Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 11661/1
Permit type:	Purpose permit
Applicant name:	BHP Iron Ore Pty Ltd
Application received:	24 June 2026
Application area:	400 hectares of native vegetation within a footprint of 6892.21 hectares
Purpose of clearing:	Environmental, ethnographic, heritage, hydrological, hydrogeological, topographical and geotechnical investigations; construction and maintenance of access tracks and other associated activities
Method of clearing:	Mechanical removal
Property:	Lot 1580 on Deposited Plan 72910 (Pastoral Lease N050368) Unallocated Crown Land PIN 11455504
Location (LGA area/s):	Shire of East Pilbara
Localities (suburb/s):	Newman

1.2. Description of clearing activities

The vegetation proposed to be cleared is located within the Pilbara and is distributed across a large application footprint of 6,892.21-hectares, within which up to 400-hectares of native vegetation may be cleared (see Figure 1, Section 1.5). The clearing is not proposed as a single contiguous block but will occur in a dispersed manner across the footprint to areas associated with investigation activities and access requirements.

The purpose of the clearing is to support environmental, ethnographic, heritage, hydrological, hydrogeological, topographical, and geotechnical investigations, as well as the construction and maintenance of access tracks and other associated activities. Clearing will be undertaken using mechanical methods and will be limited to the minimum extent necessary to safely conduct investigations and establish access.

Clearing activities will be selected and targeted, primarily associated with access track establishment, and investigation sites. Where practicable, existing disturbed areas and established tracks will be utilised to minimise additional vegetation clearing. The spatial extent and exact location of clearing have and will be refined during implementation to avoid environmentally sensitive features identified.

Revisions to the clearing extent were made during the assessment process reducing the application area from 9,644.67-hectares to 6,892.21 hectares to cover the extent of areas surveyed.

1.3. Decision on application

Decision:	Granted
Decision date:	23 September 2026
Decision area:	400-hectares of native vegetation within a footprint of 6,892.21-hectares, as depicted in Section 1.5, below.

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 Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.2), the findings of a fauna survey (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing, which is to support environmental, ethnographic, heritage, hydrological, hydrogeological, topographical and geotechnical investigations, and associated access.

The assessment identified that the proposed clearing will result in:

- the loss of up to 400 hectares of native vegetation within a largely intact and regionally extensive vegetation matrix;
- the potential loss of habitat for conservation significant fauna, including potential direct impacts to western pebble-mound mouse individuals and active mound sites;
- the loss of habitat utilised by the Pilbara olive python and northern quoll, including drainage line and rocky habitats used for foraging and movement;
- the localised loss and disturbance of native vegetation associated with ephemeral drainage lines, with the potential to alter natural surface-water flows where clearing or access tracks intersect drainage features; and
- the potential introduction and spread of weeds into adjacent vegetation.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to long-term adverse impacts on environmental values and can be minimised and managed to be environmentally acceptable. The applicant has suitably demonstrated avoidance and minimisation measures.

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
- vegetation management to avoid riparian vegetation and ensure existing surface flow is maintained
- clearing within mapped Gorge/Gully and cliff/breakaway habitat shall be avoided where practicable. Where avoidance is not practicable, clearing may occur for access tracks and associated investigation infrastructure, provided disturbance is limited to the minimum extent necessary and does not exceed 5 hectares
- undertake pre-clearance surveys and management for western pebble-mound mouse including avoidance buffers and reporting requirements
- undertake clearing during daytime hours only
- cover and backfill pits and bores to prevent fauna entrapment, and fill upon completion
- rehabilitate/revegetate areas no longer required for the approved purpose.

1.5. Site map

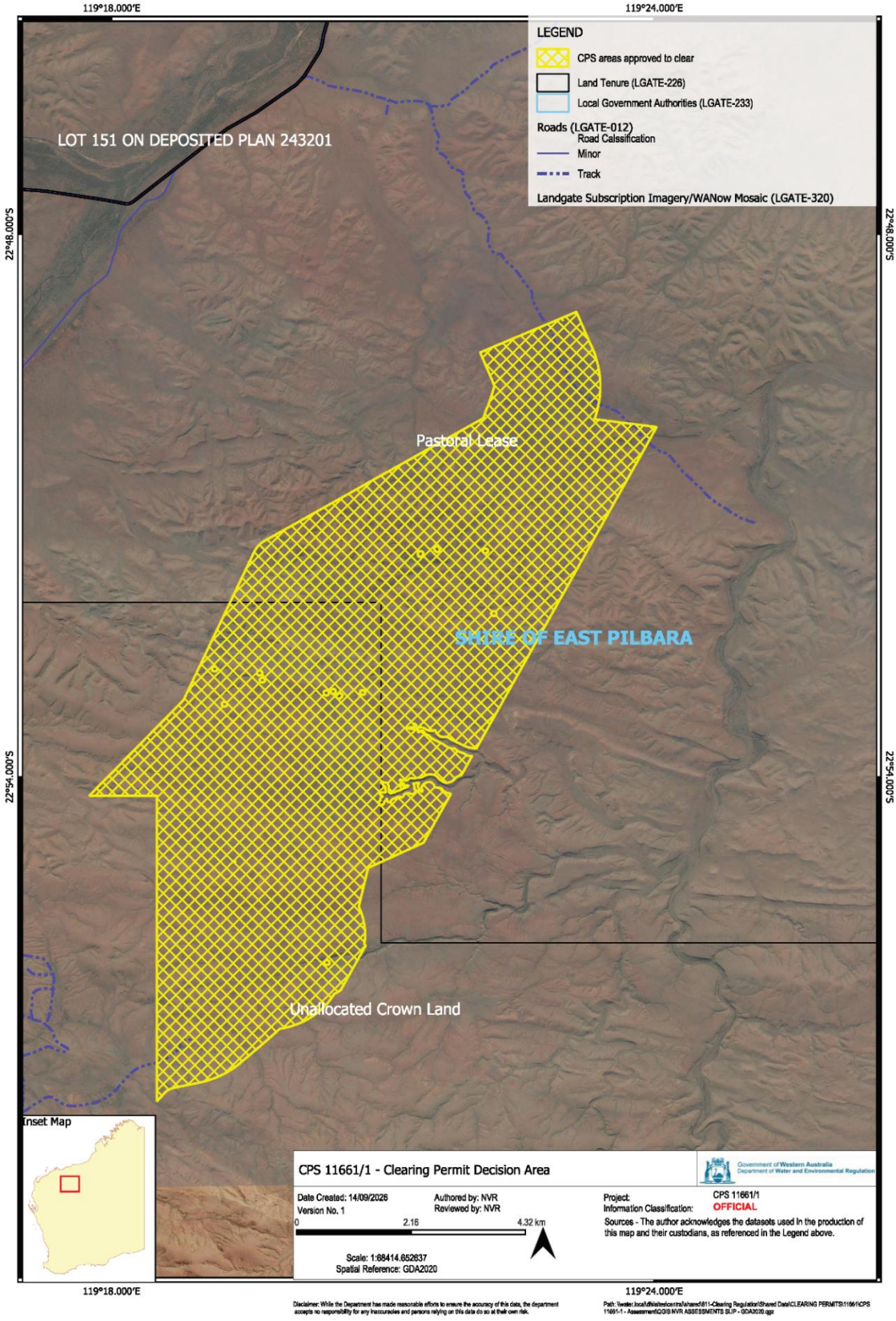


Figure 1 Map of the application area.

The area crosshatched yellow indicates the full extent of the area authorised to be cleared under the granted clearing permit.

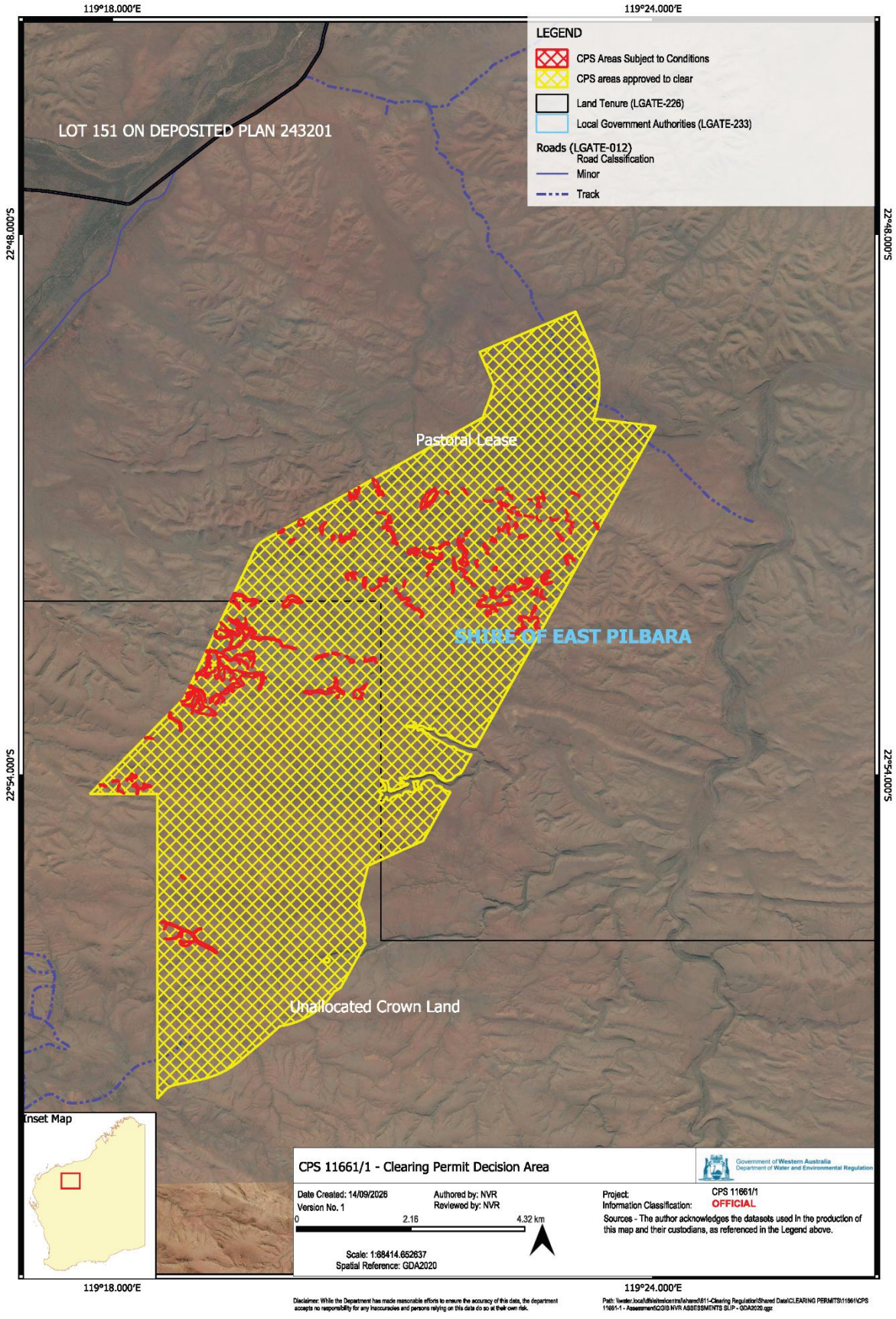


Figure 2 Map of the application area.

The area crosshatched yellow indicates the full extent of the area authorised to be cleared under the granted clearing permit. The area crosshatched red indicates the areas subject to conditions.

2 Legislative context

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

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

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant (BHP, 2026b), demonstrating that avoidance, minimisation, and mitigation measures have been considered including:

Avoidance

- application area developed to exclude:
  - five, Category 4 ghost bat caves with a 150-metre buffer
  - four, water features with a 10-metre buffer
- should any current or pending biological surveys identify any of the following features they would be avoided with the indicated exclusion zone:
  - Category 1 bat caves with a 500-metre buffer
  - Category 2 and 3 bat caves with a 150-metre buffer
  - Category 4 and 5 bat caves with a 50-metre buffer
  - Threatened flora with a 50-metre buffer
- active pebble-mouse mounds will be avoided using a 10-metre buffer, where practicable.

Minimisation

- where practicable any ground disturbance will be kept to previously disturbed areas
- should biological surveys identify any Priority flora, these will be avoided using a 10-metre buffer, where practicable
- where practicable, existing cleared tracks will be used to cross areas identified as Gorge and Gully habitat, and if it is necessary for new crossings to be installed, clearing will be kept to a base minimum
- should any geotechnical investigations be required they will be conducted immediately adjacent to the access track (allowing for safe access)
- where practicable, existing cleared tracks will be used to cross the unnamed non-perennial minor drainage line, and if it is necessary for new crossings to be installed, clearing will be kept to a bare minimum and will be constructed flat level to the surface to maintain the natural surface flow.

Mitigation

- areas that are no longer required for the purpose for which they were cleared will be rehabilitated in accordance with relevant Conditions of the NVCP once approved
- control of established weed populations will be carried out according to BHP's standard Weed Control and Management Procedures.

