



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 11343/1
Permit Holder:	BHP Iron Ore Pty Ltd
Duration of Permit:	From 2 April 2026 to 30 November 2036

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of contaminated sites investigations and associated activities.

2. Land on which clearing is to be done

Lot 104 on Deposited Plan 220785, Marble Bar

3. Clearing authorised

The permit holder must not clear more than 15 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 30 November 2031.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of *native vegetation*;
- (b) minimise the amount of *native vegetation* to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

6. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Fauna management - general

The permit holder must:

- (a) conduct clearing activities in a slow, progressive manner in one direction towards adjacent native vegetation to allow fauna to move into adjacent vegetation; and
- (b) restrict clearing activities to day-light hours to avoid the possibility of injury to fauna.

8. Fauna management – backfilling

The permit holder must:

- (a) fence all test pits on the day of drilling/excavating with fine mesh to prevent fauna access; or
- (b) cover all test pits/bores on the day of drilling/excavating with a cover which prevents entry to the pits/bores by fauna species and backfill upon completion;
- (c) cover all boresholes at the end of each day and backfill upon completion;
- (d) cover all groundwater bores at the end of each day and seal them upon completion of works.

9. Fauna management – Greater bilby pre-clearance survey

- (a) Within fourteen (14) days prior to undertaking any clearing authorised under this permit, for the areas cross-hatched yellow in Figure 1 of Schedule 1, the permit holder must engage a *fauna specialist* to:
 - (i) undertake surveys using transects spaced at 100 metres on average to identify evidence of use by the greater bilby (*Macrotis lagotis*); and
 - (ii) where evidence of greater bilby use is identified under *condition 9(a)(i)*, undertake surveys using transects spaced at 20 metres on average, to identify evidence of burrows that may be suitable for greater bilby use.
- (b) Where potential greater bilby burrow/s are identified under *condition 9(a)*, the permit holder must engage a *fauna specialist* to:
 - (i) flag the location of the burrow/s; and
 - (ii) inspect the burrow/s and determine whether the burrow/s are *occupied*.
- (c) Where an *occupied* burrow is identified under *condition 9(b)*, the permit holder must engage a *fauna specialist* to:

- (i) monitor the burrow with remote cameras for greater bilby use for a minimum of three (3) consecutive nights;
- (ii) where no evidence of greater bilby activity is identified under *condition 9(c)(i)*, the burrow shall be deemed as *un-occupied* and the permit holder must engage a *fauna specialist* to:
 - A. carefully excavate the burrow by hand, and remove and relocate any native vertebrate fauna found within the burrow; and
 - B. collapse and fill the burrow immediately after the *fauna specialist* has confirmed that no native vertebrate fauna are present within the burrow.
- (iii) where evidence of greater bilby use is identified under *condition 9(c)(i)*, the permit holder must engage a *fauna specialist* to:
 - A. continue to monitor the burrow for greater bilby activity;
 - B. implement displacement techniques such as deliberate disturbance of the burrow entrance, while ensuring the disturbance does not prevent greater bilby from exiting the burrow; and
 - C. once greater bilby displacement from the burrow is confirmed, stop monitoring, and undertake the actions required under *condition 9(c)(ii)A* and *condition 9(c)(ii)B*.
- (d) If the greater bilby has not moved on from an *occupied* burrow under *condition 9(c)(iii)*, the permit holder must, no earlier than seven (7) days prior to clearing, engage a *fauna specialist* to remove and relocate the identified greater bilby to an area of *greater bilby suitable habitat*, in consultation with the Department of Biodiversity, Conservation and Attractions.
- (e) Immediately after the greater bilby has been relocated under *condition X(d)*, the permit holder must engage a *fauna specialist* to undertake the actions required under *condition 9(c)(ii)A* and *condition 9(c)(ii)B*.
- (f) Within 24 hours prior to undertaking clearing authorised under this permit, the permit holder must engage a *fauna specialist* to re-inspect the flagged burrow/s identified under *condition 9(b)(i)* for evidence of re-excavation by greater bilby.
- (g) Where re-excavated greater bilby burrow/s are identified under *condition 9(f)*, the permit holder must engage a *fauna specialist* to:
 - (i) flag the location of the burrow/s; and
 - (ii) inspect the burrow/s and determine whether the burrow/s are *occupied*.
- (h) Where an *occupied* burrow is identified under *condition 9(g)(ii)*, the permit holder must engage a *fauna specialist* to:
 - (i) remove and relocate any identified greater bilby from the burrow to an area of *suitable habitat*, in consultation with the Department of Biodiversity, Conservation and Attractions; and
 - (ii) immediately after the greater bilby has been relocated under *condition 9(h)(i)*, undertake the actions required under *condition 9(c)(ii)A* and *condition 9(c)(ii)B*.

- (i) Where an *un-occupied* burrow is identified under *condition 9(g)(ii)*, the permit holder must engage a *fauna specialist* to undertake the actions required under *condition 9(c)(ii)A* and *condition 9(c)(ii)B*.
- (j) Where any greater bilby burrows are identified under *condition 9(a)* or *9(f)*, and any greater bilby is relocated under *condition 9(d)* or *9(h)*, the permit holder must include the following in a report to be submitted to the *CEO* within two (2) months of undertaking any clearing authorised under this permit:
 - (i) the location of any burrow identified including a description of whether the burrow was *occupied*, using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the remote camera monitoring actions undertaken under *condition 9(c)*;
 - (iii) the date and time that burrows have been excavated and collapsed under *conditions 9(c)*, *9(e)*, *9(h)* and *9(i)*;
 - (iv) the date and time greater bilby are recorded as independently moving on from an *occupied* burrow under *condition 9(c)*;
 - (v) the gender of each greater bilby captured and relocated under *condition 9(d)* or *9(h)*;
 - (vi) the location of any greater bilby captured under *condition 9(d)* or *9(h)*, using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (vii) the date, time and vegetation type at each location where greater bilby are captured under *condition 9(d)* or *9(h)*;
 - (viii) the location of any greater bilby relocated under *condition 9(d)* or *9(h)*, using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ix) the date, time and vegetation type at each location where greater bilby are relocated under *condition 9(d)* or *9(h)*;
 - (x) the name of the *fauna specialist* that relocated greater bilby under *condition 9(d)* or *9(h)*; and
 - (xi) a copy of the relevant authorisations for the relocation of greater bilby under *condition 9(d)* or *9(h)*.

10. Fauna management – pre-clearance survey

- (a) Within seven (7) days prior to undertaking any clearing authorised under this permit, the permit holder shall engage a *fauna specialist* to undertake clearance surveys within the area cross-hatched yellow on Figure 1 of Schedule 1 for the following fauna species:
 - (i) Northern Quoll (*Dasyurus hallucatus*)
 - (ii) Brush-tailed Mulgara (*Dasycercus blythi*)
 - (iii) Western Pebble-mound mouse (*Pseudomys chapmani*)
 - (iv) Northern Short tailed Mouse (*Leggadina lakedownensis*).
 including the identification and inspection of burrows and mounds, and determination of whether burrows and mounds are being utilised.
- (b) Where evidence of recent burrow or mound use is identified under *condition 10(a)* of this permit, the permit holder shall;

