mapping of fauna habitat types is provided in Appendix F and representative photos are provided in Appendix G.

C.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Pilbara	17,808,657.04	17,731,764.88	99.57	1,801,714.98	10.12
Beard vegetation associations - State					
589	807,698.58	802,713.40	99.38	15,304.39	1.89
Beard vegetation associations - Bioregion (Pilbara)					
589	728,768.20	724,695.82	99.44	15,304.39	2.10

Government of Western Australia (2019)

C.3. Flora analysis table

The following conservation significant flora species have been recorded within 50 kilometres of the application area or in biological surveys (MMWC, 2014; GIS Database). The assessment of these species included consideration in field surveys, potentially suitable habitat within the application area, species distribution and known regional records (Biologic, 2024; Butcher et al., 2017; MMWC, 2014; WAH, 1998-; GIS Database).

Species name	Suitable habitat features? [Yes, Potential, No]	Suitable vegetation type? [Yes, Potential, No]	Suitable soil type? [Yes, Potential, No]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Yes, No]	Likelihood of occurrence in application area [Recorded, Likely, Possible, Unlikely]
Priority 1							
Tephrosia rosea var. Port Hedland (A.S. George 1114)	Potential	Yes	Yes	<25	53	No	Possible
Priority 3							
Abutilon sp. Pritzelianum (S. van Leeuwen 5095)	Yes	Yes	Yes	0	52	Yes	**Recorded**
Euphorbia clementii	Yes	Yes	No	<60	32	Yes	Unlikely
Euploca mutica	Yes	Yes	Yes	<25	77	Yes	Possible
Gomphrena cucullata	Potential	Potential	Potential	<35	14	No	Unlikely
Gomphrena leptophylla	Yes	Yes	Potential	<65	8	Yes, but incorrect season for identification	Unlikely
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	No	Potential	No	<85	61	Yes, but incorrect season for identification	Unlikely
Vigna triodiophila	No	Yes	No	<25	21	Yes	Unlikely

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

C.4. Fauna analysis table

The following conservation significant fauna species have been recorded within 50 kilometres of the application area or in biological surveys (MMWC, 2014; GIS Database). The likelihood of occurrence for these species was determined by potentially suitable habitat within the application area, species distribution and known regional records (ALA, n.d.; Australian Museum, 2019; Bat Call WA, 2021a; 2021b; Benshemesh, 2004; Commonwealth of Australia, 2008-; DBCA, 2017; DCCEEW, 2023; 2025; DNREAS, 2010; Menkhorst and Knight, 2011; Menkhorst et al., 2019; MMWC, 2014; NESP, 2021; Northover et al., 2023; Pavey et al., 2012; Pearson et al., 2013; TSSC, 2019; GIS Database).

As the 50 kilometre search radius included the coastline, many migratory shorebirds and marine fauna were recorded in the desktop search. These species are unlikely to occur within the application area; therefore, these species do not require further consideration (Commonwealth of Australia, 2008-; DCCEEW, 2025; GIS Database).