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

3.2. Assessment of impacts on environmental values

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

resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora) and water resources. 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 (Fauna) - Clearing Principles (B)

Assessment

The application area is located within the Pilbara bioregion and comprises predominantly hummock grasslands with scattered *Acacia* shrublands and *Eucalyptus/Corymbia* woodlands occurring across plains, hillslopes and breakaways. These vegetation types are widespread and well represented regionally but provide habitat for a range of conservation significant fauna species.

The application area has been subject to substantial fauna survey effort. The known fauna surveys relevant to the application area are summarised in Table 1, and Figures 3 and 4 illustrate survey coverage is broadly distributed throughout the application area.

Table 1: Summary of known fauna surveys conducted in the vicinity of the CPS 11661/1 application area.

Survey Reference	Survey Title	IBSA Reference	% of application area surveyed
Astron, 2024	Jindi Rail Corridor and Burrow Pit Targeted Significant Vertebrate Fauna Survey, July 2024	ISA-0001167	60.86%
Ecocene, 2025b	Jindi Mindy North and East Rail Corridor Vertebrate Fauna Survey – Interim Report, April – October 2025	ISA-0001648	81.55%

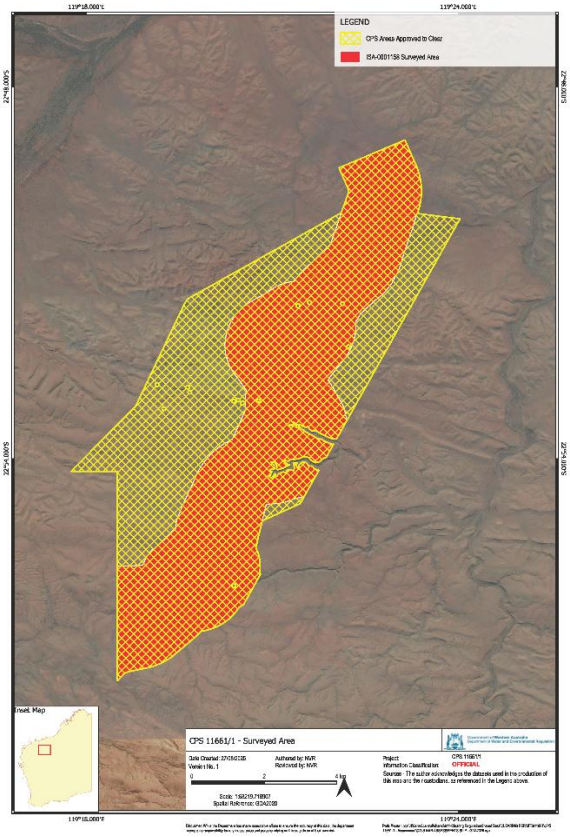


Figure 3: Surveyed portion of CPS 11661/1 application area by Spectrum (2025) and Astron (2024).

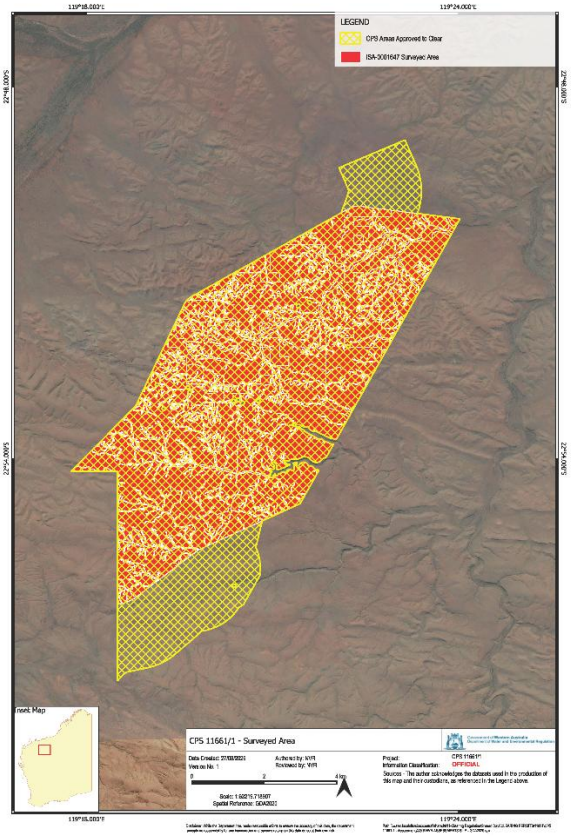


Figure 4: Surveyed portion of CPS 11661/1 application area by Ecocene (2025a, b).

The targeted significant vertebrate fauna survey (Astron, 2024) undertaken over a broader survey area (~24,951 hectares) recorded 102 fauna species, including several conservation significant taxa. The fauna survey conducted by Ecocene found 93 fauna species within the application area. The fauna assemblage is considered typical of the Pilbara region, however, the presence of key habitat features providing important habitat for conservation significant species, including Matters of National Environmental Significance (MNES). Given the large footprint (6,892.21 hectares) and proposed clearing of up to 400 hectares, and acknowledging that the Pilbara is relatively under-surveyed, habitat suitability has been a key determinant in assessing likelihood of occurrence.

Mammal species

Macrotis lagotis (Bilby)

The bilby is listed as Vulnerable under both the EPBC Act and BC Act, with possibly fewer than 10,000 bilbies remaining in the wild (Encyclopaedia Britannica, 2023). The closest record to the application area was recorded at 19.17 kilometres away (2024 record). It is a ground-dwelling omnivorous marsupial that favours sandy soils within spinifex grasslands and shrublands where it can construct extensive burrow systems for shelter and breeding. Critical bilby denning and foraging habitat consists of sandplains, spinifex dominated interdune corridors and stony plains, salt-lakes surrounded with samphire, and/or Melaleucas or paleo-drainage systems within individual home ranges (Astron, 2024; Ecocene, 2025b).

No confirmed records or signs of bilby were recorded within the application area (Astron, 2024; Ecocene, 2025b). While the application area contains spinifex-dominated vegetation and some sandy substrates that may provide suitable foraging habitat, vegetation mapping undertaken by Spectrum (2025) and Ecocene (2025a) identified several vegetation communities characterised by spinifex (Triodia spp.) grasslands occurring on sandy and sandy-loam substrates. While these communities do not represent optimal bilby habitat, they contain habitat elements capable of supporting foraging and movement by the species. Accordingly, suitable habitat cannot be considered absent from the application area.

Accordingly, the species is considered to have low likelihood of occurring within the application area, primarily as a transient foraging species. The proposed clearing may result in a localised loss of potential habitat; however, given the availability of more suitable habitat in the surrounding landscape and the relatively small proportion of marginal habitat for the greater bilby proposed to be cleared, impacts are unlikely to be significant at a regional scale.

Dasyurus hallucatus (Northern Quoll)

The northern quoll is listed as endangered under both the EPBC Act and the BC Act. It is a small carnivorous marsupial that is typically associated with rocky habitats, including gorges, escarpments, breakaways and steep hillslopes. These environments provide suitable denning sites with crevices, boulder piles and caves, which are critical for shelter and breeding. Quolls become sexually mature at one year of age, and during the mating season (June to August), males expend considerable energy fighting other males, and do not survive to breed a second year. Females then den in tree hollows, hollow logs and rock crevices (DCCEEW, 2026a). The species also utilises adjacent habitats, including open woodlands and drainage lines, for foraging and dispersal, where long range movement within a day has been recorded historically as 2.5 kilometres (DCCEEW, 2026a). The closest record to the application area is recorded at 13 kilometres (2024 record), with 553 occurrences in the local area (50-kilometres from application area).

The Astron (2024) or Ecocene (2025b) surveys did not record the northern quoll within the survey area; however, it was assessed as having a high likelihood of occurrence due to the presence of suitable gorge/gully and breakaway habitats and multiple records within the surrounding area. Within the application area, habitat is generally dominated by plains and spinifex grasslands, with some areas of rocky substrate and drainage features. As such, while the species may utilise the application area for foraging or movement and limited critical denning habitat. Based on the available habitat and proximity of known records, the northern quoll is considered to have a moderate to high likelihood of occurrence within the application area. Therefore, any impacts are expected to be limited to minor disturbance or loss of secondary habitat and are unlikely to result in a significant impact to the species.

Pseudomys chapmani (Western Pebble-Mound Mouse)

The western pebble-mound mouse, listed as a Priority 4 species under the BC Act, is a small nocturnal rodent (placental mammal) that is strongly associated with rocky substrates and spinifex grasslands, particularly on hillcrests, hillslopes, and stony plains. The species is characterised by its construction of distinctive pebble mounds, which are used as shelter and play an important role in thermoregulation and predator avoidance. These mound structures are typically built in areas with an abundance of small stones and suitable ground cover, particularly within habitats dominated by *Triodia* species (DBCA, 2017). A desktop assessment determined western pebble-mound mouse to be within the application area (2024 record). The Astron (2024) survey recorded active pebble-mound mouse mounds within hillcrest and hillslope habitats, including records within the application area, confirming that suitable habitat is present and currently utilised. The Ecocene (2025b) survey recorded nineteen mounds during the targeted survey, including active, recently inactive and inactive mounds. Given the species' strong dependence on specific rocky microhabitats and its confirmed presence within the application area, there is a high likelihood of occurrence. Accordingly, the proposed clearing has the potential to directly impact individuals and active mound sites and represents a potentially significant impact requiring management measures.

Dasycercus blythi (Brush-tailed Mulgara)

The brush-tailed mulgara, listed as a Priority 4 species under the BC Act, is a small carnivorous marsupial that inhabits arid and semi-arid environments, typically within spinifex *(Triodia)* grasslands on sandy plains and dunes. The species constructs burrows in soft soils, often beneath spinifex hummocks, which provide shelter from predators and extreme temperatures. It is a nocturnal and largely solitary species that relies on intact ground cover for foraging, feeding on insects, small vertebrates and other vertebrates (Atlas of Living Australia, 2026a). 72 records of the species have been recorded in the local area, the closest being 14.38 kilometres away (2014 record) with majority of the records observed in 2025, about 50 kilometres away.

The Astron (2024) and Ecocene (2025b) surveys recorded one brush-tailed mulgara and evidence of the species through burrows and scats within sand plain habitats in the broader survey area. However, these records were located outside the application area. While sandy substrates and spinifex-dominated vegetation occur within the application area, no sand plain or sand dune habitats, which are strongly associated with the species' preferred habitat requirements, were identified (Ecocene, 2025a; Spectrum, 2025). In addition, no individuals, burrows, scats or other evidence of the species were recorded within the application area during field surveys. Given the absence of key habitat features and lack of records within the application area, the brush-tailed mulgara is considered to have a low likelihood of occurrence. Should individuals occur in the vicinity, the application area is most likely to provide only transient movement or opportunistic foraging habitat. Consequently, the proposed clearing is not expected to result in a significant impact on the species and no species-specific management measures are considered necessary.

Reptile species

Liasis olivaceus barroni (Pilbara olive python)

The Pilbara olive python, listed as Vulnerable under both the EPBC Act and BC Act, is a large non-venomous snake endemic to the Pilbara region. The species is typically associated with rocky habitats and drainage systems,

including gorges, gullies, creeks and river systems, where it utilises caves, crevices, hollow logs and dense riparian vegetation for shelter and thermoregulation. Permanent or semi-permanent water sources are an important habitat component, as they support prey availability and facilitate movement across the landscape (DCCEEW, 2026b). Within the local area, 45 occurrences have been recorded, the closest being 1.16 kilometres away (2022 record).

The Astron (2024) and Ecocene (2025b) surveys confirmed the presence of the Pilbara olive python within the broader survey area and recorded evidence (scat) within gorge/gully habitat. In addition, a record of the species occurs within the application area, indicating that the surrounding environment provides suitable habitat for the species. Within the application area, the presence of drainage features and areas of rocky substrate provides suitable foraging and dispersal habitat, although the availability of optimal denning habitat may be limited relative to more structurally complex gorge systems. Based on the confirmed records and habitat availability, the Pilbara olive python is considered likely to occur within the application area, particularly for movement and foraging, with impacts to dens if gorge habitats involved in the clearing activities. There is potential for localised impacts through habitat disturbance and fragmentation associated with clearing activities.

Underwoodisaurus seorsus (Pilbara barking gecko)

The Pilbara barking gecko is listed as a Priority 2 species under the BC Act; it is a small nocturnal gecko endemic to the Pilbara region. The species is typically associated with rocky habitats, including stony plains, rocky hillslopes, breakaways and areas with scattered spinifex *(Triodia spp.),* where it utilises rock crevices, loose stones, and ground cover for shelter and thermoregulation. It is a ground-dwelling species that emerges at night to forage on insects and other small invertebrates and is generally considered cryptic and under-recorded due to its nocturnal habits (Audcent et al., 2026). Previous records of the species occur within the local area (27 occurrences); however, it was not detected during the Astron (2024) survey. Within the application area, the presence of rocky substrates, hillslope habitats and spinifex grasslands provides suitable microhabitat for shelter and foraging. Given the availability of these habitat features and nearby records, the Pilbara barking gecko is considered to have a moderate likelihood of occurrence within the application area, although its cryptic nature means it may be present but undetected. Therefore, potential impacts are limited to localised habitat disturbance and are unlikely to result in a significant impact to the species.