- (i) engage a *fauna specialist* to flag the location of the burrow/s and/or mound/s showing signs of recent use;
 - (ii) not clear within ten (10) metres of the flagged burrow/s and/or mound/s;
 - (iii) engage a *fauna specialist* to monitor with cameras, the flagged burrow/s and or mound/s for a maximum of five days, or until such time that the fauna species identified under condition 10(a) have been observed to independently move on from the burrow/s and/or mound/s; and
 - (iv) prior to clearing, engage a *fauna specialist* to re-inspect any flagged burrow/s and/or mound/s for the presence of the fauna species identified under condition 10(a).
- (c) If species identified under condition 10(a) of this permit are utilising any flagged burrow/s and/or mound/s under condition 10(b) and cannot be avoided in accordance with condition 5 of this permit, the permit holder shall:
- (i) engage a *fauna specialist* to remove and relocate the individual(s) to an area of *suitable habitat*; and
 - (ii) any removal and relocation of northern quoll under condition 10(c) (i) of this Permit must be conducted in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*.
- (d) Where active burrow/s and/or mound/s for species identified under condition 10(a) of this permit are identified and/or species identified under condition 10(a) of this permit are relocated in accordance with condition 10(c), the permit holder shall include the following in a report submitted to the *CEO* within two (2) months of undertaking any clearing authorised under this Permit:
- (i) the location of any active burrow/s and/or mound/s identified using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the gender of each individual captured under condition 10(c) of this permit;
 - (iii) the dates, times, vegetation types and weather conditions at each location where species listed under condition 10(a) of this permit are captured from and relocated to under condition 10(c)(ii) of this Permit;
 - (iv) the name of the *fauna specialist* that relocated fauna under condition 10(c) of this permit; and
 - (v) a copy of the fauna licenses authorising the relocation of fauna under condition 10(c)(i) of this Permit.

11. Revegetation and rehabilitation (temporary works)

The permit holder must:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared;
- (b) Within twelve months of the area no longer being required for the purposes of this permit the permit holder must revegetate and rehabilitate the areas that are no longer required for *temporary works* by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding five metres land;

- (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under condition 11(a) on the cleared areas; and undertake *weed* control activities on an ‘as needed’ basis to reduce weed cover within the cleared areas to no greater than the weed cover within the adjacent *native vegetation*;
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this permit:
- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 11(c)(i) of this Permit will not result in similar species composition, structure and density to that of pre-referral clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding native vegetation* that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

12. Land and water resources management

The permit holder must:

- (a) demarcate and identify the areas to be cleared using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA20), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (b) commence the investigation works within six (6) weeks of any authorised clearing; and
- (c) where a watercourse or drainage line is to be impacted by clearing, ensure that surface flow is maintained or reinstated downstream into existing natural drainage lines.

PART III - RECORD KEEPING AND REPORTING

13. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings;

No.	Relevant matter	Specifications
		<ul style="list-style-type: none"> (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 6; (g) actions taken to minimise impacts to fauna during clearing in accordance with condition 7; (h) actions undertaken in accordance with condition 8 of this permit; and (i) land and water resources management actions taken in accordance with condition 12.
2.	In relation to fauna management pursuant to conditions 9 and 10	<ul style="list-style-type: none"> (a) results of the pre-clearance surveys undertaken; and (b) a copy of the <i>fauna specialist's</i> reports.
3.	In relation to revegetation and rehabilitation of areas pursuant to condition 11 of this permit	<ul style="list-style-type: none"> (a) the location of any areas revegetated and rehabilitated, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (b) a description of the revegetation and rehabilitation activities undertaken; (c) the date that the area was revegetated and rehabilitated; (d) the size of the area revegetated and rehabilitated (in hectares); and (e) any weed control activities undertaken within the area revegetated and rehabilitated

14. Reporting

The permit holder must provide to the *CEO* the records required under condition 13 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist
EP Act	<i>Environmental Protection Act 1986</i> (WA)
fauna specialist	a person who holds a tertiary qualification in environmental science or equivalent, and has been assessed as competent to identify individuals (directly and indirectly) and habitat for listed conservation significant fauna through BHP Iron Ore Pty Ltd internal training programs or who is approved by the CEO as a suitable fauna specialist for the bioregion.
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
occupied	means currently occupied, or where uncertainty exists, potentially occupied, by the greater bilby (<i>Macrotis lagotis</i>).
rehabilitate/ed/ion	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate/ed/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area
suitable habitat	means habitat known to support the Northern Quoll (<i>Dasyurus hallucatus</i>), Greater Bilby (<i>Macrotis lagotis</i>), Brush tailed Mulgara (<i>Dasyurus blythi</i>), Northern Short tailed Mouse (<i>Leggadina lakedownensis</i>). and Western Pebble-mound mouse (<i>Pseudomys chapmani</i>) within the known current distribution of the species
temporary works	means works associated with a project activity that are temporary in

Term	Definition
	nature such as access tracks, spoil areas, side tracks, temporary bore holes/pits, site offices, storage areas, laydown areas, testing sites, extraction sites, camps, project surveys, pre-construction activities, and similar works
weeds	means any plant – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS



C Robertson
09.03.2026
2.28PM

Caron Robertson
Manager

NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

9 March 2026

Schedule 1

Plan CPS 11343/1 –PERMIT

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

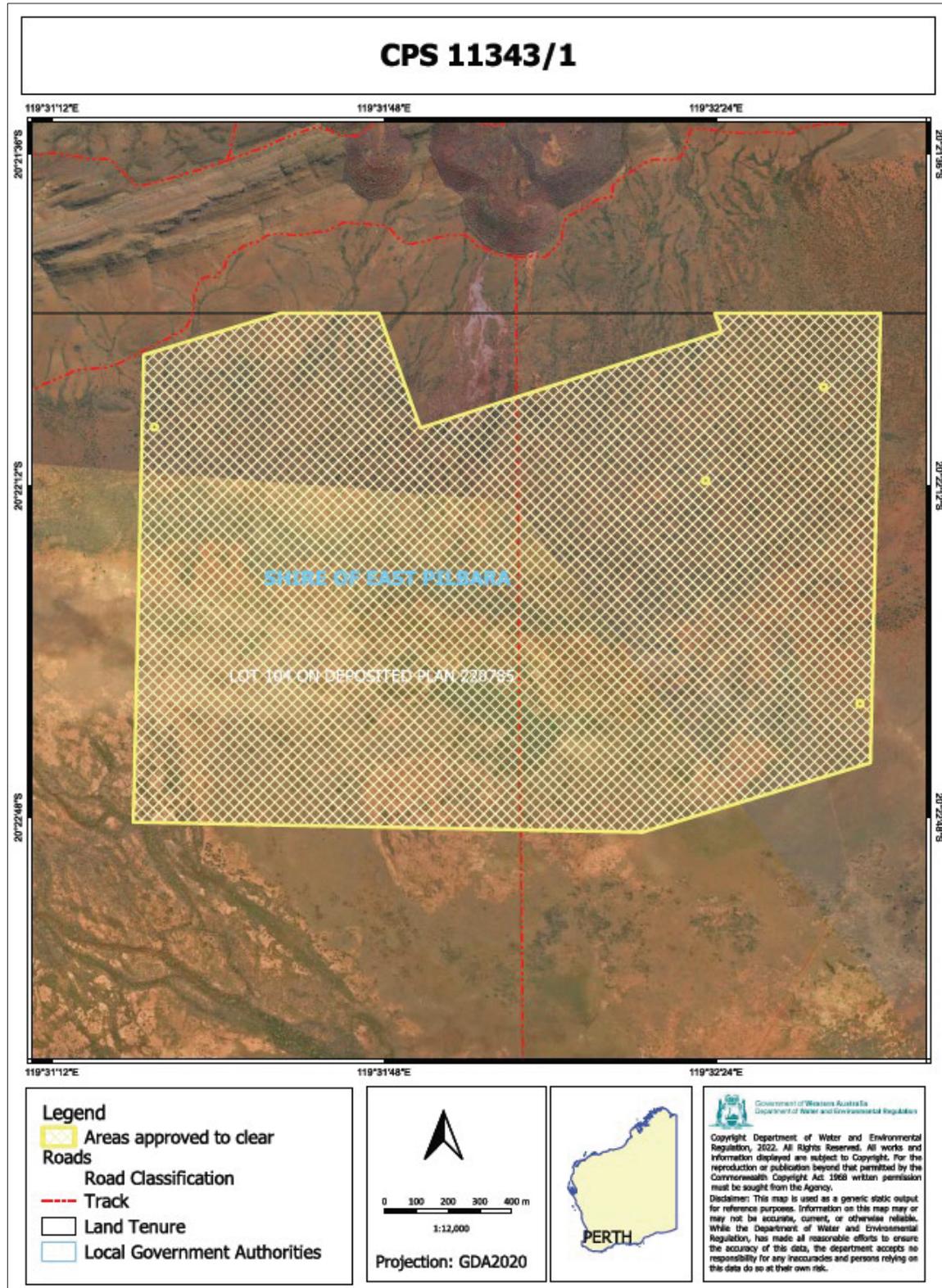


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 11343/1
Permit type:	Purpose permit
Applicant name:	BHP Iron Ore Pty Ltd
Application received:	14 November 2025
Application area:	15 hectares of native vegetation
Purpose of clearing:	Contaminated sites investigations and associated activities
Method of clearing:	Mechanical
Property:	Lot 104 on Deposited Plan 220785
Location (LGA area/s):	Shire of East Pilbara
Localities (suburb/s):	Marble Bar

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). The proposed works will involve clearing for the purposes of contaminated sites investigations and associated activities.

The Mount Goldsworthy Legacy Operations are located approximately 90 kilometres east of Port Hedland. This site has not been in operation since 1982. A number of the waste rock dumps on the southern end of the old mining operations have exposed acidic waste which has resulted in waste run off to the south. BHP have identified the need to undertake a contaminated sites investigation to the south of the existing Goldsworthy operations to determine the extent of the impacts of this contaminated run off (BHP, 2025a). The applicant proposes to clear 15 hectares within a 363 hectares footprint. The proposed activities will be restricted to test pits to take soil samples (which will be backfilled), and the installation of monitoring bores to monitor groundwater quality. The outcome of this investigation will identify what additional works and further approvals will be required (BHP, 2026).

1.3. Decision on application

Decision:	Granted
Decision date:	9 March 2026
Decision area:	15 hectares of native vegetation, 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.1), the findings of a flora and vegetation, and 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 assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is suitable habitat for conservation significant fauna. Fauna management conditions on the permit include requirements for pre-clearing surveys and rehabilitation of temporary cleared areas, to mitigate potential impacts;
- associated works may potentially trap fauna if uncovered. Covering of the pits and bores immediately after use will mitigate this impact and is required as a condition in the permit;
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- potential land degradation in the form of erosion. This can be minimised by limiting bare soil exposure and rehabilitating temporary work areas, land and water resource management and is conditioned on the permit.

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 unlikely lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds
- staged clearing to minimise wind erosion
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- undertake pre-clearing survey for conservation significant fauna,
- revegetate and rehabilitate areas cleared for temporary works by laying stockpiled vegetative material and topsoil on the cleared area,
- backfilling, fencing or covering all test pits and bore holes to prevent fauna access and potential injuries,
- commence investigation and construction works within two months of authorised clearing, and
- ensure surface water flows around watercourses impacted by clearing, are maintained.

1.5. Site maps

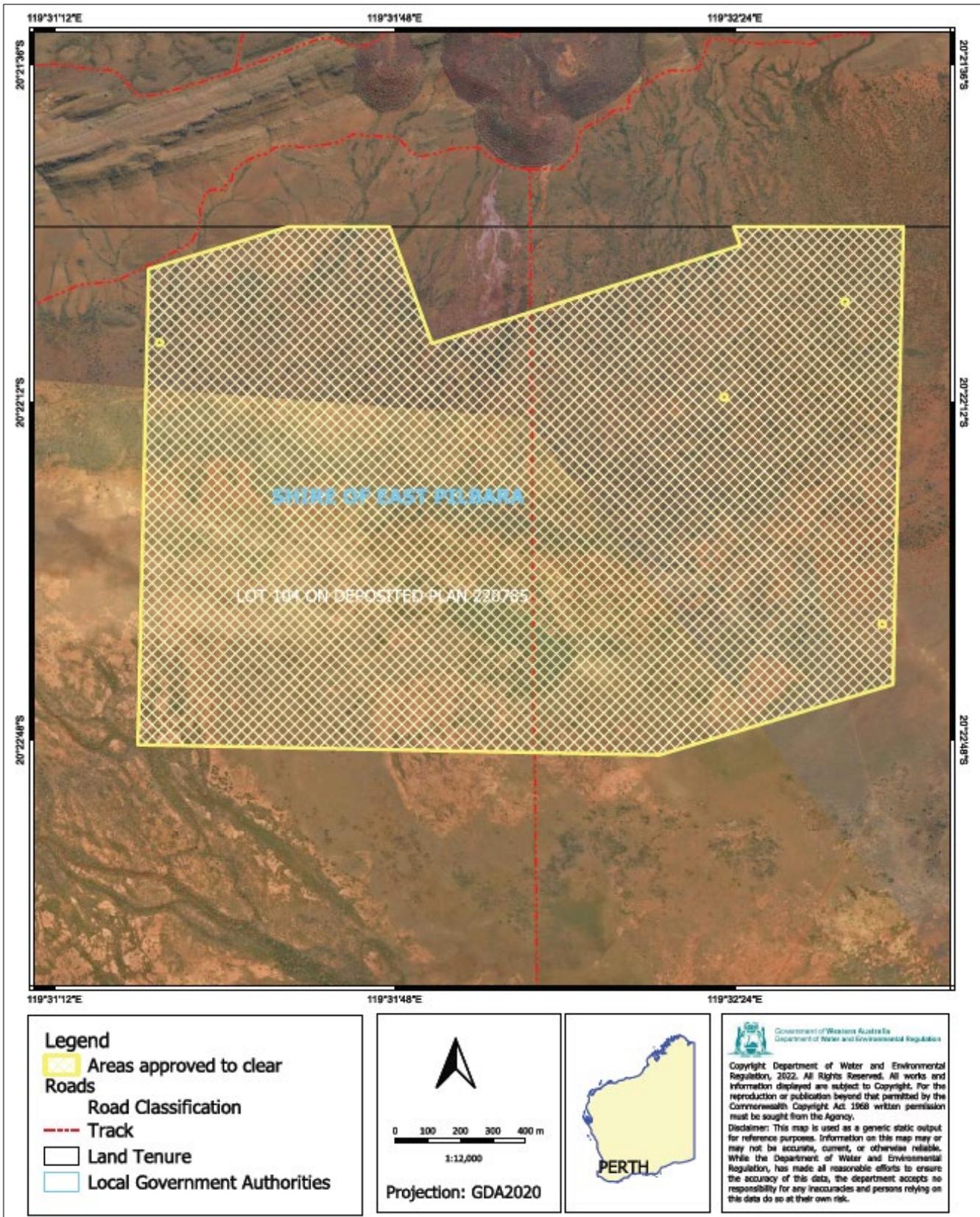


Figure 1 Map of the application area
The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

2 Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (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 – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant submitted the following avoidance and mitigation commitments (BHP, 2025a):

Avoid

- The four locations of Priority flora species have been excluded from the Application Area.