Species name	Conservation status	Suitable habitat features? [Yes, Potential, No]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Yes, No]	Likelihood of occurrence in application area [Recorded, Likely, Possible, Unlikely]
Mammal					
Brush-tailed mulgara (*Dasycercus blythi*)	P4	Yes	<10	No	Possible
Northern quoll (*Dasyurus hallucatus*)	EN	Yes	<10	Yes	Possible
Black-footed rock-wallaby (*Petrogale lateralis lateralis*)	EN	No	<45	Yes	Unlikely
Ghost bat (*Macroderma gigas*)	VU	Yes	<25	No	Possible
Greater bilby (*Macrotis lagotis*)	VU	Yes	<25	Yes	Possible
Northern coastal free-tailed bat (*Ozimops cobourgianus*)	P1	No	<35	No	Unlikely
Northern marsupial mole (*Notoryctes caurinus*)	P4	Potential	<240	Yes	Unlikely
Pilbara leaf-nosed bat (*Rhinonicteris aurantia* [Pilbara form])	VU	Yes	<10	No	Possible
Western pebble-mound mouse (*Pseudomys chapmani*)	P4	No	<10	Yes	Unlikely
Reptile					
Pilbara olive python (*Liasis olivaceus barroni*)	VU	Yes	<30	Yes	Possible
Bird					
Caspian tern (*Hydroprogne caspia*)	MI	Yes	<20	Yes	Possible
Common greenshank (*Tringa nebularia*)	MI	Yes	<20	Yes	Possible
Fork-tailed swift (*Apus pacificus*)	MI	Yes	<40	Yes	Possible
Glossy ibis (*Plegadis falcinellus*)	MI	Yes	<30	Yes	Possible
Grey falcon (*Falco hypoleucos*)	VU	Yes	<20	Yes	Possible
Long-toed stint (*Calidris subminuta*)	MI	Yes	<20	Yes	Possible
Marsh sandpiper (*Tringa stagnatilis*)	MI	Yes	<10	Yes	Possible
Oriental pratincole (*Glareola maldivarum*)	MI	Yes	<5	Yes	Possible
Osprey (*Pandion haliaetus*)	MI	Yes	<25	No	Unlikely
Peregrine falcon (*Falco peregrinus*)	OS	Yes	<45	Yes	Possible
Wood sandpiper (*Tringa glareola*)	MI	Yes	<20	Yes	Possible
Invertebrate					
Depuch Island charopid land snail (*Dupucharopa millestriata*)	P2	No	<45	No	Unlikely

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

C.5. Ecological community analysis table

The following conservation significant ecological communities have been recorded within 50 kilometres of the application area (DBCA, 2025; MMCW, 2014; GIS Database).

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence [Recorded/ Likely/ Possible/ Unlikely]
Gregory Land System	P3	Y, linear dunes	Y, AsaAstTeEe vegetation type contains *Triodia epactia*	Y, sand	0	N	Possible
Horseflat Land System of the Roebourne Plains	P3	Y, clay plain with tussock grass	Y, Ex vegetation type contains *Eragrostis xerophila*	Y, clay	<30	N	Unlikely, not within the Horseflat Land System

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

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains locally significant flora and a mapped occurrence of a PEC.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared may contain significant habitat for conservation significant fauna. The sand dune habitat is considered to be restricted and may represent significant habitat.	May be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act (MMWC, 2014; GIS Database).	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: There are no known TECs located within or in close proximity to the application area (MMWC, 2014; GIS Database).	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001; Government of Western Australia, 2019). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area (GIS Database).	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area (approximately 51 kilometres), the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas (GIS Database).	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given the application area intercepts Peawah River, the proposed clearing will result in the clearing of vegetation growing in association with a watercourse or wetlands (GIS Database). The vegetation type EcrMgMlAtTe*Cc*Cs within the application area occurs in association with a watercourse and is riparian (MMWC, 2014; GIS Database). The river line is proposed to be impacted as sand is to be excavated from the riverbed (MMWC, 2014). The riparian vegetation type covers approximately 6 hectares of the application area, which represents 19.3 per cent of the extent of EcrMgMlAtTe*Cc*Cs within the surveyed area (MMCW, 2014). This vegetation assemblage is not restricted on a local scale (MMWC, 2014), and the proposed clearing is unlikely to impact the regional representation of this vegetation association. Impacts to riparian vegetation will be minimised through the measures made by the applicant as well as a watercourse management condition.	At variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The two mapped land systems are susceptible to soil erosion (DPIRD, 2026a; Waddell and Galloway, 2023). Noting the extent of the application area and the condition of the vegetation, the proposed clearing is likely to have an appreciable impact on land degradation. The Mallina land system, which the riverine habitat within the application area coincides with, is moderately to highly susceptible to erosion when cleared (Van Vreeswyk et al., 2004). The loss of riparian vegetation can result in accelerated erosion of bank material (North West Quarries, 2025b). Impacts to riparian vegetation will be minimised through the measures made by the applicant as well as a watercourse management condition, which will reduce the erosion risk in the Mallina land system. The Gregory land system covers the remainder of the application area, which comprises sand dune, sand plain and clay plain landforms (MMWC, 2014). Sand dunes are particularly prone to erosion following disturbance, such as the proposed clearing (Van Vreeswyk et al., 2004). The impacts of small-scale erosion may be reduced by a staged clearing condition to utilise cleared areas within three months of conducting clearing, to prevent cleared areas from being unstable and prone to erosion for extended periods of times.	May be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: No Public Drinking Water Sources Areas are recorded within the application area (GIS Database). The application area occurs over a 1.4 kilometre section of the Peawah River (MMCW, 2014; GIS Database). This river experiences annual intermittent flooding during the wet season (North West Quarries, 2025b), where some natural sedimentation is likely to occur. Approximately 8.7 hectares of the river is proposed to be cleared (North West Quarries, 2025b). The clearing of native vegetation has the potential to destabilise soils and cause temporary runoff and sedimentation to watercourses (North West Quarries, 2025b). With the mitigation measures proposed by the applicant and a watercourse management condition, the proposed clearing is unlikely to cause significant deterioration in the quality of surface water in or around the application area. Additionally, all clearing activity will occur during the dry season	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
(May to November), which will further reduce sedimentation of watercourses (North West Quarries, 2025b). All project water will be transported from Port Hedland, and no storage of significant volumes of hydrocarbons or equipment maintenance will occur on site (North West Quarries, 2025b). Therefore, the proposed clearing is not expected to have any impact on the quality of groundwater in the local area.		
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The average annual rainfall at the nearest weather station is 331.3 millimetres (BoM, 2026), and the average annual evaporation is between 3,200 and 3,600 millimetres, greatly exceeding rainfall (BoM, 2006). No permanent watercourses or waterbodies are recorded within or in close proximity to the application area (GIS Database). The section of the Peawah River within the application area carries an annual water flow, predominantly flooding during summer months with high rainfall (North West Quarries, 2025b). There are no perennial pools along this section (North West Quarries, 2025b). In this landscape, some minor flooding may occur but is unlikely to be significant. Additionally, operations will only occur during the dry season or winter months, May to November (North West Quarries, 2025b). Therefore, the proposed clearing is unlikely to contribute to waterlogging or increase the incidence or intensity of flooding (GIS Database).	Not likely to be at variance	No