Anilios ganei (Gane's blind snake (Pilbara))

The Gane's blind snake, listed as a Priority 1 species under the BC Act, is a small, fossorial (burrowing) reptile, that occurs within arid environments of the Pilbara region. The species is typically associated with loose sandy or loamy soils, stony plains and spinifex grasslands, where it inhabits subsurface microhabitats, including soil layers, beneath rocks and within termite mounds (Atlas of Living Australia, 2026b; Encyclopaedia Britannica, 2026a). Due to its subterranean lifestyle, it is rarely encountered and is considered cryptic and under-recorded, with distribution and ecology not well understood. Previous records indicate the species occurs within the local survey area (9 records since 1985); however, it was not detected during the Astron (2024) survey. Within the application area, the presence of suitable soil types, spinifex-dominated vegetation and scattered rocky substrates provides appropriate habitat for burrowing, shelter and foraging. Given the availability of these habitat features and nearby records, Gane's blind snake is considerate to have a moderate likelihood of occurrence within the application area, although its cryptic nature means it may be present but undetected during surveys.

Bat species

Macroderma gigas (Ghost Bat) and *Rhinonicteris aurantia* (Pilbara leaf-nosed bat)

The application area provides habitat potentially suitable for foraging by two conservation significant bat species: the ghost bat *(Macroderma gigas)* and the Pilbara leaf-nosed bat *(Rhinonicteris aurantia)*. Both species are listed as threatened under State and Commonwealth legislation and have been recorded within the local area, including proximate records of the ghost bat within the application area.

Both species exhibit similar ecological requirements in that they are obligate cave-roosting taxa, relying on caves, disused mine workings, adits, or other subterranean voids for diurnal roosting and breeding (Australian Museum, 2023; DCCEEW, 2026c). These roost sites are a critical habitat component, with populations highly dependent on the availability and integrity of such features. The surveys identified that, while the broader region contains geological formations suitable of supporting roost sites, all suitable caves and roosting features have been removed from, or are absent within, the application area. Accordingly, no roosting habitat for either species is present within the proposed clearing footprint.

The application area comprises extensive spinifex grasslands, open shrublands, and woodland habitats, which are consistent with known foraging environments for both species. The ghost bat forages on small invertebrates and large invertebrates, often utilising open habitats, while the Pilbara leaf-nosed bat forages on aerial insects (Australian Museum, 2023; DCCEEW, 2026c). As noted in Astron (2024), these habitat types are widespread and well represented throughout the surrounding landscape.

Given the confirmed absence of roosting habitat within the application area, the interaction of these species with the site is expected to be limited to intermittent foraging activity. The proposed clearing of up to 400 hectares within a broader disturbance footprint of over 6,892.21 hectares will result in the localised removal of foraging habitat. However, this loss is not considered significant in the context of the extensive and contiguous nature of similar habitat in the surrounding landscape, and the high mobility and large foraging ranges of both species.

Importantly, the proposed clearing will not result in impacts to critical roosting habitat, which represents the most sensitive ecological feature for both species. Therefore, potential impacts are limited to a minor reduction in available foraging habitat, with no anticipated impact to population persistence or regional habitat function.

Bird species

Pezoporus occidentalis (Night Parrot)

The night parrot is listed as critically endangered and is one of Australia's most cryptic and poorly understood avifauna species. It has a wide but extremely sparse distribution across arid inland Australia, including parts of the Pilbara region; however, confirmed records remain limited and highly localised. The species is strongly associated with dense, long-unburnt spinifex *(Triodia spp.)* grasslands, typically on sandplains, dune systems or stony uplands. Night parrots require structurally complex spinifex hummocks with dense spinifex clumps, where individuals construct nests close to the ground and rely on intact spinifex vegetation cover for protection. These habitat requirements are generally associated with long periods without fire disturbance, allowing spinifex to mature into dense, hummock-forming structures (Department of Environment, 2016; Western Australian Museum, 2024).

While the application area contains spinifex-dominated vegetation communities, consistent with habitat types used by night parrots, the species is known to be highly selective and occurs at very low densities even in otherwise suitable habitat (Department of Environment, 2016; Western Australian Museum, 2024). Given the highly cryptic nature of the species, absence of records does not conclusively indicate absence. Although desktop assessment identified a record as close as 21 kilometres away in 2003, the most recent record within the local area in 2022. Targeted acoustic surveys undertaken by Astron (2024) and Ecocene (2025b), did not detect the species and no evidence of night parrots was identified during surveys.

Furthermore, the application area has been subject to varying levels of disturbance and vegetation condition, ranging from completely degraded to excellent, which may limit the extent of suitable long-unburnt, structurally complex spinifex required for nesting. The species' reliance on large, undisturbed habitat areas further reduces the likelihood of regular utilisation of the site.

Polytelis alexandrae (Princess Parrot)

The princess parrot is a priority 4 species (BC Act) and vulnerable species (EPBC Act) associated with arid and semi-arid environments, particularly spinifex grasslands, sandy plains and dune systems. The species is highly nomadic, moving in response to rainfall and the availability of food resources, and breeds opportunistically in areas supporting suitable vegetation following significant rainfall events. Habitats considered suitable for the species, including sand plains and dune landforms, are present within the broader survey region (DCCEEW, 2026d). However, the application area is located outside the known core distribution of the species, which is primarily centred further east within the central and western arid zone. As such, despite the presence of some broadly suitable habitat types, the likelihood of the species occurring within the application area is limited. The Astron (2024) fauna survey did not record the species within the application area, and given its irregular occurrence, geographically distant core range, presence of nearby suitable habitat in which they can escape to (if present), it is considered unlikely that the site is regularly utilised, and if utilised, not core to the species survival.

Aphelocephala leucopsis castaneiventris (Southern Whiteface)

The southern whiteface is a small passerine bird widely distributed across arid and semi-arid Australia, typically occurring in open shrublands, grasslands and spinifex-dominated habitats. The species utilises ground and low vegetation for foraging and nests in low shrubs or spinifex hummocks (DCCEEW, 2026e). The application area comprises spinifex grasslands and open shrubland communities, which are consistent with suitable habitat for the species. However, the southern whiteface is widespread and common across the Pilbara region, and the habitat present within the application area is well represented in the surrounding landscape. While the species may occur within the application area, the proposed clearing represents a small, localised loss of habitat within a large, continuous vegetation matrix. The Astron (2024) fauna survey did not identify this species as being of particular conservation concern within the application area.

Falco peregrinus (Peregrine Falcon)

The peregrine falcon is a widespread raptor occurring across much of Australia in a variety of habitats, including coastal regions, woodlands, and arid inland areas. The species typically nests on cliff ledges, rocky outcrops, or other elevated structures and forages over large areas, hunting birds in open airspace. The application area comprising of spinifex grasslands and woodland habitats, may provide foraging habitat for the species. The

Ecocene (2025b) survey identified Breakaway and Cliff habitat as providing potential nesting and foraging habitat for peregrine falcon. The peregrine falcon is highly mobile and utilises extensive home ranges (Encyclopaedia Britannica, 2026b). The proposed clearing will result in a small, localised reduction in foraging habitat, which is well represented in the surrounding landscape. The Astron (2024) fauna survey did not identify this species as being reliant on the application area. While the peregrine falcon may forage over the application area, the absence of nesting habitat and the widespread availability of foraging habitat in the region indicates that the proposed clearing is unlikely to result in a significant impact to this species.

Conclusion

Based on the above assessment, the proposed clearing will result in the localised loss and disturbance of conservation significant fauna habitat, including:

- the loss of habitat for the western pebble-mound mouse, including potential direct disturbance to individuals and active mound sites
- the loss of habitat utilised by the Pilbara olive python and northern quoll, including potential disturbance to individuals moving through drainage lines and rocky habitats

After consideration of the available information, as well as the applicant's avoidance and mitigation measures (see Section 3.1), the Delegated Officer determined that the proposed clearing is unlikely to have long-term adverse impacts on fauna values, with impacts primarily limited to localised habitat loss.

For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna values can be managed through the implementation of conditions, including pre-clearing fauna management, avoidance of gorge/gully and cliff/breakaway habitat where practicable, limits on disturbance within these habitats where avoidance is not practicable, and rehabilitation and revegetation of temporarily disturbed areas.

Conditions

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

- avoid, minimise to reduce the impacts and extent of clearing;
- clearing within mapped gorge/gully and cliff/breakaway habitat shall be avoided where practicable. Where avoidance is not practicable, disturbance shall be limited to the minimum area necessary and restricted to 5 hectares;
- pre-clearance surveys, avoidance buffers and reporting requirements for western pebble-mound mouse;
- daytime-only clearing;
- fauna protection measures requiring pits and bores to be fenced, covered and backfilled; and
- rehabilitation and revegetation of temporary disturbance areas.

3.2.2. Biological values (Flora) - Clearing Principles (A) and (C)

Assessment

The application area comprises hummock grasslands dominated by *Triodia* species, with scattered *Acacia* shrublands and *Corymbia* and *Eucalyptus* woodlands. These vegetation types are widespread and well represented across the Pilbara region, with the mapped vegetation association retaining approximately 99.50% of its pre-European extent.

A desktop assessment identified 25 conservation significant flora species within the local area, comprising one threatened flora species and 24 priority flora species. Flora and vegetation surveys undertaken by Spectrum (2025) and Ecocene (2025a) did not record any threatened or priority flora species within the application area.

The application area has been subject to substantial flora and vegetation survey effort. The known flora and vegetation surveys relevant to the application area are summarised in Table 2, and Figures 3 and 4 (Section 3.2.1) illustrate survey coverage is broadly distributed throughout the application area.

Table 2: Summary of known flora and vegetation surveys conducted in the vicinity of the CPS 11661/1 application area.

Survey Reference	Survey Title	IBSA Reference	% of application area surveyed
Spectrum, 2025	Jindi Rail Corridor and Burrow Pit Detailed Flora & Vegetation Assessment	ISA-0001158	60.86%
Ecocene, 2025a	Jindi Mindy North and East Rail Corridor	ISA-0001647	81.55%

	Detailed Flora and Vegetation Survey		

The Delegated Officer considered the survey coverage illustrated in Figures 3 and 4 (Section 3.2.1) together with the survey methodologies and outcomes. The surveys were undertaken in accordance with EPA flora and vegetation survey guidance and included systematic vegetation mapping, targeted searches for conservation significant flora and assessment of vegetation condition. The survey effort is considered adequate to characterise the flora and vegetation values of the application area and to identify any conservation significant flora likely to be impacted by the proposed clearing.

The Ecocene (2025a) survey representing an interim Phase 1 (dry season) assessment, recorded one Priority flora species, *Gymnanthera cunninghamii* (P3), from ten locations (30 individuals) occurring within gorge habitat in the broader survey area, these records are located outside the application area and will not be directly impacted by the proposed clearing.

The surveys did not identify any threatened flora, threatened ecological communities, priority flora or priority ecological communities within the application area. The vegetation types present within the application area are widespread, regionally well represented and occur within a largely intact surrounding landscape. As such, the available information indicates that the application area does not contain any known threatened or priority flora populations.

The scale of the application area (6,892.21-hectare footprint) increases the possibility that habitat suitable for conservation significant flora may occur in some locations. However, vegetation types within the application area are broad, relatively homogeneous and regionally extensive. The landforms and soil systems present, including the Newman and McKay systems, are well characterised and widespread throughout the surrounding area.

Many conservation significant flora species occurring in the Pilbara are associated with specific geological substrates, drainage systems, cracking clay habitats or other localised environmental features. These habitat requirements are either absent, limited in extent, or not known to support conservation significant flora within the application area.

Vegetation condition within the application area ranges from completely degraded to excellent, although the majority of the area was mapped as being in excellent condition. The proposed clearing of up to 400 hectares represents a small proportion of the broader application footprint and will result in the removal of vegetation that remains well represented at the local and regional scale.

Based on the available survey information and desktop assessment, the likelihood of the proposed clearing impacting threatened, or priority flora is considered low.

Conclusion

The proposed clearing will result in the localised removal of native vegetation within a largely intact and regionally extensive vegetation matrix. No threatened flora species or priority flora species were recorded within the application area during the flora and vegetation surveys. While *Gymnanthera cunninghamii* (P3) was recorded during survey investigations, the known records occur outside the application area and are not expected to be directly impacted by the proposed clearing.