Minimise

- Where practicable any ground disturbance will be kept to previously disturbed areas.
- Control of established weed populations will be carried out according to BHP's standard Weed Control and Management Procedures.
- Should any active Brush-tailed Mulgara burrows be identified they will be avoided using a ten-metre buffer, where practicable.
- Should any active Greater Bilby burrows be identified they will be avoided using a ten-metre buffer, where practicable.
- Should any active Western Pebble-mound Mouse mounds be identified they will be avoided using a ten-metre buffer, where practicable.
- Where practicable, existing cleared tracks will be used to cross Pardoo Creek.
- Should contaminated sites drilling or additional access track be required within Pardoo Creek clearing will be kept to a bare minimum and will be constructed flat level to the surface (i.e. a simple clearing with no bunds) to maintain the natural surface flow.
- Any potentially acid soil material disturbed will remain in-situ and will be managed to prevent further spread as a result of any activities conducted under this application.

Mitigate

- Areas that are no longer required for the purpose for which they were cleared will be rehabilitated.

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 conservation significant fauna. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (fauna) - Clearing Principles (a) & (b)

Assessment

A review of available databases (GIS Database) indicate that conservation significant fauna species have been recorded from the local area (50 km radius of the application area). A fauna survey was conducted by Biota Environmental (2025a) over the application area and the broader area. The following habitats were identified within the application area:

- Sand Plain habitat
- Gilgai Plain habitat and
- Minor Drainage line habitat

No caves or waterholes have been recorded within the application area. None of the identified fauna habitats within the proposed clearing areas were considered critical habitat for any conservation significant species as they expand beyond the proposed clearing area and are common in the surrounding region.

Based on the desktop assessment and findings of the fauna survey (Biota, 2025a), the following conservation significant fauna species are likely to occur in the application area and vicinity:

- *Dasyurus hallucatus* - northern quoll (EN)
- *Macrotis lagotis* - bilby (VU)
- *Dasycercus blythi* - brush-tailed mulgara (P4)
- *Leggadina lakedownensis* - Northern Short tailed Mouse (P4)
- *Pseudomys chapmani* - Western Pebble-mound Mouse (P4)

Northern quoll (*Dasyurus hallucatus*)

Northern quolls are nocturnal, opportunistic foragers that use a variety of habitats including open, rocky outcrops and also occur along drainage lines, riparian zones and are known to travel long distances across their home ranges (Commonwealth of Australia, 2008; Hill & Ward, 2010). A review of available database indicate that the species has been recorded in the local area (50 kilometres radius of the application area) frequently with over 160 records with the closest record approximately 2.9 kilometres from the application area.

No northern quolls were recorded in the application area during the fauna survey (Biota, 2025a). This species has been recorded to the north of the application area and in the broader region. The application area does not contain any suitable denning habitat for this species; however, this species may forage within the habitats of the application area. There is likely to be a low impact on this species given that there is no key habitat for this species within the application area and this species is likely to only be a transitory visitor as it travels between areas of more suitable habitat (BHP, 2025a).

Greater bilby (*Macrotis lagotis*)

The greater bilby (Vulnerable) inhabits sandplains and sandy areas with spinifex and mulga (DCCEEW, 2023). Signs of greater bilby were found within the application area in the form of burrows, scats and diggings (Biota, 2025a). The sandplain habitat is considered critical habitat for bilbies, and the Gilgai plain habitat is considered supporting habitat (Biota, 2025a). A review of available data indicate that the species has been recorded in the local area (50 kilometres radius of the application area) frequently, with over 605 records, with the closest record approximately 2.5 kilometres from the application area.

Noting the limited scale of disturbance at each clearing site and the occurrence of similar vegetation surrounding them, clearing is unlikely to sever movement corridors and prevent access to habitat resources supporting the greater bilby population locally and regionally. No greater bilbies were recorded in the application area during the fauna survey (Biota, 2025a). Greater bilby activity has been recorded in the Sand Plain habitat to the north of the application area. This species may therefore utilise the Sand Plain habitats of the application area. However, there is likely to be a low impact on this species given that the Sand Plain habitat within the application area is widespread throughout the Pilbara. The applicant has committed to maintaining a ten-metre buffer, where practicable, should any active greater bilby burrows be identified (BHP, 2025a).

Brush-tailed mulgara (*Dasycercus blythi*)

The brush-tailed mulgara (Priority 4) inhabits sandplains or sand dunes with spinifex. It occurs in a range of vegetation types, however, the principal habitat is mature hummock grasslands of spinifex, especially *Triodia*

basedowii and *T. pungens* (Masters et al., 2003). A review of available data indicate that the species has four records in the local area (50 kilometres radius of the application area) with the closest record approximately 24 kilometres from the application area.

No brush-tailed mulgara were recorded in the application area. Brush-tailed Mulgara activity has been recorded in the Sand Plain habitat to the north of the application area. This species may therefore utilise the Sand Plain habitats of the application area. Applicant has committed to maintaining a ten-metre buffer, where practicable, should any active brush-tailed mulgara burrows be identified (BHP, 2025a).

Northern Short tailed Mouse (*Leggadina lakedownensis*)

This species is endemic to northern Australia, where it occurs from Cape York in the east to the Pilbara, in Western Australia, although the distribution is discontinuous (Moro and Kutt 2008). It is a nocturnal species found in areas of open tussock and hummock grassland, acacia scrubland, and savanna woodland, on alluvial clay or sandy soils (Lee 1995). A review of available database indicate that the species has 16 records in the local area (50 kilometres radius of the application area) with the closest record approximately 29 kilometres from the application area.

No Northern Short-tailed Mice were recorded in the application area. This species is generally restricted to cracking clays (Gilgai habitat) in the region (Gibson and McKenzie 2009). The band of cracking clays in the application area extends well beyond the application area. There are larger, more suitable, areas of Gilgai plain habitat occur outside of the application area, therefore the proposed clearing is unlikely to impact continuation of this species in the local area (Biota, 2025a). The permit will be conditioned to mitigate any impacts to this species, if present within the application area.

Western Pebble-mound Mouse (*Pseudomys chapmani*)

The Western Pebble-mound Mouse is restricted to the Pilbara region, where it is recognised as an endemic species. Abandoned mounds to the east of its current range indicate a decline in distribution (Menkhorst and Knight, 2004). Abandoned mounds in disturbed areas suggest that the species is under threat by grazing and mining activities. The construction of extensive pebble mounds, built from small stones, which typically cover areas from 0.5-9.0 square metres, is characteristic of this species. Mounds are restricted to suitable class stones and are usually found on gentle slopes and spurs (van Dyck and Strahan, 2008). A review of available data indicate that the species has eight records in the local area (50 kilometres radius of the application area) with the closest record approximately four kilometres from the application area.

No Western Pebble-mound Mice were recorded in the application area during the fauna survey (Biota, 2025a). Key habitat for this species (Undulating Low Hills and Hill crest / Hill slope habitat) are not found within the application area. This species is known from the broader regions and could potentially use rockier areas within the Sand Plain habitat.

There is likely to be a low impact on this species given that key habitat for this species is not located within the application area. There is a large area of suitable habitat in a similar or better condition adjacent to the application area. No active or inactive mounds have been identified during the survey (Biota, 2025a). The applicant has committed to maintaining a ten-metre buffer, where practicable, should any active western pebble mound mouse mounds be identified.