Appendix E. 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 F. Biological survey mapping excerpts

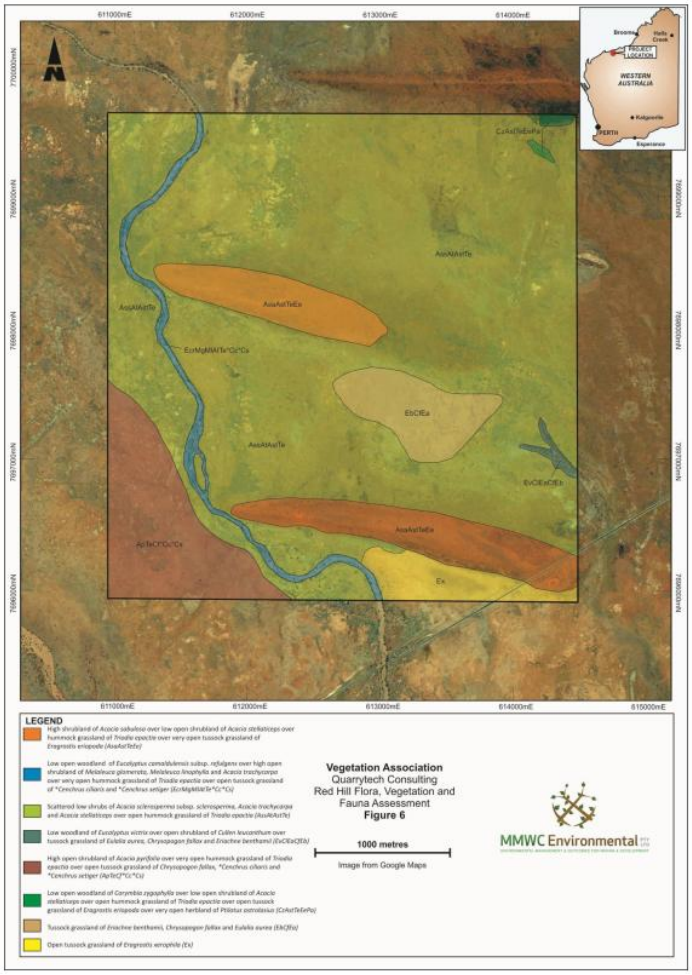


Figure 1. Vegetation types in surveyed area (MMWC, 2014). Note that EvClEaCfEb, CzAstTeEePa, EbCfEa and ApTeCf*Cc*Cs do not occur in the application area.