The vegetation associations proposed to be cleared are widespread and well represented within the Pilbara region, and the proposed clearing extent represents a small proportion of the available habitat in the surrounding landscape. Given the substantial flora and vegetation survey effort, the current surveys are considered adequate to characterise the flora and vegetation values of the site. Consequently, the likelihood of conservation significant flora occurring within the application area is considered low.

After consideration of the available information, including the results of flora and vegetation surveys and the applicant's avoidance and minimisation measures (see Section 3.1), the Delegated Officer determined that the proposed clearing is unlikely to result in significant impacts to flora values.

For the reasons set out above, it is considered that impacts to flora values can be appropriately managed through implementation of permit conditions relating to avoidance and minimisation of clearing extent and hygiene management. Additional flora management measures, including pre-clearance flora surveys, are not considered necessary.

Conditions

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

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

3.2.3. Water Resources - Clearing Principles (F), (I) and (J)

Assessment

The application area is located within the Pilbara Surface Water Area and Pilbara proclaimed groundwater area under the *Rights in Water and Irrigation Act 1914.* Numerous ephemeral drainage lines intersect the application area. These drainage features are generally dry for much of the year and convey surface water following significant rainfall events.

Flora and vegetation surveys identified drainage line, floodplain and gorge habitats within the survey area (Spectrum 2025, Ecocene, 2025a). Vegetation associated with drainage features generally supports greater structural and floristic diversity than the surrounding plains and hillslopes, including *Eucalyptus* and *Corymbia* woodlands, *Acacia* shrublands and riparian vegetation elements (CALM, 2003).

Clearing associated with access tracks and investigation activities has the potential to locally disturb drainage-associated vegetation and alter surface-water flow where works intersect ephemeral drainage lines. Potential impacts may include localised changes to drainage patterns, erosion and sediment movement following significant rainfall events, with the potential to temporarily affect surface-water quality.

The application area also intersects a mapped terrestrial Groundwater Dependent Ecosystem (GDE) identified as having moderate potential for groundwater dependency under the national GDE assessment. The national GDE mapping identifies the potential for groundwater/ecosystem interaction and does not, by itself, confirm groundwater dependency at a site. Given the nature and dispersed extent of the proposed clearing, significant impacts to groundwater-dependent values as a result of vegetation clearing are considered unlikely.

The applicant has proposed measures to minimise these impacts, including using existing cleared tracks to cross drainage lines where practicable. Where new crossings are required, clearing will be limited to the minimum extent necessary and crossings will be constructed to maintain natural surface-water flows (Section 3.1).

Advice received from DWER Water Regulation indicated that significant impacts to surface-water and groundwater resources are unlikely, provided natural drainage systems and flow paths are maintained and best-practice management measures are implemented. Water Regulation also recommended avoiding disturbance to riparian vegetation where practicable and rehabilitating disturbed areas following completion of works (DWER Regulatory Services – Water, 2026).

Given the dispersed nature of the proposed clearing and the applicant's proposed avoidance and minimisation measures, significant changes to surface-water or groundwater quality, or the incidence or intensity of flooding, are considered unlikely. Potential impacts associated with disturbance of ephemeral drainage lines can be further minimised through a watercourse management condition requiring the permit holder to avoid clearing riparian vegetation where practicable and maintain existing surface-water flows.

Conclusion

The proposed clearing will result in the localised removal of native vegetation associated with ephemeral drainage lines and has the potential to disturb natural surface water flows where clearing or access tracks intersect these drainage features.

For the reasons set out above, it is considered that impacts to water resources can be appropriately managed through implementation of a watercourse management condition requiring the avoidance of riparian vegetation where practicable and the maintenance of existing surface water flows. Rehabilitation and revegetation of temporarily disturbed areas will further minimise potential impacts following completion of the proposed activities.

Conditions

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

- vegetation management to avoid clearing riparian vegetation where practicable and ensure existing surface-water flows are maintained; and
- rehabilitation and revegetation of temporarily disturbed areas.

3.3. Relevant planning instruments and other matters

Rights in Water and Irrigation Act 1914

Advice was sought from DWER Water Regulation regarding requirements under the Rights in Water and Irrigation Act 1914 (RIWI Act) (DWER Regulatory Services - Water, 2026). It is advised that hydrogeological investigations involving the drilling or bores are authorised under existing section 26D licence CAW213395(1) held by BHP Iron Ore Pty Ltd for Mining Lease ML244SA. The licence was granted on 15 February 2026 and expires on 14 February 2028.

Water Regulation advised that up for 50,000 kL may be abstracted from each bore for hydrogeological investigation and sampling purposes under the section 26D licence. If the combined abstraction associated with hydrogeological testing exceeds 200,000 kL across all bores, or if a bore is used for purposes other than hydrogeological testing, a licence under section 5C of the RIWI Act may be required.

Water Regulation further advised that no diversion or obstruction of drainage lines of waterways is proposed and, based on the information available, no additional approvals under the RIWI Act are likely to be required.

Best management practice advice includes:

- maintaining existing hydrological regimes
- disturbance to natural drainage systems or adversely affecting the quality or quantity of water in any watercourse, dam, waterhole, spring, or subterranean source of supply should be avoided where possible
- disturbance to riparian vegetation should be avoided where possible to maintain foreshore stability and protect important riparian habitats. Where possible, existing tracks are to be used
- providing buffers along watercourses and constructing any creek crossings on straighter sections of watercourse rather than bends or meanders
- the disturbed areas being appropriately rehabilitated upon completion of the work.

Shire of East Pilbara

The Shire of East Pilbara was provided the opportunity to comment on CPS 11661/1; no response was received in the timeframe to date.

Section 91 Licence

Tenure over the application area was applied for under a section 91 (s91) licence application under the *Land Administration Act 1997* (Department of Planning, Lands and Heritage (DPLH)) The application area is located within:

- portion of unallocated crown land PIN 11455504;
- portion of unallocated crown land Lot 908 on Deposited Plan 72908;
- portion of Lot 1580 on Deposited Plan 72910 (LR3161/597) being Marillana Pastoral Station (Lease N050268);
- Crown Lease (CL841/1967 Newman Mainline) I154279 over Lot 19 on Deposited Plan 48921; and
- portion of unallocated crown land Lot 151 on Deposited Plan 243201.

A s91 licence under the *Land Administration Act 1997* was issued to BHP on 24 June 2026 (Licence L01000/2026_A15436112) for the term of twenty-four (24) months.

The application area is located within the EPA's Ministerial boundary for BHP's Pilbara Expansion Strategic Proposal (Ministerial Statement 1105) that identifies and assesses how impacts to the environment at a landscape scale will be managed. A portion of the application area also intersects the EPA's Ministerial boundary for the Pilbara Iron Ore and Infrastructure Project (Christmas Creek Mine, East-West Railway and Mindy Mindy Mine) (Ministerial Statement 1033) which includes mines and associated infrastructure at the sites and the modification/expansion or development of additional mine pits and associated infrastructure. Access to this portion of the land by BHP for the purpose of undertaking geotechnical investigations has been negotiated through the s91 Licence under the *Land Administration Act 1997.*

Aboriginal Cultural Heritage and Native Title

The application area is located within the registered area of interest of the Karlka Nyiyaparli People (WAD6280/1998 WC 2005/006) (Karlka Nyiyaparli Aboriginal Corporation RNTBC), and includes the Nyiyaparli and BHP Billiton Comprehensive Agreement ILUA, Rtio and Nyiyaparli ILUA, RMG – Nyiyaparli Land Access Agreement ILUA and RMG – Nyiyaparli Land Access ILUA. Under section 24LA of the *Native Title Act 1993* (Cth), DWER has provided Karlka Nyiyaparli Aboriginal Corporation RNTBC an opportunity to comment on clearing permit application CPS 11661/1. No comments were received.

Advice received from the Department of Planning, Lands and Heritage (DPLH, 2026) identified that the application area intersects the boundaries of the registered Aboriginal site Mindy Mindy Drill Line 1 (ID 22041) and the lodged Aboriginal heritage place Mindy Mindy Creek (ID 41634).

DPLH advised that, based on the information currently held by the Department, any works undertaken within the boundaries of these sites that may impact or harm Aboriginal Heritage may require approval under the *Aboriginal*

Heritage Act 1972 (WA). DPLH further advised that the application area may not have been comprehensively surveyed and that unrecorded Aboriginal heritage may also be present. DPLH recommended that the permit holder regularly review the Aboriginal Cultural Heritage Inquiry System (ACHIS) for any updates relevant to the application area and engage with the Karlka Nyiyaparli Aboriginal Corporation as appropriate regarding impacts to Aboriginal Heritage.

It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The application area occurs within an extensive and largely intact native vegetation landscape in the Pilbara region. The proposed clearing is dispersed within a broader 6,892.21-hectare footprint and does not constitute an isolated remnant or recognised ecological linkage. Aerial imagery indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains 95 – 100 per cent of the original native vegetation cover.
Ecological linkage	There are no formal ecological linkages within or adjacent to the application area, however, the application area may function as an informal ecological linkage as the application area forms part of a continuous expansive of native vegetation, within minimal fragmentation.
Conservation areas	There are no conservation areas intersecting with the application area. The closest conservation area being located approximately 23.5 kilometres northeast from the application area, which is Fortescue Marsh Nature Reserve. Karajini National Park is situated approximately 44 kilometres northwest from the application area.
Vegetation description	Supporting information supplied by the applicant (BHP, 2026b; Ecocene, 2025a; Spectrum, 2025) indicate the vegetation within the proposed clearing area consists of predominantly hummock grasslands dominated by *Triodia* species, with scattered *Acacia* shrublands and *Corymbia* and *Eucalyptus* woodlands occurring across plains, hillslopes and drainage features. Specific mapped survey descriptions from Spectrum (2025) and Ecocene (2025a) indicate that vegetation within the proposed clearing area is dominated by *Triodia* spp. hummock grasslands, with varying assemblages of *Acacia* shrublands and open woodlands of *Corymbia* and *Eucalyptus* species. Vegetation communities occur across a range of landforms including sand plains, hillslopes, hill crests, footslopes, drainage lines, floodplains, gullies and gorges, with drainage features generally supporting greater structural and floristic diversity, including tussock grasslands and riparian woodland elements. Disturbed and previously cleared areas are also present within the proposed clearing footprint. The full survey descriptions are available in Appendix F. This is consistent with the (Shepherd et al) mapped vegetation type: • Beard Vegetation Associations, Hamersley (HAMMERSLEY_82) hummock grassland with scatter bloodwoods & snappy gum *Triodia spp., Corymbia dichromophloia, Eucalyptus leucophloia,* *The mapped vegetation type retains approximately 99.50 per cent of the original extent (Government of Western Australia, 2019).*
Vegetation condition	Supporting information supplied by the applicant (BHP, 2026b) indicate the vegetation within the proposed clearing area ranges from completely degraded to very good and excellent (Trudgen, 1991) condition, described as: • completely degraded: areas are completely or almost completely without native species in their structure of their vegetation • very good: some relatively slight signs of damage caused by human activities • excellent: pristine or nearly so, no obvious signs of damage caused by human activities. However, majority of the application area was mapped as in excellent condition with no obvious signs of disturbance within the flora assessment (Ecocene, 2025a; Spectrum, 2025). The full Trudgen (1991) condition rating scale is provided in Appendix E. The full survey descriptions are available in Appendix F.