Conclusion

Based on the above assessment and survey details (Biota 2025a), the proposed clearing will remove some suitable habitat for conservation significant fauna species. The impact is not likely to be significant, and can be managed to be environmentally acceptable through permit conditioning that will mitigate the potential impacts on conservation significant fauna. Having considered the above, the Delegated Officer determined that the proposed clearing will not have a significant residual impact on conservation significant fauna species.

Conditions

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

- slow and progressive one directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity;
- undertake targeted pre-clearance surveys for bilby, brush-tailed mulgara, quoll, northern short-tailed mouse and western pebble-mound mouse prior to any clearing;
- a fauna specialist will monitor evidence of fauna to ensure avoidance of used burrows and allow independent movements of fauna away from habitat prior to clearing;

- a fauna specialist will relocate targeted fauna to suitable habitat that do not independently move away from
- habitat that cannot be avoided;
- restrict any clearing to daylight hours;
- backfilling or covering all the contaminated site drilling points (holes) to prevent fauna access,
- revegetation and rehabilitation of areas cleared for temporary works.

3.3. Relevant planning instruments and other matters

DWER (2026) has advised that a 26D licence is required for hydrogeological investigations, however, the drilling of monitoring bores is exempt from requiring a 26D license.

A licence to construct a well is not required if:

- the development is within the water table (non-artesian) aquifer; and
- the well is only required for monitoring water level or water quality and not for abstraction purposes.

DWER (2026) further advised that all monitoring bores are to be constructed in accordance with the latest edition of the Minimum Construction requirements in Australia, currently the fourth edition (2020). If the applicant needs to drill within Padro Creek, DWER Pilbara Water Licensing team will need to be contacted for further water licensing advice and clarification on the requirements of a permit to modify banks (DWER, 2026).

No Aboriginal sites of significance have been mapped within the application area. 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	<p>The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is located approximately 90 kilometres east of Port Hedland in the Pilbara region of Western Australia.</p> <p>Aerial imagery indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99 per cent of the original native vegetation cover.</p>
Ecological linkage	There are no formal linkages mapped across the proposed application area. However, noting the vegetation within the application area and the surroundings is undisturbed, the vegetation within the application area may form an informal ecological linkage.
Conservation areas	The nearest legislated conservation area is the Eighty Mile Beach Marine Park, approximately 32 kilometres northeast of the application area
Vegetation description	<p>A vegetation survey (Biota, 2025) identified the vegetation within the proposed clearing area as three vegetation units (GP ErxErbErgg DishErte and SS TeTsc AacAancAi ChCflCoz) and a cleared track devoid of native vegetation intersecting the application area. These are described as;</p> <ul style="list-style-type: none"> • Triodia open hummock grassland (SS TeTsc AacAancAi ChCflCoz): Open Hummock Grassland of <i>Triodia epactia</i> and <i>T. schinzii</i> with an Open Shrubland to High Open Shrubland of <i>Acacia acradenia</i>, <i>A. ancistrocarpa</i> and <i>A. inaequilatera</i> with Scattered Low Trees of <i>Corymbia hamersleyana</i>, <i>C. flavescens</i> and <i>C. zygophylla</i> on red • Eragrostis closed tussock grassland (GP ErxErbErgg DishErte) : Closed Tussock to Tussock Grassland of <i>Eragrostis xerophila</i>, <i>Eriachne benthamii</i> and <i>Eriachne glauca</i> var. <i>glauca</i> with an Open Bunch Grassland of <i>Dichanthium sericeum</i> subsp. <i>humilius</i> and <i>Eragrostis tenellula</i> on yellow to red gilgai clay plains • Eucalyptus low open woodland (ME Ev AsyAcoAthe EuaErbChf Cyv): Low Open Woodland of <i>Eucalyptus victrix</i> with a High Open Shrubland of <i>Acacia synchronicia</i>, <i>Acacia coleii</i> and <i>Atalaya hemiglauca</i> with a Tussock Grassland of <i>Eulalia aurea</i>, <i>Eriachne benthamii</i> and <i>Chrysopogon fallax</i> and Scattered Sedges of <i>Cyperus vaginatus</i> <p>The full survey descriptions and maps are available in Appendix D. This is consistent with the mapped vegetation types:</p> <ul style="list-style-type: none"> • Abydos Plain, which is described as grasslands, short bunch-grass savanna • Abydos Plain - Chichester, which is described as shrub-steppe <p>The mapped vegetation types retain approximately 99 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>A vegetation survey (Biota, 2025) indicates the vegetation within the proposed clearing area is in Very Good (Trudgen, 1991) condition except for a cleared track intersecting the application area which is in Completely Degraded condition.</p> <ul style="list-style-type: none"> • 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. • 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

Characteristic	Details
	<p>'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C. The full survey descriptions and mapping are available in Appendix D.</p>
Climate and landform	<p>Climate: Average annual rainfall at Port Hedland Airport is 315.6 millimetres with a dry season (mean monthly rainfall < five millimetres) between August and November and a wet season (mean monthly rainfall between 53.6 millimetres and 90.5 millimetres) between January and March (BoM, 2025). The mean maximum temperatures in summer months (October to April) is 35.2° Celsius to 36.8° Celsius and mean maximum temperatures in winter (May to September) are between 27.4° Celsius and 32.5° Celsius at Port Hedland Airport (BoM, 2025).</p> <p>Landform:</p> <ul style="list-style-type: none"> • Capricorn system: Erosional surfaces; ranges and hills with steep rocky upper slopes, more gently sloping stony foot slopes, restricted stony lower plains and valleys; moderately spaced tributary drainage patterns. Relief up to 180 metres. • Paradise system: Depositional surfaces; plains (weakly saline in parts) with numerous small scalds and claypans on reworked old alluvium, subject to flooding; also tracts receiving more concentrated through flow with sluggish channels and minor clay plains with gilgai mic. • Nita system: Depositional surfaces; level eolian sand plains and occasional linear dunes, isolated low hills and occasional stony or gravelly rises; no organised drainage features. Relief up to 15 metres.
Soil description	<p>The soil is mapped as:</p> <ul style="list-style-type: none"> • Nita System (281Nt): Sandplains supporting shrubby spinifex grasslands with occasional trees. • Paradise System (281Pd): Alluvial plains supporting soft spinifex grasslands and tussock grasslands. • Capricorn System (281Cp): Rugged sandstone hills, ridges, stony footslopes and interfluves supporting low acacia shrublands or hard spinifex grasslands with scattered shrubs.
Land degradation risk	<ul style="list-style-type: none"> • The Capricorn land systems are not generally susceptible to erosion (van Vreeswyk et al., 2004). • The Paradise systems have a moderate to high risk of erosion, particularly in drainage lines (Van Vreeswyk et al., 2004). • Within the Nita system, wind erosion is known to occur after fires, however it is usually stabilised rapidly following rain and consequent regeneration of vegetation (Van Vreeswyk et al., 2004). Therefore, should the land be left cleared for a prolonged period of time, wind erosion may occur.
Waterbodies	<p>Supporting information (BHP, 2025a) and aerial imagery indicated that surface water drainage is to the south across the application area before joining the eastern arm of Pardoo Creek. The applicant has committed to using existing cleared tracks to cross Pardoo Creek where practicable.</p> <p>There are also some minor nonperennial watercourses intersecting the northern boundary of the application area. These are all ephemeral, with water flow predominantly occurring from north to south in direct response to precipitation events. This pattern is characteristic of arid and semi-arid regions where hydrological regimes</p>

Characteristic	Details
	are defined by high inter-annual variability and short-lived surface water presence (EPA 1988).
Hydrogeography	The application area is located in the Pilbara Groundwater Area, proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act)
Flora	The desktop assessment identified records of 11 priority flora within 50 kilometres, with the closest record of <i>Euphorbia clementii</i> approximately four kilometres from the application area. The vegetation and flora survey (Biota, 2025) identified no Threatened flora within the application area. Three Priority flora species were identified within the application area (<i>Euphorbia clementii</i> , <i>Euphorbia inappendiculata</i> var. <i>queenslandica</i> and <i>Uvedalia clementii</i>) across four locations. The four locations of Priority flora species have been excluded from the application area with a ten-metre buffer (see Figure 3).
Ecological communities	None of the vegetation associations comprised listed Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) (Biota, 2025).
Fauna	The desktop assessment identified 51 fauna of conservation significance within the local area (50-kilometre radius) with the closest record of <i>Macrotis lagotis</i> (bilby - VU) approximately 2.5 kilometres from the centre of the application area. A fauna survey (Biota, 2025a) of the application area identified three fauna habitats occurring within the application area (Sand Plains, Gilgai Plain and Minor Drainage line) however no fauna of conservation significance were recorded within the application area (see section 3.2.1).