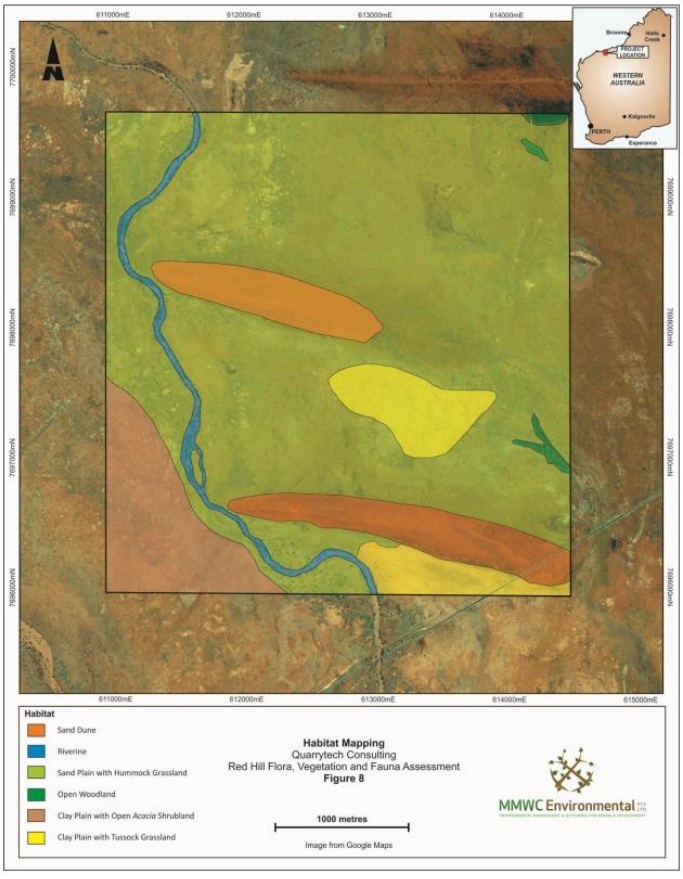


Figure 2. Fauna habitat types in surveyed area (MMWC, 2014). Note that open woodland and clay plain with open *Acacia* shrubland do not occur in the application area.

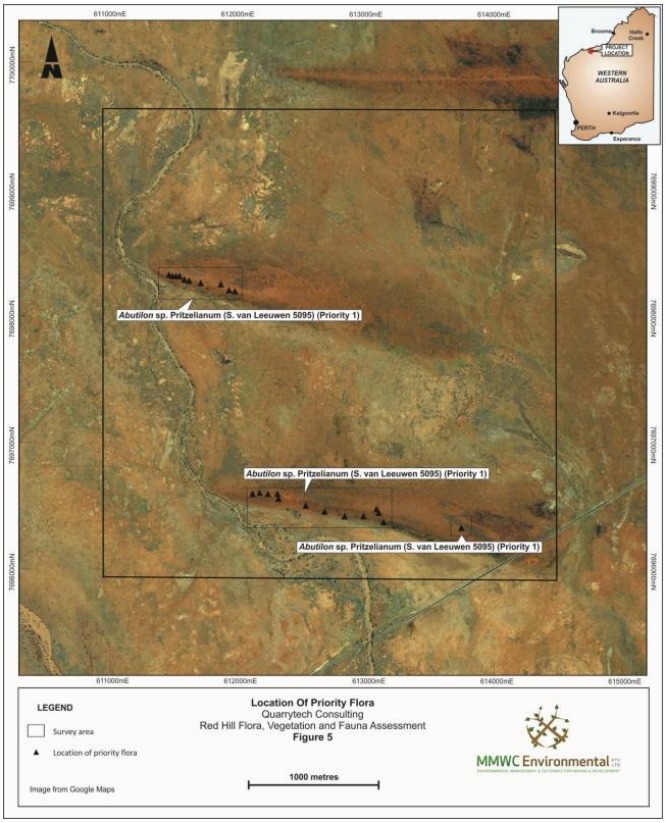


Figure 3. Conservation significant flora locations in surveyed area (MMWC, 2014). Note that the north population is not within the application area.