Characteristic	Details
Climate and landform	The mean average rainfall in the region is recorded as 318.5 millimetres (Astron, 2024). Rainfall in the region is known to be variable, falling mainly in summer cyclonic events from December to February (Spectrum, 2025). The application area has some elevation changes from approximately 550 to 700 metres above sea level.
Soil description	The soil is mapped as: • *Newman System (285Ne) rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.* • *McKay System (285Mk) hills, ridges, plateaux remnants and breakaways of meta sedimentary rocks supporting hard spinifex grasslands with acacias and occasional eucalypts.*
Land degradation risk	Based on available data, the application area is not mapped within areas at risk of significant land degradation.
Waterbodies	The desktop assessment and aerial imagery indicated that no major waterbodies intersect with the application area, however extensive RIWI waterlines are present. The application area is within one mapped terrestrial Groundwater Dependent Ecosystem (GDE) identified as having a moderate potential for groundwater dependency under the national GDE assessment. It is characterised by rugged jaspilite plateaux, ridges, and mountains supporting hard spinifex grasslands.
Hydrogeography	The application area is mapped within the Pilbara Surface Water Area and Pilbara proclaimed groundwater area under the RIWI Act. According to available databases, the groundwater salinity is 500 – 1000 milligrams to litres total dissolved solids within the application area.
Flora	The desktop assessment identified that 25 conservation significant flora species have been recorded in the local area (50-kilometres from application area), comprising of one threatened species and 24 priority species (3, Priority 1; 19, Priority 3; 2, Priority 4). The closest to the application area being *Stylidium weeliwolli* (P3), 14.68 kilometres west from the application area, which is not within the same soil system as the application area. The flora assessment conducted by Spectrum (2025) did not reveal any threatened or priority flora species occurrences within the application area. The Ecocene (2025a) survey recorded one priority flora being *Gymnanthera cunninghamii* (P3), from 10 locations (30 individuals) within gorge habitat in the broader survey area, however not within the application area. The assessment survey conducted by Spectrum (2025) was conducted over a larger area of land compared to the application area revealing five priority flora to be within the local area: *Fimbristylis sieberiana, Goodenia sp. East Pilbara* (A.A. Mitchell PRP 727), *Bulbostylis burbidgeae, Lepidium catapycnon,* and *Sida sp. Barlee Range* (S. van Leeuwen 1642), none within the application area.
Ecological communities	The desktop assessment identified that there are no threatened or priority ecological communities mapped within the application area. The closest ecological community is 5.6 kilometres west of the application area, being the Weeli Wolli Spring Community (P1).
Fauna	There are records of 34 fauna of conservation significance within the local area, 12 migratory birds, 7 other birds, 5 reptiles, 4 mammals, 3 marsupials and 3 invertebrates. There are 14 records within the application area, 12 being of western pebble-mound mouse (*Pseudomys chapmani)* and one record of a Pilbara olive python *(Liasis olivaceus barroni)* and ghost bat *(Macroderma gigas)*. The Astron (2024) survey conducted determined fauna habitat within the surveyed area of the application area to include minor and medium drainage lines, gorge/gully, hillcrest/hillslope, drainage area/floodplain and cleared/disturbed habitat (Appendix F, Figure 7). The Ecocene (2025a) survey recorded numerous species in the application area, none of conservation significance (not listed in BC or EPBC Act).

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Acacia subtiliformis	P	Y	Y	Y	17.46	342
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	P	Y	Y	Y	21.12	50
Aristida lazaridis	P	Y	Y	Y	22.35	112
Aristida jerichonsis var. subspinulifera	P	Y	Y	Y	23.34	857
Indigofera gilesii	P	Y	Y	Y	28.34	26
Eremophila sp. West Angelas (S. van Leeuwen 4068)	P	Y	Y	Y	35.22	6
Dampiera metallorum	P	Y	Y	Y	36.28	38
Isotropis parviflora	P	Y	Y	Y	37.52	20
Euphorbia inappendiculate var. inappendiculata	P	Y	Y	Y	37.95	13
Ipomoea recemigera	P	Y	Y	Y	39.29	15
Eremophila spongiocarpa	P	Y	Y	Y	46.59	24
Triodia karijini	P	Y	Y	Y	50.78	4

A.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information, impacts to the following conservation significant fauna required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Pseudomys chapmani (Western Pebble-mound mouse, nagadji)	P	Y	Y	Within application area	586
Dasycerus blythi (Brush-tailed mulgara)	P	Y	Y	14.38	72
Macrotis lagotis (Bilby, dalgyte, ninu)	T - VU	Y	Y	19.17	1
Anilios ganei (Gane's blind snake (Pilbara))	P	Y	Y	18.66	9
Macroderma gigas (Ghost Bat)	T - VU	Y	Y	Within application area	391
Pexoporus occidentalis (Night parrot)	T - CR	Y	Y	21.49	1
Dasyurus hallucatus (Northern Quoll)	T - EN	Y	Y	13.03	553
Underwoodisaurus seorsus (Pilbara barking gecko)	P	Y	Y	22.60	27
Rhinonicteris aurantia (Pilbara leaf-nosed bat)	T – VU	Y	Y	10.91	12314
Liasis olivaceus barroni (Pilbara olive python)	T - VU	Y	Y	Within application area	45
Aphelopcephala leucopsis castaneiventris (Southern whiteface)	T - VU	Y	Y	33.43	1
Polytelis alexandrae (Princess Parrot)	P	Y	Y	43.05	0
Falco peregrinus (Peregrine Falcon)	SP	Y	Y	13.56	15

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The vegetation within the application area comprises widespread and well-represented vegetation associations that retain a high proportion of their pre-European extent. The application area contains habitat suitable for conservation significant fauna species.	May be at variance	Yes Refer to Section 3.2.2, 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 provides habitat for conservation significant fauna species. The proposed clearing is dispersed in nature and occurs within extensive, contiguous habitat. While localised impacts to fauna habitat may occur, there may be disturbance to fauna utilising the area.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No threatened flora species were recorded within the application area. One Priority flora species, *Gymnanthera cunninghamii* (P3), was recorded within the broader survey area but outside the application area. Therefore, it is unlikely the proposed clearing will impact individual conservation significant species.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: No threatened ecological communities occur within the application area.	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 native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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: Numerous ephemeral drainage lines intersect the application area, with native vegetation occurring in association with these drainage features. The drainage lines are generally dry for much of the year and convey surface water following significant rainfall events. Clearing associated with access tracks and investigation activities has the potential to disturb drainage-associated vegetation and locally alter surface-water flows.	At variance	Yes *Refer to Section 3.2.3, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The soils and landforms are typical of the Pilbara and not highly susceptible to land degradation. Given the nature of the clearing, the proposed clearing is unlikely to result in appreciable land degradation.	Not 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: Numerous ephemeral drainage lines intersect the application area. Clearing within or adjacent to these drainage features has the potential to result in localised erosion and sediment movement following significant rainfall events, which may temporarily affect surface-water quality.	May be at variance	Yes *Refer to Section 3.2.3, above.*
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: Numerous ephemeral drainage lines intersect the application area and convey surface water following significant rainfall events. Clearing and construction of access tracks across these drainage features have the potential to locally alter surface-water flows where natural drainage pathways are obstructed or modified, which may increase the intensity or frequency of flooding. However, given the dispersed nature of the proposed clearing and the applicant's commitment to maintain natural drainage systems and surface-water flows, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.	May be at variance	Yes *Refer to Section 3.2.3, above.*

Appendix C. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from:

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

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

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

3 EXISTING ENVIRONMENT

3.1 CLIMATE

Newman Aero meteorological site (007176) is the closest Bureau of Meteorology (BoM) station to the Application Area. Average annual rainfall at Newman Aero is 318.0 mm (BOM 2024a). This is mainly derived from tropical storms and cyclones during summer, producing sporadic, heavy rains over the area. Mean monthly rainfall varies from 4.6 mm in September to 71.6 mm in February (BoM 2024a). Daily rainfall is highly variable; the highest maximum daily rainfall ranges from 34.8 mm in October, to 305.6 mm in February (BoM 2024a). The mean maximum temperature in summer months (October to March) is 35.2°C to 39.4°C and mean maximum temperature in winter (April to September) is between 23.0°C and 32.1°C (BoM 2024a).

Wittenoom meteorological site (005026) is the closest station to the Application Area that records daily evaporation. Wittenoom is located approximately 120 km northwest of the Application Area. Mean daily evaporation at Wittenoom throughout the year is 8.6 mm/day (BoM 2023b), which equates to 3.1 metres per year. Evaporation greatly exceeds rainfall in the region throughout the year and on a month-by-month basis (BoM 2024b).

3.2 BIOREGION, LANDFORMS AND LAND SYSTEMS

The Application Area is situated in the following biogeographic sub-region:

- Hamersley subregion (PIL3) of the Pilbara region described as: "*Mountainous area of Proterozoic sedimentary ranges and plateaux, dissected by gorges (basalt, shale and dolerite). Mulga low woodland over bunch grasses on fine textured soils in valley floors, and Eucalyptus leucophloia over Triodia brizoides on skeletal soils of the ranges. The climate is semi-desert tropical, average 300 mm rainfall, usually in summer cyclonic or thunderstorm events. Winter rain is not uncommon. Drainage into either the Fortescue (to the north), the Ashburton to the south, or the Robe to the west. Subregional area is 6,215,092ha*" (Kendrick 2001).

The proposed Application Area is also located in the following land systems, as mapped by van Vreeswyk *et al.* (2004):

McKay: Hills, ridges, plateaux remnants and minor breakaways of sedimentary and meta sedimentary rocks, relief up to 100 m.

Newman: Rugged high mountains, ridges and plateaux with near vertical escarpments of jaspilite, chert and shale, the second largest system in the survey area and prominent

These Land Systems are well represented in their bioregions.

3.3 GEOLOGY AND SOILS

The Australian Soil Resource Information System (ASRIS) provides soil and land resource information across Australia. The following soil type occurs within the Application Area (CSIRO 2021):

Fa13: Ranges of banded jaspilite and chert along with shales, dolomites, and iron ore formations; some areas of ferruginous duricrust as well as occasional narrow winding valley plains and steeply dissected pediments. This unit is largely associated with the Hamersley and Ophthalmia Ranges. The soils are frequently stony and shallow and there are extensive areas without soil cover: chief soils are shallow stony earthy loams (Um5.51) along with some (Uc5.11) soils on the steeper slopes. Associated are (Dr2.33 and Dr2.32) soils on the limited areas of dissected pediments, while (Um5.52) and (Uf6.71) soils occur on the valley plains.

Figure 5: Excerpt from supporting information document supported by applicant (BHP, 2026b).

3.4 FLORA, VEGETATION AND FAUNA

There has been one key flora and vegetation surveys across the Application Area:

- *Jinidi Rail Corridor and Borrow Pit Detailed Flora and Vegetation Assessment* (Spectrum Ecology and Spatial 2025) (**Appendix 1**).

There have been two key vertebrate fauna surveys across the Application Area:

- *Jinidi Rail Corridor and Borrow Pit Targeted Significant Vertebrate Fauna Survey July 2024* (Astron 2025) (**Appendix 2**)
- *Jinidi to Mindy Level 1 Fauna Survey* (Biota 2013)[1]

3.4.1 Vegetation Communities

The Application Area is located within the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara Bioregion (Department of Environment and Heritage 2005). According to the Government of Western Australia (2013), this bioregion is more than 99.9% vegetated (**Table 2**). The vegetation within the Application Area is classified as the following vegetation association, as mapped by Beard (1975):

82 Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.

There is more than 99% of the pre-European vegetation remaining of these vegetation associations (**Table 2**). The Application Area is not part of any significant remnant vegetation in the wider regional area.

Table 2: Pre European extent of vegetation associations occurring within the Application Area (Shepherd *et al.* 2001)

Vegetation Association	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Pre-European % in IUCN Class I-IV Reserves
Pilbara IBRA Bioregion	17,808,657	17,733,584	99.58	6.34
Vegetation association 82 within Western Australia	2,565,901	2,553,217	99.51	10.25
Vegetation association 82 within the Pilbara IBRA	2,563,583	2,550,899	99.51	10.26

A total of six broad floristic formations with eight vegetation associations have been described and mapped within the Application Area (**Figure 2 and Table 3**).

Table 3: Vegetation associations of the Application Area (Spectrum Ecology and Spatial 2005)

Broad Floristic Formation	Vegetation Association Description	
Acacia low open woodland	*SA TbTscPamu EgAiCh AancAdPec*	Hummock Grassland of *Triodia basedowii* and *Triodia schinzii* with *Neurachne muelleri* Scattered Tussock Grass with Low Open Woodland of *Acacia inaequilatera*, *Corymbia hamersleyana* and Very Open Mallee of *Eucalyptus gamophylla* over Open Shrubland of *Acacia ancistrocarpa*, *Acacia dictyophleba* and *Petalostylis cassioides* on red clayey sand on flat plains.
Acacia mid sparse shrubland	*SA TbTp AancApaHc BeScp*	Hummock Grassland of *Triodia basedowii* and *Triodia pungens* with Low Scattered Shrubs of *Acacia ancistrocarpa*, *Acacia ancistrocarpa* and *Hakea chordophylla* over scattered herbs of *Bonamia erecta* and *Scaevola parvifolia* subsp. *pilbarae* on red-orange loamy sand on flat plain.
Acacia tall sparse shrubland	*SS TpTb AprAiHall AbAsiSeah*	Hummock Grassland of *Triodia pungens* and *Triodia basedowii* with High Open Shrubland of *Acacia pruinocarpa*, *Acacia inaequilatera* and *Hakea lorea* subsp. *lorea* over Open Shrubland of *Acacia bivenosa*, *Acacia sibirica* and *Senna artemisioides* subsp. *helmsii* on dark red-orange sandy clay loam on plains with ironstone gravel.
Corymbia low open woodland	*ME AtpPlApyp TpTwTt Ch*	Open Scrub of *Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides* and *Acacia pyrifolia* var. *pyrifolia* with Open Hummock Grassland of *Triodia pungens* and *Triodia wiseana* with Very Open Tussock Grassland of *Themeda triandra* with Low Open Woodland of *Corymbia hamersleyana* on red-orange, brown clayey sand on medium drainage lines with creek stone/ironstone cobbles.

[1] Note that this survey is only relevant for the additional Western Pebble-mound Mouse locations that overlap the Application Area.