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u></p> <p>The survey conducted over the application area (Biota,2025) identified three vegetation units within the application area in ‘Very Good’ condition (Trudgen, 1991). None of the vegetation units represent a TEC or a PEC. The survey identified records of Priority flora species within the application area and the applicant has excluded these area and a ten-metre buffer to those records from the clearing area. Clearing will remove up to 15 hectares of native vegetation within the context of an extensively vegetated area of similar condition. Limited clearing which avoids significant vegetation values is not expected to significantly impact the biodiversity or conservation values of the native vegetation in this context.</p> <p>The area proposed to be cleared contains conservation significant fauna habitats (Biota, 2025a) in similar condition to the broader landscape.</p> <p>The permit will be conditioned to mitigate impacts to the above-mentioned environmental values.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared contains habitat for conservation significant fauna in similar quality and condition to the local area.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u> 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.</p>	Not at variance	No
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u> 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.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> One vegetation unit within the application area is growing in an environment associated with a watercourse however considering the avoidance and minimisation measures proposed by the applicant (see section 3.1), the proposed clearing is unlikely to significantly impact riparian vegetation.</p>	At variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soils are susceptible to erosion. Localised erosion will not impact any environmental values as clearing will be restricted to a bare</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>minimum and cleared areas that are no longer required will be revegetated.</p> <p>Noting the extent of clearing, condition of vegetation and the rehabilitation measures proposed by the applicant, the proposed clearing is not likely to have an appreciable impact on land degradation. The permit will be conditioned to manage the risks of land degradation.</p>		
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>Given no significant perennial water courses are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p> <p>Should contaminated sites drilling or additional access track be required within Pardoo Creek, applicant has committed to keeping the clearing to a bare minimum and construction be to kept flat level to the surface (i.e. a simple clearing with no bunds) to maintain the natural surface flow (BHP, 2025a)</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>Considering size of clearing relative to the footprint of clearing extent of vegetation in local area, the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p> <p>Drainage infrastructure will be designed to ensure that post-construction flows will not differ significantly from pre-construction flows. Therefore, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding (BHP, 2025a).</p>	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.

Condition	Description
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

Mt Goldsworthy South Detailed Flora and Vegetation Survey- Biota Environmental Sciences (2025)

The survey was conducted in a broader area. The following is the description of the vegetation associations identified within the application area:

Code	SS TeTsc AacAancAi ChCfCoz
Vegetation association description (NVIS Level V)	Open Hummock Grassland of <i>Triodia epactia</i> and <i>T. schinzii</i> with an Open Shrubland to High Open Shrubland of <i>Acacia acradenia</i> , <i>A. ancistrocarpa</i> and <i>A. inaequilatera</i> with Scattered Low Trees of <i>Corymbia hamersleyana</i> , <i>C. flavescens</i> and <i>C. zygophylla</i> .
Distribution and landforms	This vegetation occurred on red sands (and very occasionally sandy loams) on the sandy and stony plains that dominated the Survey Area (Plate 5.1). This unit was mapped in the northeastern half of the Survey Area (Figure 5.1), and was associated predominantly with the Nita land system. The vegetation occurred mostly on sandy soils that lacked a rocky surface, however there were scattered small pockets of this unit on low stony rises. This broad area lies at the base of medium ranges and is a depositional surface, sloping gently to the south. The vegetation was dissected by minor flowlines dominated by <i>Acacia</i> spp. (e.g. <i>Acacia monticola</i> , <i>Acacia ancistrocarpa</i>) that were too small to be mapped separately. The hummock grass <i>Triodia schinzii</i> occurred patchily though this unit (e.g. sites MGW-08, MGW-10 and MGW-11), with <i>Triodia epactia</i> otherwise dominant. The low mallee tree <i>Eucalyptus odontocarpa</i> occurred in an isolated patch in the northwestern corner of the Survey Area.
Other associated species	<u>Mallee:</u> <i>Eucalyptus odontocarpa</i> . <u>Tall Shrubs:</u> <i>Acacia monticola</i> , <i>Grevillea pyramidalis</i> subsp. <i>leucadendron</i> . <u>Shrubs:</u> <i>Carissa lanceolata</i> , <i>Grevillea wickhamii</i> , <i>Senna artemisioides</i> subsp. <i>oligophylla</i> . <u>Low Shrubs:</u> <i>Acacia stellaticeps</i> , <i>Bonamia erecta</i> , <i>Corchorus sidoides</i> subsp. <i>vermicularis</i> , <i>Hibiscus sturtii</i> var. <i>campylochlamys</i> , <i>Isotropis atropurpurea</i> , <i>Senna notabilis</i> , <i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543). <u>Herbs:</u> <i>Afrohybanthus aurantiacus</i> , <i>Arivela viscosa</i> , <i>Boerhavia</i> spp., <i>Bonamia pannosa</i> , <i>Euphorbia vaccaria</i> var. <i>vaccaria</i> , <i>Goodenia microptera</i> , <i>Grona filiformis</i> , <i>Indigofera linifolia</i> , <i>Polymeria ambigua</i> , <i>Portulaca oleracea</i> , <i>Ptilotus axillaris</i> , <i>Ptilotus fusiformis</i> , <i>Trianthema pilosum</i> , <i>Tribulus hirsutus</i> , <i>Tribulopsis angustifolia</i> , <i>Trigastrotheca molluginea</i> . <u>Sedges:</u> <i>Bulbostylis barbata</i> . <u>Grasses:</u> <i>Aristida holathera</i> var. <i>holathera</i> , <i>*Cenchrus ciliaris</i> , <i>Chrysopogon fallax</i> , <i>Eragrostis eriopoda</i> , <i>Eriachne obtusa</i> , <i>Panicum australiense</i> var. <i>australiense</i> , <i>Paspalidium rarum</i> , <i>Sporobolus australasicus</i> .
Vegetation condition	Very Good, and in many places Excellent. Very occasional records of <i>*Cenchrus ciliaris</i> , predominantly as scattered individuals and often under <i>Corymbia</i> trees. <i>*Vachellia farnesiana</i> was recorded at one site, however it was otherwise rarely encountered within this vegetation. In some sections there was evidence of low intensity cattle activity (predominantly old scats and tracks). The majority of the vegetation had a moderate fire age (3-5 yr), however there were some patches that were burnt more recently (0-2 yr).
Sampling sites	MGW-04, MGW-05, MGW-07, MGW-08, MGW-09, MGW-10, MGW-11, MGW-12, MGW-13, MGW-15, MGW-18, MGW-20, MGW-22, MGW-23, MGW-25, MGW-26, MGW-R-01, MGW-R-02; also Q10 and Q12 of Pilbara Flora (2009).