Appendix G. Representative photos of fauna habitats and vegetation types



Photo 1: Sand dune fauna habitat, AsaAstTeEe vegetation type (MMWC, 2014).



Photo 2: Clay plain with tussock grassland fauna habitat, EX vegetation type (MMWC, 2014).

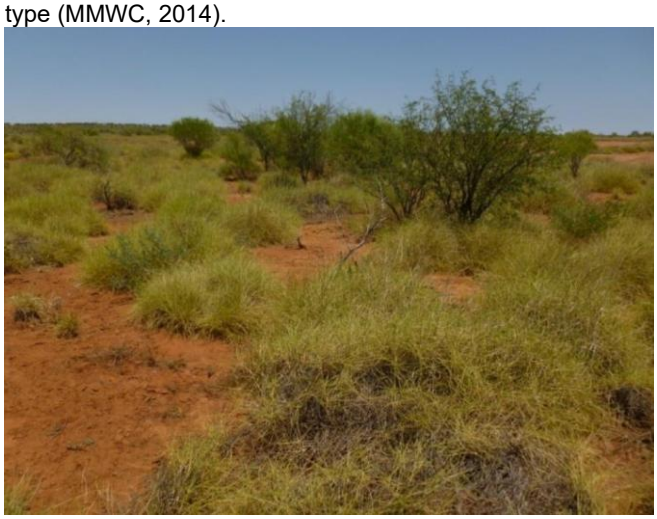


Photo 3: Sand plain with hummock grassland fauna habitat, AssAtAstTe vegetation type (MMWC, 2014).



Photo 4: Riverine fauna habitat, EcrMgMlAtTe*Cc*Cs vegetation type (MMWC, 2014).

Appendix H. Sources of information

H.1. GIS datasets

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

- 10 metre contours (DPIRD-073)
- Cadastre (Polygon) (LGATE-217)
- 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)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- 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, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Soil Landscape Mapping - Systems (DPIRD-064)
- Townsites (LGATE-248)
- WA Now Aerial Imagery
- Wild Rivers (DWER-087)

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)

H.2. References

Adair, R. J. and Groves, R. H. (1998) Impact of environmental weeds on biodiversity: A review and development of a methodology. National Parks and Wildlife, Biodiversity Group, Environment Australia, Canberra, April 1998. https://weeds.org.au/wp-content/uploads/2020/04/bioimpact.pdf

Atlas of Living Australia (ALA) (n.d.) *Pseudomys chapmani* (Kitchener, 1980). Atlas of Living Australia. https://bie.ala.org.au/species/https:/biodiversity.org.au/afd/taxa/f6c557a8-aa8c-4ed2-9b6b-ad3c71ba5328 (Accessed 29 June 2026).

Australian Museum (2019) Peregrine falcon (*Falco peregrinus*). The Australian Museum, Sydney. https://australian.museum/learn/animals/birds/peregrine-falcon/ (Accessed 29 June 2026).

Bat Call WA (2021a) A review of ghost bat ecology, threats and survey requirements. Report prepared for the Department of Agriculture, Water and the Environment, Canberra. https://www.dcceew.gov.au/sites/default/files/documents/review-ghostbat-ecology-threats.pdf

Bat Call WA (2021b) A review of Pilbara leaf-nosed bat ecology, threats and survey requirements. Report prepared for the Department of Agriculture, Water and the Environment, Canberra. https://www.dcceew.gov.au/sites/default/files/documents/review-pilbara-leaf-nosed-bat-ecology-threats.pdf

Benshemesh, J. (2004) Recovery Plan for Marsupial Moles: *Notoryctes typhlops* and *N. caurinus*, 2005-2010. Department of Infrastructure, Planning and Environment, Alice Springs. https://cdn.environment.sa.gov.au/environment/docs/pa-rec-marsupialmoles.pdf

Biologic Environmental Survey Pty Ltd (Biologic) (2024) Port Hedland Transmission Line Flora and Vegetation Survey (IBSA-2024-0282). Prepared by Biologic Environmental Survey Pty Ltd, for Pilbara Energy, June 2024.