Figure 6: Excerpt from supporting information document supported by applicant (BHP, 2026b).

Broad Floristic Formation	Vegetation Association Description	
Corymbia low woodland	*FP Tp Ch AdHcAi*	Very Open Hummock Grassland of *Triodia pungens* with Scattered Trees of *Corymbia hamersleyana* over Scattered Shrubs of *Acacia dictyophleba*, *Hakea chordophylla* and *Acacia inaequilatera* on dark red-orange clay loam with ironstone gravel on floodplains.
Eucalyptus low open woodland	*FS TvTp AbAtenAi Ell*	Hummock Grassland of *Triodia vanleeuwenii* and *Triodia pungens* with Open Shrubland of *Acacia bivenosa*, *Acacia tenuissima* and *Acacia inaequilatera* with Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* on red-orange sandy clay loam on foot slopes with ironstone gravel.
	HC TvTw AhiAbSegp EllHc	Hummock Grassland of *Triodia vanleeuwenii* and *Triodia wiseana* with Low Open Shrubland of *Acacia hilliana*, *Acacia bivenosa* and *Senna glutinosa* subsp. *pruinosa* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and *Hakea chordophylla* on red-orange clayey sand on hill crests with ironstone cobbles.
	HC TvTwTp ColsSeggAa r EllHcCh	Hummock Grassland of *Triodia vanleeuwenii*, *Triodia wiseana* and *Triodia pungens* with Low Open Shrubland of *Corchorus lasiocarpus* var. *parvus*, *Senna glutinosa* subsp. *glutinosa* and *Acacia arida* with Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia*, *Hakea chordophylla* and *Corymbia hamersleyana* on red-orange, brown sandy clay on hill crests with ironstone gravel.

The distinct mapped broad floristic communities and vegetation associations identified within Application Area extend or occur beyond the project boundary.

None of the vegetation associations identified within the Application Area are representative of a Threatened Ecological Community (TEC) or a Priority Ecological Community (PEC). The closest PEC the Weeli Wolli Spring Community (Priority 1) which is approximately 5.5 km west of the Application Area.

Vegetation condition within the Application Area ranges from Excellent to completely Degraded.

3.4.2 Significant Flora

No species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or gazetted as Threatened Flora species under the *Biodiversity Conservation Act 2016* (BC Act) or listed as Priority Flora by the Department of Biodiversity, Conservation and Attractions (DBCA) have been identified within the Application Area.

Should the pending biological surveys identify any of the following features they will be avoided with the indicated exclusion zone:

- Threatened flora will be avoided using a 50 m buffer.
- Priority flora will be avoided using a 10 m buffer, where practicable.

3.4.3 Weeds

Three introduced flora species (weeds) have been recorded within the Application Area (**Table 4**). Control of established weed populations will be carried out according to BHP's standard *Weed Control and Management Procedures*.

Table 4: Introduced Flora of the Application Area

Species	Common Name	DPAW Rating (DPAW 2016)	Declared Pest[1]
**Bidens bipinnata*	Bipinnate Beggartick	Unknown and Rapid	No
**Cenchrus ciliaris*	Buffel Grass	High and Rapid	No
**Setaria verticillata*	Whorled Pigeon Grass	High and Rapid	No

Figure 7: Excerpt from supporting information document supported by applicant (BHP, 2026b).

3.4.4 Fauna Habitats and Significant Fauna

Astron (2025) identified the following five vertebrate fauna habitats within the Application Area (**Figure** 3):

- **Drainage Area / Floodplain**: habitat consisted of hummock grassland with emergent shrubs and sparse *Corymbia* trees on mostly stony and sandy soils in association with Weeli Wolli Creek and other tributaries. A moderate diversity of microhabitats occurred, with tree hollows, soft soil, old *Triodia* and leaf litter present. This habitat occurred in proximity to the Sand Plain, Stony Plain and Mulga Woodland habitats in the northern half of the Survey Area, and Hillcrest/ Hillslope and drainage line habitats in the southern half of the Survey Area. Disturbance included some cattle grazing and road/ track access.
- **Minor Drainage Line**: habitat consisted of small drainage channels less than 10 m wide, with mostly fringing eucalypt trees, shrubland and grassland along the banks. A moderate diversity of microhabitats were exhibited, with tree hollows, soft soil (burrows), old *Triodia* and leaf litter present. Cattle grazing and weed invasion was often present in the ground story vegetation.
- **Medium Drainage Line**: habitat consisted of drainage channels with eucalypt trees growing in the riparian zone, and some patches of dense shrubland throughout the channel. A moderate diversity of microhabitats were present and included tree hollows, woody debris (logs and leaf litter), soft soil (burrows) and old *Triodia*. Cattle grazing and weeds were often present.
- **Hillcrest / Hillslope**: habitat consisted of hummock grassland with an overstory of scattered eucalypt and *Acacia* shrubs on stony soils. Microhabitats were limited with some old *Triodia*, crevices and occasional tree hollows and logs. Disturbances were absent from this habitat type. Hillcrest/ Hillslope habitat was common throughout the southern half of the Survey Area and found in conjunction with Gorge/ Gully and Drainage Area/ Floodplain habitats.
- **Gorge / Gully**: habitat was common throughout the southern half of the Survey Area and was characterised by semi-enclosed rock formations. A high diversity of microhabitats was exhibited, with caves, overhangs, crevices, pools, woody debris (logs and leaf litter), tree hollows and thick undergrowth. Most of the banded iron formation (BIF) geology lacked the structural stability to produce structurally complex caves and were generally open and shallow. Twelve caves and 11 surface water pools were recorded within this habitat type. This habitat was found in conjunction with Hillcrest/ Hillslope and Breakaway/ Cliff habitats, and no disturbance was observed.

Astron (2025) identified the following habitat features which have been clipped from the Application Area (**Figure** 3):

- Five Category 4 Ghost Bat caves which have been clipped from the Application Area using a 50 m buffer
- Four water features which have been clipped from the Application Area using a 10 m buffer.

Astron (2025) recorded one fauna species of significance within the Application Area (**Figure** 3):

- *Pseudomys chapmani* (Western Pebble-mound Mouse) (DBCA Priority 4).

Two fauna species have been recorded solely from habitat features which have been excluded from the Application Area (**Figure** 3). Given the proximity of the habitat features and the highly mobile nature of these species they are considered to be recorded within the Application Area:

- *Liasis olivaceus* subsp. *barroni* (Pilbara Olive Python) (EPBC Act and BC Act Vulnerable)
- *Macroderma gigas* (Ghost Bat) (EPBC Act and BC Act Vulnerable).

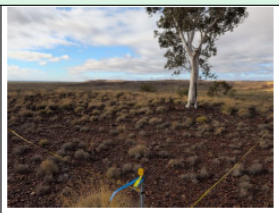
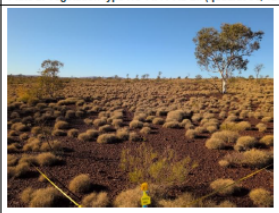
Based on the occurrence of the habitat types and significant fauna species previously recorded in the vicinity, an additional four species are considered to potentially occur within the Application Area (i.e. those considered 'likely' or 'possible' to occur within the Application Area):

- *Anilios ganei* (Pilbara Flat-headed Blind-snake) (DBCA Priority 1)
- *Apus pacificus* (Fork-tailed Swift) (EPBC Act and BC Act Migratory)
- *Dasyurus hallucatus* (Northern Quoll) (EPBC Act and BC Act Endangered)
- *Falco peregrinus* (Peregrine Falcon) ('Other Specially Protected Fauna' BC Act)

An assessment of the potential impact of the proposed clearing on the species of significant fauna that may occur in the application area is provided in **Table** 5.

Figure 8: Excerpt from supporting information document supported by applicant (BHP, 2026b).

Table 7. Vegetation types of the survey area.

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
Hills, Slopes and Dunes				
HC TvTpTw Apr Ell **H6** Open Hummock Grassland of *Triodia vanleeuwenii*, *Triodia pungens* and/or *Triodia wiseana* with High Open Shrubland of *Acacia pruinocarpa* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* on dark reddish-brown sandy clay loam on hillcrests and upper hillslopes **Associated species:** *Triodia wiseana*, *Grevillea wickhamii* and *Corchorus lasiocarpus*	*Triodia* Open Hummock Grassland	JQ-051, JQ-068, JR-224	86.7 ha (0.3%)	 Plate 1: Vegetation type HC TvTpTw Apr Ell (quadrat JQ-068).
HC TwTv Ab Ell **H3** Open Hummock Grassland of *Triodia wiseana* and *Triodia vanleeuwenii* with Open Shrubland of *Acacia bivenosa* with Scattered Mallees of *Eucalyptus leucophloia* subsp. *leucophloia* on dark reddish-brown sandy loam on hillcrests and upper hillslopes **Associated species:** *Triodia ?brizoides*, *Goodenia stobbsiana*, *Ptilotus calostachyus*, *Senna glutinosa* subsp. *pruinosa* and *P. astrolasius*	*Triodia* Open Hummock Grassland	JQ-072, JQ-074, JQ-109, JQ-115, JQ-120, JQ-193, JQ-215	1,217.6 ha (4.6%)	 Plate 2: Vegetation type HC TwTv Ab Ell (quadrat JQ-120).
HS Tv AhiAar Ell **H1** Open Hummock Grassland of *Triodia vanleeuwenii* with Open Shrubland of *Acacia hilliana* and *Acacia arida* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* on dark reddish-brown sandy clay loam on hillslopes **Associated species:** *Corymbia deserticola* subsp. *deserticola and Triodia wiseana*	*Triodia* Open Hummock Grassland	JQ-024, JQ-033, JQ-034, JQ-037, JQ-038, JQ-039, JQ-040, JQ-041, JQ-043, JQ-045, JQ-049, JQ-082, JQ-083, JQ-084, JQ-085, JQ-087, JQ-088, JQ-092, JQ-117, JQ-119, JQ-141, JQ-144, JQ-147, JQ-148, JQ-150, JQ-155, JQ-188, JQ-191, JQ-194, JR-223	4,369.1 ha (16.6%)	 Plate 3: Vegetation type HS Tv AhiAar Ell (quadrat JQ-041).

BHP WAIO
Jinidi Mindy North and East Rail Corridor - Detailed Flora and Vegetation Survey - Interim Report
June - October 2025

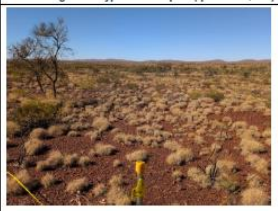
Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
HS Tv Asp Ell **H1a** Open Hummock Grassland of *Triodia vanleeuwenii* with Low Open Shrubland of *Acacia spondylophylla* with Scattered Low Trees of *Eucalyptus leucophloia* subsp. *leucophloia* on dark reddish-brown sandy clay loam on hillslopes **Associated species:** *Triodia wiseana*, *Acacia bivenosa*, *A. hilliana* and *A. pruinocarpa*	*Triodia* Open Hummock Grassland	JQ-089, JQ-105, JQ-122	251.3 ha (1%)	 Plate 4: Vegetation type HS Tv Asp Ell (quadrat JQ-089).
HS Tv Lasu **H2** Open Hummock Grassland of *Triodia vanleeuwenii* with Low Open Shrubland of *Lamarchea sulcata* on dark reddish-brown sandy loam on hillslope **Associated species:** *Eucalyptus leucophloia* subsp. *leucophloia*, *Acacia arida* and *A. hilliana*	*Triodia* Open Hummock Grassland	JQ-044, JQ-046, JQ-047, JQ-048, JQ-086, JQ-090, JQ-106	788.9 ha (3%)	 Plate 5: Vegetation type HS Tv Lasu (quadrat JQ-044).
HS Tw Ain **H5** Hummock Grassland of *Triodia wiseana* with Scattered Tall Shrubs of *Acacia inaequilatera* on dark reddish-brown sandy clay loam on hillslopes **Associated species:** *Triodia pungens*, *T. vanleeuwenii and Corymbia hamersleyana*	*Triodia* Hummock Grassland	JQ-035, JQ-036, JQ-059, JQ-125, JQ-127, JQ-135, JQ-137, JQ-216, JR-067	1,263.7 ha (4.8%)	 Plate 6: Vegetation type HS Tw Ain (quadrat JQ-127).