Code	GP ErxErbErgg DishErte
Vegetation association description (NVIS Level V)	Closed Tussock to Tussock Grassland of <i>Eragrostis xerophila</i> , <i>Eriachne benthamii</i> and <i>Eriachne glauca</i> var. <i>glauca</i> with an Open Bunch Grassland of <i>Dichanthium sericeum</i> subsp. <i>humilius</i> and <i>Eragrostis tenellula</i> .
Distribution and landforms	This vegetation occurred on the yellow to red clay gilgai plains in the southern half of the Survey Area (Plate 5.2; Figure 5.1). The unit was associated with the Paradise land system, characterised by deposited alluvium and prone to flooding. No trees were present within this unit. Occasionally, the tall shrub <i>Acacia synchronicia</i> occurred as scattered individuals, or as a small dense stand in a few locations within this grassland unit. Grasses and herbs were dominant.
Other associated species	<u>Tall Shrubs:</u> <i>Acacia synchronicia</i> . <u>Shrubs:</u> <i>Sesbania cannabina</i> . <u>Low Shrubs:</u> <i>Sida fibulifera</i> . <u>Herbs:</u> <i>Bergia pedicellaris</i> , <i>Corchorus tridens</i> , <i>Euphorbia fitzroyensis</i> , <i>Grona muelleri</i> , <i>Ipomoea coptica</i> , <i>Marsilea hirsuta</i> , <i>Mimulus gracilis</i> , <i>Neptunia scutata</i> , <i>Nellica maderaspatensis</i> , <i>Ptilotus murrayi</i> , <i>Stemodia kingii</i> , <i>Streptoglossa tenuiflora</i> , <i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113). <u>Sedges:</u> <i>Bulbostylis turbinata</i> , <i>Cyperus iria</i> . <u>Grasses:</u> <i>Cynodon convergens</i> , <i>Dactyloctenium radulans</i> , <i>Elytrophorus spicatus</i> , <i>Iseilema membranaceum</i> , <i>Iseilema dolichotrichum</i> , <i>Panicum laevinode</i> , <i>Sporobolus australasicus</i> .
Vegetation condition	Very Good; in many places Excellent. There was no evidence of recent fire within this grassland unit. Occasionally, low intensity cattle activity was noted, however the majority was unimpacted. Weeds were rare, with only one record of <i>*Vachellia farnesiana</i> and <i>*Echinochloa colona</i> from this unit.
Sampling sites	MGW-06, MGW-14, MGW-24, MGW-45.

Code	ME Ev AsyAcoAthe EuaErbChf Cyv
Vegetation association description (NVIS Level V)	Low Open Woodland of <i>Eucalyptus victrix</i> with a High Open Shrubland of <i>Acacia synchronicia</i> , <i>Acacia colei</i> and <i>Atalaya hemiglauca</i> with a Tussock Grassland of <i>Eulalia aurea</i> , <i>Eriachne benthamii</i> and <i>Chrysopogon fallax</i> and Scattered Sedges of <i>Cyperus vaginatus</i> .
Distribution and landforms	This vegetation occurred on reddish brown light to medium clay within the moderate drainage line (Pardoo Creek) in the western section of the Survey Area (Plate 5.3; Figure 5.1). The drainage line was braided in places, with a well-defined channel that was either bare or contained a groundcover of herbs, bunch grasses and sedges. The banks were dominated by <i>Eucalyptus victrix</i> and native tussock grasses. The unit occurred within the Paradise land system.
Other associated species	<u>Shrubs:</u> <i>Carissa lanceolata</i> , <i>Ehretia saligna</i> var. <i>saligna</i> , <i>*Vachellia farnesiana</i> . <u>Low Shrubs:</u> <i>Sesbania cannabina</i> . <u>Herbs:</u> <i>Alternanthera nodiflora</i> , <i>Ammannia multiflora</i> , <i>Basilicum polystachyon</i> , <i>Blumea tenella</i> , <i>Boerhavia burbridgeana</i> , <i>Centipeda minima</i> subsp. <i>minima</i> , <i>Euphorbia fitzroyensis</i> , <i>Ipomoea coptica</i> , <i>Ludwigia perennis</i> , <i>Marsilea hirsuta</i> , <i>Mimulus gracilis</i> , <i>Nellica maderaspatensis</i> , <i>Ptilotus murrayi</i> , <i>Rostellularia adscendens</i> var. <i>clementii</i> , <i>Uvedalia clementii</i> , <i>Vigna lanceolata</i> var. <i>lanceolata</i> , <i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113). <u>Grasses:</u> <i>Cynodon convergens</i> , <i>Dichanthium fecundum</i> , <i>Dichanthium sericeum</i> subsp. <i>humilius</i> , <i>*Echinochloa colona</i> , <i>Eragrostis exigua</i> , <i>Eriachne glauca</i> var. <i>glauca</i> , <i>Iseilema macratherum</i> , <i>Sporobolus australasicus</i> . <u>Sedges:</u> <i>Bulbostylis turbinata</i> , <i>Cyperus squarrosus</i> , <i>Fimbristylis littoralis</i> , <i>Fimbristylis microcarya</i> .
Vegetation condition	Very Good. Scattered weeds were recorded, comprising <i>*Cenchrus ciliaris</i> , <i>*Echinochloa colona</i> , <i>*Indigofera oblongifolia</i> and <i>*Vachellia farnesiana</i> , but were not dominant within the vegetation. Low to moderate cattle activity was evident in places, however some sections of the creek appeared free from cattle impacts. There was no evidence of recent fire within this unit.
Sampling sites	MGW-02, MGW-16, MGW-19.

An additional unit mapped separately to the vegetation association is Unit OT (C) which consisted of the cleared areas for the few minor access tracks that occurred within the Survey Area.

Photographs of vegetation associations:



Figure 2: Vegetation associations 'SS TeTsc AacAancAi ChCflCoz' (L) and 'GP ErxErbErgg DishErte' (R).



Figure 3: Vegetation associations 'ME Ev AsyAcoAthe EuaErbChf Cyv' (bed=left; bank=right).

The location of the Priority flora records within the application area can be seen in figure 3 below. Applicant has committed to excluding the locations of the species within the application area and maintaining a ten metre buffer around each of the four locations.