Bureau of Meteorology (BoM) (2006) Bureau of Meteorology Website – Evaporation: Average Monthly & Annual Evaporation. Bureau of Meteorology. https://www.bom.gov.au/watl/evaporation/ (Accessed 3 June 2026).

Bureau of Meteorology (BoM) (2019) Bureau of Meteorology Website – Groundwater Information – Average Salinity. Bureau of Meteorology. https://www.bom.gov.au/water/groundwater/insight/metadata.shtml (Accessed 27 May 2026).

Bureau of Meteorology (BoM) (2026) Bureau of Meteorology Website – Climate Data Online, Mallina Weather Station (004059). Bureau of Meteorology. https://reg.bom.gov.au/climate/data/ (Accessed 26 May 2026).

Butcher, R., van Leeuwin, S. and Thiele, K. (2017) Taxonomic studies in *Tephrosia* Pers. (Fabaceae) in northern Western Australia. Prepared for Rio Tinto Pty Ltd, May 2017. https://www.eca.org.au/ecwp/wp-content/uploads/2017/05/Taxonomic-Studies-in-Tephrosia-in-Northern-Western-Australia-Final-Report-8-May-2017.pdf

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

Commonwealth of Australia (2008-) Species Profile and Threats Database. Department of Climate Change, Energy, the Environment and Water, Australia. https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl (Accessed 26 June 2026).

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

Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Fauna Profile - Bilby (*Macrotis lagotis*). Department of Biodiversity, Conservation and Attractions, Perth. https://library.dbca.wa.gov.au/FullTextFiles/926066.pdf

Department of Biodiversity, Conservation and Attractions (DBCA) (2025) List of threatened and priority ecological communities. Department of Biodiversity, Conservation and Attractions, November 2025. Available from: https://www.dbca.wa.gov.au/wildlife-and-ecosystems/threatened-ecological-communities

Department of Biodiversity, Conservation and Attractions (DBCA) (2020) List of threatened and priority ecological communities. Department of Biodiversity, Conservation and Attractions, May 2020.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023) Recovery Plan for the Greater Bilby (*Macrotis lagotis*). Department of Climate Change, Energy, the Environment and Water, Canberra. https://www.dcceew.gov.au/sites/default/files/documents/recovery-plan-greater-bilby-2023.pdf

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2025) Wetlands and migratory shorebirds. Department of Climate Change, Energy, the Environment and Water, Australia. https://www.dcceew.gov.au/water/wetlands/about/migratory-shorebirds (Accessed 29 June 2026).

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

Department of Natural Resources, Environment, The Arts and Sport (DNREAS) (2010) National Recovery Plan for the Northern Quoll (*Dasyurus hallucatus*). Department of Natural Resources, Environment, The Arts and Sport, Darwin. https://www.dcceew.gov.au/sites/default/files/documents/northern-quoll.pdf

Department of Planning, Lands and Heritage (DPLH) (2026) Aboriginal Cultural Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/ACHIS/index.html?viewer=ACHIS (Accessed 18 May 2026).

Department of Primary Industries and Regional Development (DPIRD) (2026a) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f (Accessed 3 June 2026).

Department of Primary Industries and Regional Development (DPIRD) (2026b) Western Australian Organism List. Department of Primary Industries and Regional Development. Government of Western Australia. https://www.dpird.wa.gov.au/online-tools/western-australian-organism-list/ (Accessed 30 June 2026).

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

Environmental Protection Authority (EPA) (2016) Technical Guidance – Flora and vegetation surveys for environmental impact assessment. http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf

Environmental Protection Authority (EPA) (2020) Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment. https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf

Fletcher, M., Gibson, L., Mackay, G. and Wilson, N. (2025) Insights into spinifex (*Triodia* species) pastures and their management. XII International Rangeland Congress 2025, Adelaide, 1070-1074. https://library.dpird.wa.gov.au/conf_papers/336

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

Menkhorst, P. and Knight, F. (2011) A field guide to the mammals of Australia: Third Edition. Oxford University Press, Victoria, 2011.

Menkhorst, P., Rogers, D., Clarke, R., Davies, J., Marsack, P. and Franklin, K. (2019) The Australian bird guide: Revised Edition. CSIRO Publishing, Victoria, 2019.