Figure 9: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
SD ArhErarErer Ad TscTb ^ **SD** Very Open Tussock Grassland of *Aristida* sp. indet., *Eriachne aristidea* and *Eragrostis eriopoda* with Open Shrubland of *Acacia dictyophleba* with Scattered Hummock Grasses of *Triodia schinzii* and *Triodia basedowii* on red sand on sand dunes **Associated species:** **Cenchrus ciliaris, Bonamia erecta, Corchorus sidoides* subsp. *sidoides, Crotalaria cunninghamii, Hibiscus brachychlaenus* and *Trichodesma zeylanicum* var. *grandiflorum* Represents the Vegetation of sand dunes of the Hamersley Range/Fortescue Valley P3 PEC.	*Aristida* Open Tussock Grassland	JQ-013, JQ-017, JQ-026, JQ-029, JQ-198	97.7 ha (0.4%)	 Plate 7: Vegetation type SD ArhErarErer Ad TscTb ^ (quadrat JQ-013).
Gorges and Gullies				
GO TtErteErmu AtPlAnl CfEllEv **G1** Open Tussock Grassland of *Themeda triandra, Eriachne tenuiculmis* and *Eriachne mucronata* with High Shrubland of *Acacia tumida, Petalostylis labicheoides* and *Androcalva luteiflora* with Low Open Woodland of *Corymbia ferriticola, Eucalyptus leucophloia* subsp. *leucophloia* and *Eucalyptus victrix* on dark reddish-brown sandy loam in gorges **Associated species:** *Grevillea wickhamii, Ficus brachypoda, Acacia monticola, Atalaya hemiglauca, Corymbia hamersleyana, A. arida and Eucalyptus camaldulensis* subsp. *refulgens.* Includes locations of *Gymnanthera cunninghamii* P3.	*Themeda* Open Tussock Grassland	JQ-097, JQ-098, JQ-099, JQ-101, JQ-128, JQ-142	44.2 ha (0.2 %)	 Plate 8: Vegetation type GO TtErteErmu AtPlAnl CfEllEv (quadrat JQ-097).
GU CfFibEll TpTw TtErmu **G2** Low Woodland of *Corymbia ferriticola, Ficus brachypoda* and *Eucalyptus leucophloia* subsp. *leucophloia* over Open Hummock Grassland of *Triodia pungens* and *Triodia wiseana* and Open Tussock Grassland of *Themeda triandra* and *Eriachne mucronata* on dark reddish-brown sandy loam in gullies **Associated species:** *Acacia tumida, Petalostylis labicheoides, Acacia pruinocarpa, A. arida, A. sericophylla and Grevillea wickhamii* subsp. *aprica*	*Corymbia* Low Woodland	JQ-121, JQ-123, JQ-126, JQ-129, JQ-134	12.1 ha (< 0.1%)	 Plate 9: Vegetation type GU CfFibEll TpTw TtErmu (quadrat JQ-129).

BHP WAIO
Jinidi Mindy North and East Rail Corridor - Detailed Flora and Vegetation Survey - Interim Report
June - October 2025

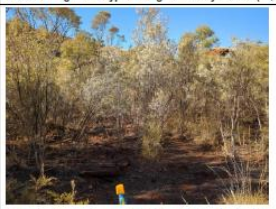
Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
Drainages and Floodplains				
MA MgAci TtCcCya EcrEv **D1** High Shrubland of *Melaleuca glomerata* and *Acacia citrinoviridis* over Very Open Tussock Grassland of *Themeda triandra, *Cenchrus ciliaris* and *Cymbopogon ambiguus* with Scattered Low Trees of *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix* on dark reddish-brown sandy clay loam in major drainage lines **Associated species:** *Acacia coriacea* subsp. *pendens, Corchorus crozophorifolius, Eulalia aurea, Enneapogon caerulescens, Enneapogon lindleyanus, Gossypium robinsonii, Indigofera monophylla and Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186)	*Melaleuca* High Shrubland	JQ-055, JQ-061, JQ-063, JQ-064, JQ-178	373.3 ha (1.4%)	 Plate 10: Vegetation type MA MgAci TtCcCya EcrEv (JQ-063).
ME MgAse Ev Tp **D2** Open Scrub of *Melaleuca glomerata* and *Acacia sericophylla* with Low Open Woodland of *Eucalyptus victrix* with Very Open Hummock Grassland of *Triodia pungens* on brown sandy loam in medium drainage lines. **Associated species:** *Eriachne tenuiculmis*	*Melaleuca* Open Scrub	JQ-149	2 ha (< 0.1%)	 Plate 11: Vegetation type ME MgAse Ev Tp (quadrat JQ-149).
FP Tp ApyAttGrw CocrInm **D3** Hummock Grassland of *Triodia pungens* with High Shrubland of *Acacia pyrifolia, Acacia tumida* var. *tumida* and *Grevillea wickhamii* with Open Shrubland of *Corchorus crozophorifolius* and *Indigofera monophylla* on dark reddish-brown sandy loam in drainage areas and on floodplains **Associated species:** *Eucalyptus victrix, *Cenchrus ciliaris, Atalaya hemiglauca, Gossypium australe* and *G. robinsonii*	*Triodia* Hummock Grassland	JQ-053, JQ-054, JQ-060, JR-062	119.8 ha (0.5%)	 Plate 12: Vegetation type FP Tp ApyAttGrw CocrInm (quadrat JQ-054).

Figure 10: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
FP CcTt Aci **D4** Tussock Grassland of **Cenchrus ciliaris* and *Themeda triandra* with High Open Shrubland of *Acacia citrinoviridis* on dark reddish-brown sandy clay loam in drainage areas and on floodplains **Associated species:** *Eucalyptus victrix, Corchorus crozophorifolius* and *Indigofera monophylla*	**Cenchrus* Tussock Grassland	JQ-222, JQ-225, JQ-226	118.1 ha (0.4%)	 Plate 13: Vegetation type FP CcTt Aci (quadrat JQ-226).
ME Tt AtpGrw EvChEll **D5** Open Tussock Grassland of *Themeda triandra* with High Shrubland of *Acacia tumida* var. *pilbarensis* and *Grevillea wickhamii* with Low Open Woodland of *Eucalyptus victrix, Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* on dark reddish-brown sandy loam in medium drainage lines **Associated species:** *Corymbia deserticola* subsp. *deserticola, Eucalyptus camaldulensis* subsp. *refulgens, Acacia pyrifolia, A. monticola* and *A. hilliana*	*Themeda* Open Tussock Grassland	JQ-103, JQ-108, JQ-110, JQ-111, JQ-114, JQ-116, JQ-124, JQ-130, JQ-132, JQ-139, JQ-146, JQ152	305.6 ha (1.2%)	 Plate 14: Vegetation type ME Tt AtpGrw EvChEll (quadrat JQ-139).
MI AtpGrwPl Tp Ch **D7** Open Scrub of *Acacia tumida* var. *pilbarensis, Grevillea wickhamii* and *Petalostylis labicheoides* with Very Open Hummock Grassland of *Triodia pungens* with Very Open Mallee of *Corymbia hamersleyana* on dark reddish-brown sandy loam in minor drainage lines **Associated species:** *Themeda triandra, Dodonaea lanceolata* var. *lanceolata, Androcalva luteiflora, Santalum lanceolatum, Acacia adoxa* var. *adoxa, A. arida, A. monticola* and *Duperreya commixta*	*Acacia* Open Scrub	JQ-100, JQ-102, JQ-104, JQ-107, JQ-112, JQ-113, JQ-151, JQ-153, JQ-154, JQ-156	296 ha (1.1%)	 Plate 15: Vegetation type MI AtpGrwPl Tp Ch (quadrat JQ-112).

BHP WAIO
Jinidi Mindy North and East Rail Corridor - Detailed Flora and Vegetation Survey - Interim Report
June - October 2025

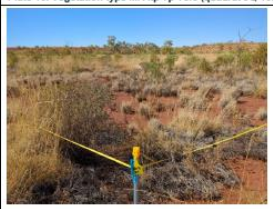
Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
MI Atp Tp Tefc **D8** High Shrubland of *Acacia tumida* var. *pilbarensis* over Open Hummock Grassland of *Triodia pungens* with Low Open Shrubland of *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) on dark reddish-brown sandy clay loam in minor drainage lines **Associated species:** *Eucalyptus camaldulensis, Eucalyptus victrix, *Cenchrus ciliaris* and *Ptilotus obovatus* var. *obovatus*	*Acacia* High Shrubland	JQ-065, JQ-163, JQ-169, JR-190, JR-192, JQ-195, JQ-202, JQ-206	404.3 ha (1.5%)	 Plate 16: Vegetation type MI Atp Tp Tefc (quadrat JQ-163).
FP Tp CcTt AtpErlo **F2** Open Hummock Grassland of *Triodia pungens* and Open Tussock Grassland of **Cenchrus ciliaris* and *Themeda triandra* with High Open Shrubland of *Acacia tumida* var. *pilbarensis* and *Eremophila longifolia* on red sandy loam in drainage areas and on floodplains **Associated species:** *Eucalyptus victrix, Acacia bivenosa, Atalaya hemiglauca, Santalum lanceolatum, Eriachne tenuiculmis, Aristida contorta, Senna artemisioides* subsp. *oligophylla, Grevillea wickhamii, A. meilleodora* and *Enneapogon robustissimus*	*Triodia* Open Hummock Grassland	JQ-118, JQ-136, JQ-138, JQ-145	116.9 ha (0.4%)	 Plate 17: Vegetation type FP Tp CcTt AtpErlo (quadrat JQ-136).
FP CcCs Ch **F3** Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* with Scattered Low Trees of *Corymbia hamersleyana* on dark reddish-brown sandy clay loam in drainage areas and on floodplains **Associated species:** *Eremophila longifolia, Acacia pyrifolia* and *A. inaequilatera*	**Cenchrus* Tussock Grassland	JQ-164, JQ-165, JQ-197, JQ-210	129.6 ha (0.5%)	 Plate 18: Vegetation type FP CcCs Ch (quadrat JQ-165).

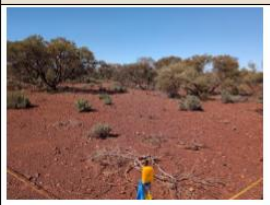
Figure 11: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
FP CcCs ApAin **F4** Tussock Grassland of **Cenchrus ciliaris* and **Cenchrus setiger* with High Open Shrubland of *Acacia aptaneura* and *Acacia incurvaneura* on dark reddish-brown sandy clay loam in drainage areas and on floodplains **Associated species:** *Corymbia hamersleyana* and *Triodia pungens*	**Cenchrus* Tussock Grassland	JQ-171, JQ-172, JQ-173, JQ-174, JQ-176	242.4 ha (0.9%)	 Plate 19: Vegetation type FP CcCs ApAin (quadrat JQ-173).
Plains				
SA Tp CcArh AinCauAthe **F1** Open Hummock Grassland of *Triodia pungens* with Very Open Tussock Grassland of **Cenchrus ciliaris* and *Aristida holathera* with High Open Shrubland of *Acacia inaequilatera*, *Capparis umbonata* and *Atalaya hemiglauca* on dark reddish-brown clayey sand on sand plains **Associated species:** *Corymbia hamersleyana*, *Triodia basedowii*, *Eragrostis eriopoda*, *Acacia pyrifolia*, *Eriachne eriopoda*, *Senna artemisioides* subsp. *helmsii* and *S. artemisioides* subsp. *oligophylla*	*Triodia* Open Hummock Grassland	JQ-042, JQ-050, JQ-056, JQ-058, JQ-070, JQ-140, JQ-175, JQ-183, JQ-185, JQ-187, JQ-199, JQ-214, JQ-221	1,413.1 ha (5.4%)	 Plate 20: SA Tp CcArh AinCauAthe (quadrat JQ-070).
SA Tb EgCd Aanc **P3** Open Hummock Grassland of *Triodia basedowii* with Very Open Mallees of *Eucalyptus gamophylla* and *Corymbia deserticola* subsp. *deserticola* with Open Shrubland of *Acacia ancistrocarpa* on dark reddish-brown sandy clay loam on sand plains Associated species: *Triodia pungens*, *Acacia melleodora*, *A. hilliana*, *Senna notabilis*, *Dicrastylis cordifolia*, *Grevillea wickhamii*, *Indigofera monophylla*, *Corchorus sidoides* subsp. *sidoides*, *A. adoxa* var. *adoxa* and *Anthobolus leptomerioides*	*Triodia* Open Hummock Grassland	JQ-003, JQ-028, JQ-030, JQ-032, JQ-094, JQ-095, JQ-096, JQ-161, JQ-162, JR-168, JQ-170, JQ-180, JQ-182, JQ-189, JQ-196, JQ-208, JQ-211, JQ-212, JQ-213	2,944.5 ha (11.2%)	 Plate 21: Vegetation type SA Tb EgCd Aanc (quadrat JQ-094).