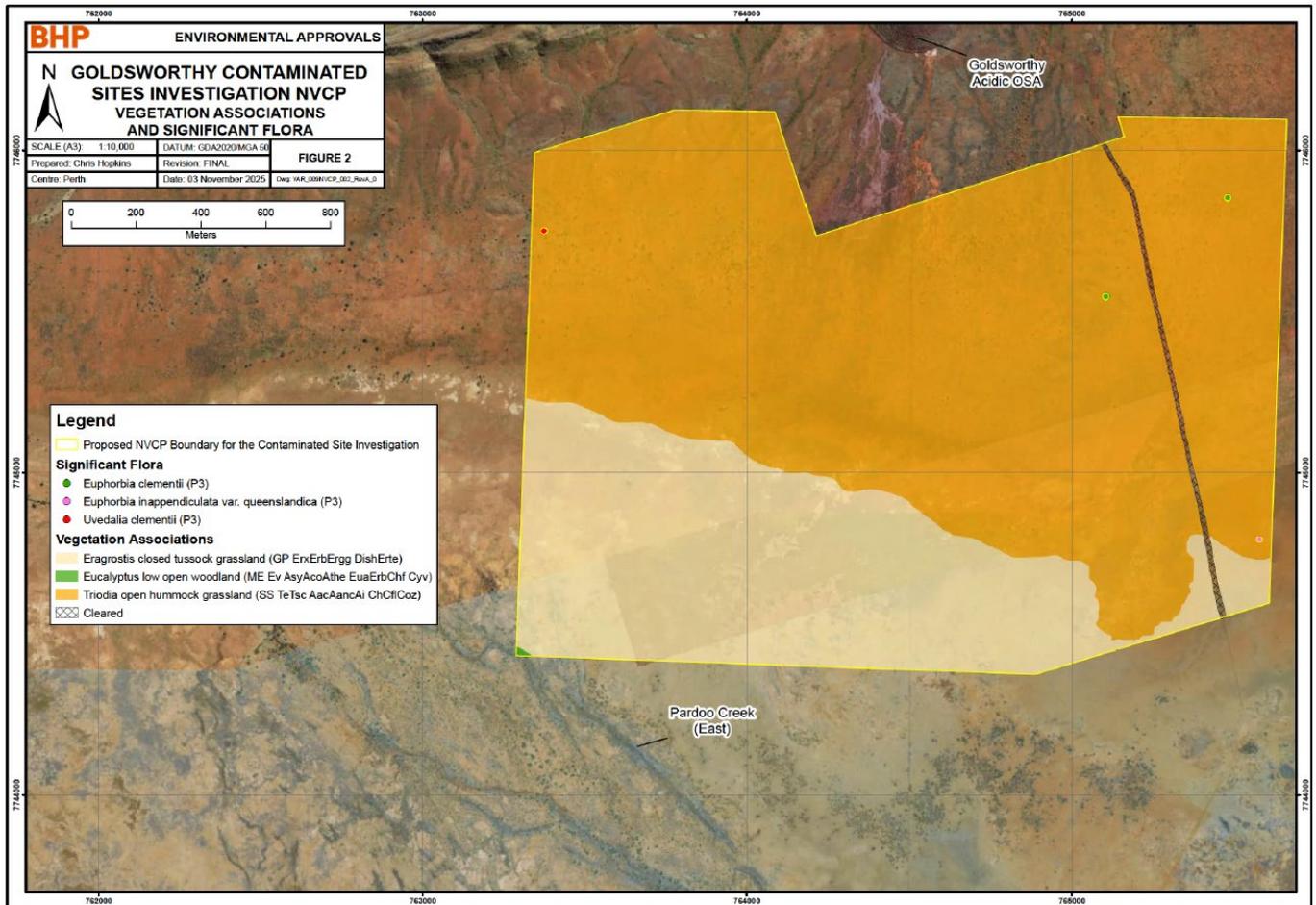


Figure 4: Location of the Priority flora species within the application area

Mt Goldsworthy South Targeted Significant Vertebrate Fauna Survey – Biota Environmental Sciences (2025a)

Biota to conduct a single-season basic and targeted vertebrate fauna survey covering the broader survey area. When overlapping the survey data over the application area, the survey identified three fauna habitats within the application area.

- Sand Plain habitat
- Gilgai Plain habitat
- Minor Drainage Line

The Sand Plain habitat provides critical habitat for two significant species, the Greater Bilby and Brush-tailed Mulgara. Brush-tailed Mulgara typically occur in spinifex grasslands on sandplains and sandy swales between low dunes. No signs of this species were recorded during the current survey, though they have been recorded in the desktop study area previously.

The Gilgai Plain habitat was characterised by clay plains with occasional cracks and sinkholes (Gilgai) supporting dense tussock grasses with none to very few shrubs or trees. This habitat may provide supporting habitat for Greater Bilby, primary mainland habitat for Short-tailed Mouse, and foraging habitat for the significant bird species such as Fork-tailed Swift, Grey Falcon, Peregrine Falcon, Glossy Ibis and Oriental Plover.

The Minor Drainage Line habitat acts as a dispersal corridor and may provide foraging value to multiple significant species. The drainage line intersecting the application area (a tributary of Pardoo Creek) forms part of the broader regional drainage network and holds ecological importance, particularly during periods of seasonal rainfall.

A minor portion of the application area is mapped as 'Cleared/Disturbed' habitat which provides little to no ecological value for significant species presence in the Survey Area (Biota, 2025a).

Table 1: Fauna Habitats present within the application area (Biota, 2025a)

Habitat Type, Extent and Description	Fauna Values	Representative Photo
<p>Sand Plain (537.1 ha, 56.4%)</p> <p>Description: Sand plains of red sands and sandy loams with an Open Shrubland of Acacias including (but not limited to) <i>A. acradenia</i>, <i>A. ancistrocarpa</i> and <i>A. inaequilatera</i>, over an Open Hummock Grassland of <i>Triodia epactia</i> and <i>T. schinzii</i>. This habitat has a mixed burn history, with some areas recently burnt.</p> <p>Significance: Medium</p>	<ul style="list-style-type: none"> • Critical habitat for Greater Bilby. • Supporting habitat for Fork-tailed Swift, Grey Falcon and Peregrine Falcon. • Critical habitat for Brush-tailed Mulgara. 	
<p>Gilgai Plain (335.6 ha, 35.3%)</p> <p>Description: Clay plains with occasional cracks and sinkholes (Gilgai) supporting a Closed Tussock Grassland of <i>Eragrostis xerophila</i>, <i>Eriachne benthamii</i> and <i>E. glauca</i> var. <i>glauca</i> with none to very few shrubs or trees.</p> <p>Significance: Medium</p>	<ul style="list-style-type: none"> • Supporting habitat for Greater Bilby. • Suitable habitat for Northern Short-tailed Mouse. • Supporting habitat for Fork-tailed Swift, Grey Falcon and Peregrine Falcon. • Potential foraging habitat for Glossy Ibis and Oriental Plover. 	
<p>Minor Drainage Line (56.7 ha, 5.9%)</p> <p>Description: Minor drainage lines with sandy or gravelly riverbeds, bordered by <i>Eucalyptus victrix</i> with a High Open Shrubland of <i>Acacia synchronicia</i>, <i>A. colei</i> and <i>Atalaya hemiglauc</i> over a Tussock Grassland of <i>Eulalia aurea</i>, <i>Eriachne benthamii</i> and <i>Chrysopogon fallax</i>. Some areas contained small amounts of water during the field survey (following above average rainfall).</p> <p>Significance: Low</p>	<ul style="list-style-type: none"> • Supporting habitat for Northern Quoll (dispersal). • Supporting habitat for Pilbara Olive Python (dispersal). • Supporting habitat for Pilbara Leaf-nosed Bat and Ghost Bat (foraging and dispersal). • Supporting habitat for Grey Falcon, Fork-tailed Swift and Peregrine Falcon. 	

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)
- 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)
- 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

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)

E.2. References

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BHP (2025a) *Mount Goldsworthy Contaminated Sites Investigation NVCP - Supporting information for clearing permit application CPS 11343/1*, received 14 November 2025 (DWER Ref: DWERDT1230551).

BHP (2026) *Supporting information for clearing permit application CPS 11343/1*, received 16 February 2026 (DWER Ref: DWERDT1276238).

Biota Environmental Sciences (2025) *Mt Goldsworthy South Detailed Flora and Vegetation Survey- Supporting information for clearing permit application CPS 11343/1*, received 14 November 2026 (DWER Ref: DWERDT1230551).

Biota Environmental Sciences (2025a) *Mt Goldsworthy South Targeted Significant Vertebrate Fauna Survey - Supporting information for clearing permit application CPS 11343/1*, received 14 November 2026 (DWER Ref: DWERDT1230551).

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