MMWC Environmental Pty Ltd (MMWC) (2014) Red Hill Flora, Vegetation and Fauna Assessment. Prepared by MMWC Environmental Pty Ltd, for Quarrytech Consulting Pty Ltd, February 2014.

NESP Threatened Species Recovery Hub (NESP) (2021) Arid Zone Monitoring Species Profile: Brush-tailed mulgara, Project 3.2.5 findings factsheet. https://www.nespthreatenedspecies.edu.au/publications-and-tools/arid-zone-monitoring-species-profiles

North West Quarries Pty Ltd (North West Quarries) (2019) Red Hill Sand Quarry - M47/1495: Clearing Permit CPS 6262/1 - Compliance Report 2019. Prepared by North West Quarries Pty Ltd, July 2019.

North West Quarries Pty Ltd (North West Quarries) (2025a) Clearing permit application form, CPS 11375/1, received 3 December 2025.

North West Quarries Pty Ltd (North West Quarries) (2025b) Red Hill Sand Quarry - M47/1495: Clearing Permit (Purpose Permit) Application 2025. Prepared by North West Quarries Pty Ltd, November 2025.

North West Quarries Pty Ltd (North West Quarries) (2026) Additional information received via email, 17 June 2026 and 19 August.

Northover, A., Palmer, R., Burbidge, A. H., Pearson, D., Dziminski, M., Ottewell, K., Prada, D., Umbrello, L. and Gibson, L. (2023) Summary of knowledge for six faunal species that are Matters of National Environmental Significance in the Pilbara, Western Australia. Department of Biodiversity, Conservation and Attractions, Perth. https://www.wa.gov.au/system/files/2023-08/summary-of-knowledge-for-six-faunal-species-that-are-mnes-in-the-pilbara_final-report.pdf

Pavey, C. R., Nano, C. E. M., Cooper, S. J. B., Cole, J. R. and McDonald, P. J. (2012) Habitat use, population dynamics and species identification of mulgara, *Dasycercus blythi* and *D. cristicauda*, in a zone of sympatry in central Australia. *Australian Journal of Zoology*, 59(3):156-169. https://doi.org/10.1071/ZO11052

Pearson, D. J. (2013) Recovery plan for five species of rock wallabies: Black-footed rock wallaby (*Petrogale lateralis*), Short-eared rock wallaby (*Petrogale brachyotis*), Monjon (*Petrogale burbidgei*), Nabarlek (*Petrogale concinna*) and Rothschild rock wallaby (*Petrogale rothschildi*). Department of Parks and Wildlife, Perth. https://www.dcceew.gov.au/sites/default/files/documents/rock-wallabies-recovery-plan.pdf

Submission (2026) Public submission in relation to clearing permit application CPS 11375/1, received 21 May 2026.

Threatened Species Scientific Committee (TSSC) (2019) Conservation Advice: *Falco hypoleucos* (grey falcon). Threatened Species Scientific Committee, September 2019. https://environment.gov.au/biodiversity/threatened/species/pubs/929-conservation-advice-09072020.pdf

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.

Van Vreeswyk, A. M. E., Payne, A. L., Leighton, K. A. and Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia. Technical Bulletin No. 92. Department of Agriculture, South Perth, Western Australia.

Weeds Australia (2026) Established: Weeds of National Significance (WoNS). Centre for Invasive Species Solutions and the Department of Agriculture, Fisheries and Forestry. https://weeds.org.au/lists/established/ (Accessed 30 June 2026).

Western Australian Herbarium (WAH) (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dbca.wa.gov.au/ (Accessed 16 June 2026).

Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)

DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

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

Threatened species

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

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

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

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

CR **Critically endangered species**

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

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

EN **Endangered species**

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

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

VU **Vulnerable species**

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

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Extinct species

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

EX **Extinct species**

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

EW **Extinct in the wild species**

Species that *"is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

Specially protected species

SP **Specially protected species**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered, or vulnerable) or extinct species under the BC Act cannot also be listed as specially protected species.

MI **Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

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

Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

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

OS **Other specially protected species**

Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

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

Priority species

P **Priority species**

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

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

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species – known from few locations, none on conservation lands**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

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

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

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

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

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

(d) Other species in need of monitoring.

Principles for clearing native vegetation:

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

(j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.