BHP WAIO
Jinidi Mindy North and East Rail Corridor - Detailed Flora and Vegetation Survey - Interim Report
June - October 2025

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
SA Tb EgCh AdAanc **P9** Open Hummock Grassland of *Triodia basedowii* with Very Open Mallee of *Eucalyptus gamophylla* and *Corymbia hammersleyana* with Open Shrubland of *Acacia dictyophleba* and *Acacia ancistrocarpa* on red clayey sand on sand plains **Associated species:** *Hakea chordophylla*, *Hakea lorea* subsp. *lorea* and *Acacia inaequilatera*	*Triodia* Open Hummock Grassland	JQ-025, JQ-027, JQ-209	533.9 ha (2%)	 Plate 22: Vegetation type SA Tb EgCh AdAanc (quadrat JQ-027).
SA TbTsc AseHc Arc **P2** Open Hummock Grassland of *Triodia basedowii* and/or *Triodia schinzii* with High Open Shrubland of *Acacia sericophylla* and *Hakea chordophylla* over Scattered Tussock Grassland of *Aristida contorta* on dark reddish-brown sand on sand plains **Associated species:** *Acacia ancistrocarpa*, *A. inaequilatera*, *A. melleodora*, *Bonamia erecta*, *Dicrastylis cordifolia*, *Eriachne aristidea*, *Eragrostis eriopoda* and *Scaevola parvifolia*	*Triodia* Open Hummock Grassland	JQ-069, JQ-071, JQ-076, JQ-077, JQ-078, JQ-131, JQ-133, JQ-177, JQ-179, JQ-181, JQ-186	1,990.5 ha (7.6%)	 Plate 23: Vegetation type SA TbTsc AseHc Arc (quadrat JQ-071).
SA TpTb Ai Aanc **P1** Open Hummock Grassland of *Triodia pungens* and/or *Triodia basedowii* with Scattered Tall Shrubs of *Acacia inaequilatera* over Scattered Shrubs of *Acacia ancistrocarpa* on dark reddish-brown sandy loam on sand plains **Associated species:** *Aristida contorta*, *Corchorus lasiocarpus* subsp. *parvus*, *Dicrastylis cordifolia*, *Eriachne aristidea*, *Eragrostis eriopoda*, *Senna notabilis* and *S. artemisioides* subsp. *oligophylla*	*Triodia* Open Hummock Grassland	JQ066, JQ073, JQ075, JQ079, JQ080, JQ081, JQ143, JQ166, JQ201	1,925.6 ha (7.3%)	 Plate 24: Vegetation type SA TpTb Ai Aanc (quadrat JQ-075).

Figure 12: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
SP Ax MatiScct **P8** High Open Shrubland of *Acacia xiphophylla* over Low Open Shrubland of *Maireana triptera* and *Sclerolaena cuneata* on dark reddish-brown clayey sand on hardpan plains **Associated species:** *Sclerolaena eriacantha, Eremophila cuneata, Maireana tomentosa, M. pyramidata, M. villosa* and *Senna artemisioides* subsp. *X sturtii*	*Acacia* High Shrubland	JQ005, JQ-020, JQ-160, JQ-220	429.2 ha (1.6%)	 Plate 25: Vegetation type SP Ax MatiScct (quadrat JQ-005).
SS Tb AancAb **P4** Open Hummock Grassland of *Triodia basedowii* with High Open Shrubland of *Acacia ancistrocarpa* and *Acacia bivenosa* on dark reddish-brown clayey sand on sandy and stoney plains **Associated species:** *Eucalyptus gamophylla, Acacia atkinsiana, Aristida holathera, Anthobolus leptomerioides, Corchorus sidoides* subsp. *sidoides, Dicrastylis cordifolia, Eragrostis eriopoda, Eriachne aristidea, Indigofera monophylla, Scaevola parvifolia, Senna notabilis* and *Trichodesma zeylanicum*	*Triodia* Open Hummock Grassland	JQ-031, JQ-093, JQ-167, JQ-184, JQ-200, JQ-203, JQ-204, JQ-205	1,498.3 ha (5.7%)	 Plate 26: Vegetation type SS Tb AancAb (quadrat JQ-031).
SS Tlo Ass Eg **P5** Hummock Grassland of *Triodia longiceps* with Scattered Shrubs of *Acacia sclerosperma* subsp. *sclerosperma* with Scattered Mallee of *Eucalyptus gamophylla* on dark reddish-brown sandy clay loam on sandy and stony plains **Associated species:** *Triodia pungens, Stylobasium spathulatum, Acacia synchronicia, Acacia ancistrocarpa and Eucalyptus xerothermica*	*Triodia* Hummock Grassland	JQ-019, JQ-021, JQ-159, JQ-219	446.6 (1.7%)	 Plate 27: Vegetation type SS Tlo Ass Eg (quadrat JQ-159).

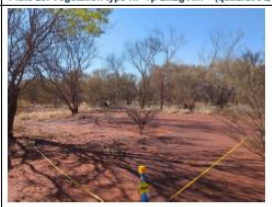
Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
SS Tp Eg Ass **P7** Open Hummock Grassland of *Triodia pungens* with Very Open Mallee of *Eucalyptus gamophylla* over Open Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* on red clayey sand on sand plains **Associated species:** *Stylobasium spathulatum, Acacia melleodora, Eucalyptus xerothermica* and *A. adsurgens*	*Triodia* Open Hummock Grassland	JQ-001, JQ-007, JQ-015, JQ-023, JQ-218	1,480.3 ha (5.6%)	 Plate 28: Vegetation type SS Tp Eg Ass (quadrat JQ-007).
HP Tp ExEg Ain ^ **P6** Open Hummock Grassland of *Triodia pungens* with Very Open Mallee of *Eucalyptus xerothermica* and *Eucalyptus gamophylla* Scattered Low Trees of *Acacia ?incurvaneura* on red clayey sand on hardpan plains. **Associated species:** *Acacia ancistrocarpa, A. bivenosa, A. inaequilatera, A. synchronicia, Senna notabilis, Senna artemisioides* subsp. *oligophylla, Ptilotus exaltatus and Solanum lasiophyllum*	*Triodia* Open Hummock Grassland	JQ-009, JQ-011, JQ-217	882.8 ha (3.4%)	 Plate 29: Vegetation type HP Tp ExEg Ain ^ (quadrat JQ-011).
HP AinAaApr EnpoArc ^ **M1** High Shrubland of *Acacia ?incurvaneura, Acacia ?aptaneura* and *Acacia pruinocarpa* over Open Tussock Grassland of *Enneapogon polyphyllus* and *Aristida contorta* on red clay loam on hardpan plains **Associated species:** *Acacia ?aneura, A. ?sericophylla, A. tetragonophylla, Eremophila forrestii* subsp. *forrestii, Dodonaea petiolaris, Ptilotus astrolasius, Atalaya hemiglauca, Abutilon otocarpum, A. lepidum, Hibiscus burtonii, Psydrax latifolia* and *Evolvulus alsinoides* var. *villosicalyx*	*Acacia* High Shrubland	JQ-006, JQ-008, JQ-014, JQ-016, JQ-018, JQ-207	767.2 ha (2.9%)	 Plate 30: Vegetation type HP AinAaApr EnpoArc ^ (quadrat JQ-207).

Figure 13: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).

Vegetation code, mapping unit and vegetation type description	Broad floristic information	Sites	Total area (proportion of survey area)	Representative photo
HP AinAaApr Tp ^ M2 High Shrubland of *Acacia ?incurvaneura*, *Acacia ?aptaneura* and *Acacia pruinocarpa* over Very Open Hummock Grassland of *Triodia pungens* on red clay loam on hardpan plains **Associated species:** *Enneapogon polyphyllus, Acacia ?pteraneura, *Cenchrus ciliaris, Atalaya hemiglauca, Aristida contorta, A. synchronicia, Ptilotus obovatus, Abutilon otocarpum, Hibiscus burtonii* and *Evolvulus alsinoides* var. *villosicalyx*	*Acacia* High Shrubland	JQ-002, JQ-004, JQ-010, JQ-012, JQ-022, JQ-157, JQ-158	1,562.9 ha (6%)	 **Plate 31: Vegetation type HP AinAaApr Tp ^ (JQ-012).**
Disturbed Areas where vegetation has been disturbed or completely removed.	NA	NA	143.2 ha (0.5%)	NA

*denotes unconfirmed dominant taxon, but for the purpose of the BHP vegetation code the ? has been removed. These will be recollected for confirmation in phase two.

Figure 14: Excerpt from supporting information document supported by applicant (Ecocene, 2026a).



Figure 15: Photographs of vegetation, habitat and fauna presence within the fauna surveyed area supplied by Astron (2024).

Row 1: (1) Gorge/Gully (2) Recently inactive brush-tailed mulgara burrows (3) Sand Plain

Row 2: (1) Hillcrest/Hillslope (2) Mulga Woodland (3) Stony Plain

Row 3: (1) Drainage Area/Floodplain (2) Sand Dune (3) Minor Drainage Line

Row 4: (1) Medium Drainage Line (2) Major Drainage Line (3) Breakaway/Cliff

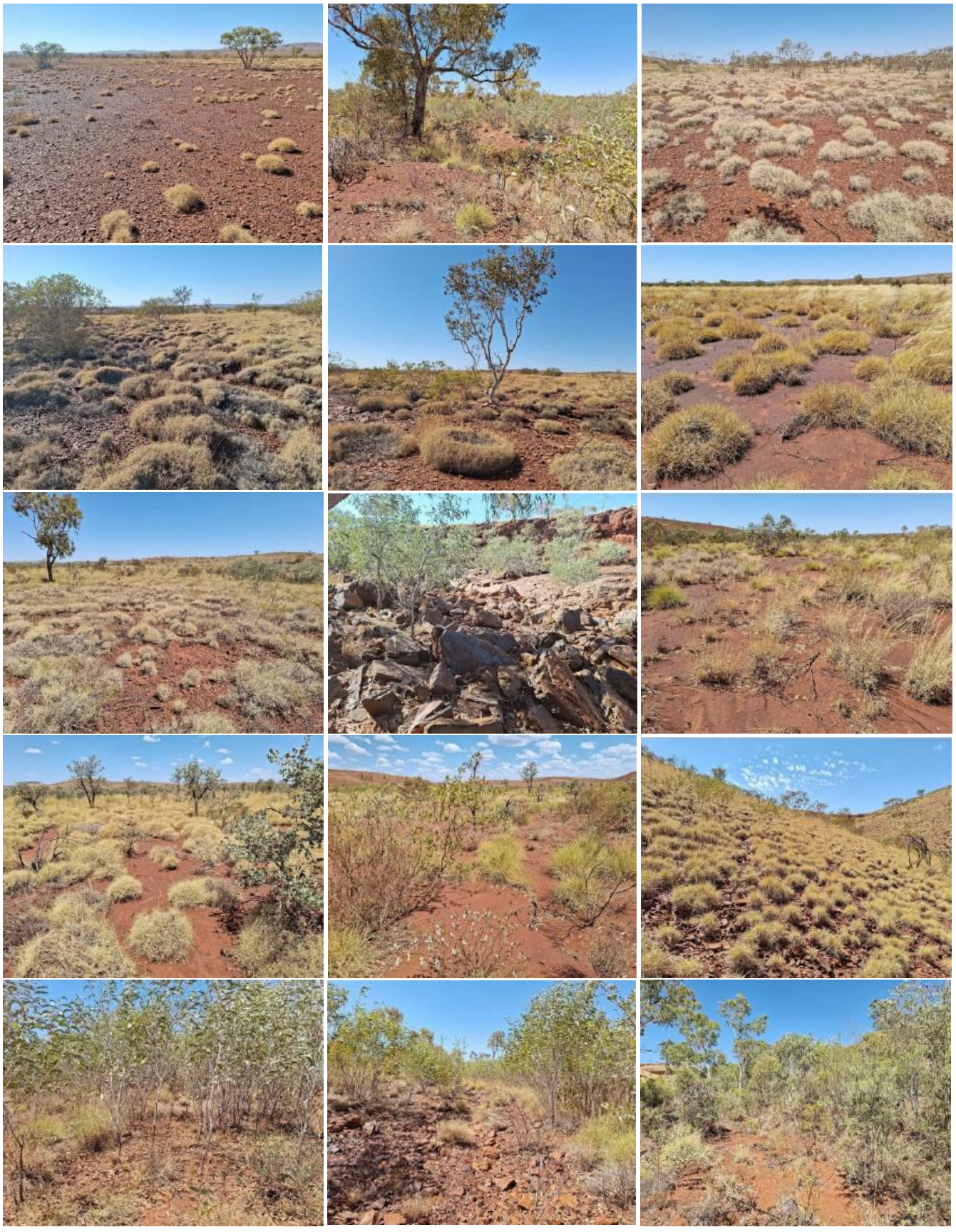


Figure 16: Photographs of vegetation within the detailed flora and vegetation assessment as supplied by Spectrum (2025).

Row 1: (1) Hill Crest (2) Drainage Line on Flat (3) Lower Hill Slope

Row 2: (1) Hill Crest (2) Hill Crest (3) Flat Plain

Row 3: (1) Flat Plain (2) Creek/Riverbed (3) Floodplain

Row 4: (1) Flat Plain (2) Flat Plain (3) Mid Hill Slope

Row 5: (1) Drainage Line on Flat (2) Hill Crest (3) Drainage Line on Mid Slope

Appendix E. Sources of information

E.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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