Application for a new NVCP for Contaminated Sites Investigations at Mount Goldsworthy

Native Vegetation Clearing Permit Application Supporting Document

November 2025

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1 INTRODUCTION

BHP Iron Ore Pty Ltd (BHP) currently operates a number of Iron Ore mines and associated rail and port infrastructure within the Pilbara region of Western Australia (WA). Current mining operations include the:

- Newman Operations consisting of:
  - The Mount Whaleback hub (including Orebodies 29, 30 and 35) located approximately two kilometres (km) west of Newman Township; and;
  - The Eastern Ridge hub (Consisting of Orebodies 23, 24, 25 25 West and 32) located approximately 5 km east of Newman Township;
- Mining Area C / South Flank located approximately 90 km north west of Newman Township;
- Orebodies 17, 18, 31 and Wheelarra Hill (Jimblebar) Mine located approximately 35 km east of Newman Township; and
- Yandi Mine located approximately 100 km north west of Newman Township.

Ore from the above mining operations is transported to Port Hedland via the BHP Newman to Port Hedland Mainline (and associated spur lines) and is then shipped out through Port Hedland at the BHP facilities at Nelson Point and Finucane Island.

The Mount Goldsworthy Legacy Operations are located approximately 90 km 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 on the De Grey Pastoral Lease N050027 (**Figure 1**) to determine the extent of the impacts of this run off.

In accordance with Part V Division 2 of the *Environmental Protection Act 1986* (EP Act), BHP hereby refers the application to amend NVCP CPS 5572/2 to the Department of Water and Environmental Regulation (DWER).

BHP considers that the proposed application will not result in any significant environmental or social impacts and that the proposed Project complies with the 'Ten Clearing Principles', as defined in Schedule 5 of the *Environmental Protection Act 1986* (EP Act).

1.1 LOCATION

The Application Area is located approximately 90 km east of Port Hedland in the Pilbara region of Western Australia (**Figure 1**).

1.2 TENURE

The Application Area is located on De Grey Pastoral Lease N050027. Consent to access this Pastoral Lease is provided in **Attachment 1**.

1.3 LOCAL GOVERNMENT JURISDICTION

The Application Area is located within the Shire of East Pilbara.

1.4 PROPONENT

This Licence Amendment application has been submitted by BHP on behalf of the owners being the Mt Goldsworthy Joint Venture:

- BHP Iron Ore (Jimblebar) Pty Ltd 85%
- Itochu Minerals and Energy Australia Pty Ltd 8%
- Mitsui Iron Ore Corporation 7%

[redacted]

1.5 PROJECT DESCRIPTION

The proposed works will involve clearing for the purposes of contaminated sites investigations and associated activities.

1.6 MITIGATION HIERARCHY

1.6.1 Avoid

The four locations of Priority flora species have been excluded from the Application Area (**Section 3.4.2; Figure 2**).

1.6.2 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 10 m buffer, where practicable.

Should any active Greater Bilby burrows be identified they will be avoided using a 10 m buffer, where practicable.

Should any active Western Pebble-mound Mouse mounds be identified they will be avoided using a 10 m 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.

1.6.3 Mitigate

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

1.6.4 Offset

Based on the low level of potential impacts associated with this application no offsets are proposed.

1.7 PROJECT CHARACTERISTICS AND COMMITMENTS.

BHP commits to undertake the Project in accordance with the details set out in **Table 1**.

Table 1 Project Characteristics and Commitments

Permit Characteristics	
Authorising Agency	DWER
Permit Title	Goldsworthy Contaminated Sites Investigation
Area to be cleared	15 hectares.
Application Area	363.61 hectares
Purpose of the permit	Clearing for the purposes of contaminated sites investigations and associated activities
Tenure	De Grey Pastoral Lease N050027
Clearing Duration	Until 30 November 2030
Permit Duration	Until 30 November 2035
Proposed Annual Reporting Date	01 October for the previous Financial Year
Proposed Final Reporting Date	30 November 2035
Application boundary	Map Reference: • YAR_008NVCP_001_RevB_0 • YAR_008NVCP_002_RevA_0 • YAR_008NVCP_003_RevA_0 BHP Shapefile D2 Reference: https://waio-dctm.bhp.com/D2/?docbase=bhpbio_od_prod&locateId=0b03c41a84d47e13&application=ManagedDocuments

Application Commitments	**Section**
Control of established weed populations will be carried out according to BHP's standard Weed Control and Management Procedures.	1.6.2 3.4.3 6.7.4
Should any active Brush-tailed Mulgara burrows be identified they will be avoided using a 10 m buffer, where practicable.	1.6.2 3.4.4 6.2
Should any active Greater Bilby burrows be identified they will be avoided using a 10 m buffer, where practicable.	1.6.2 3.4.4 6.2
Should any active Western Pebble-mound Mouse mounds be identified they will be avoided using a 10 m buffer, where practicable.	1.6.2 3.4.4 6.2
Where practicable, existing cleared tracks will be used to cross Pardoo Creek.	1.6.2 3.6 6.6 6.9
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.	1.6.2 3.6 6.6 6.9
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.	1.6.2 6.7

2 ASSOCIATED APPROVALS

Any other additional approvals will be sought as required.

3 EXISTING ENVIRONMENT

3.1 CLIMATE

Port Hedland Airport (meteorological site 004032) is the closest Bureau of Meteorology (BoM) station to the Application Area. Average annual rainfall at Port Hedland Airport is 315.6 mm with a dry season (mean monthly rainfall <5 mm) between August and November and a wet season (mean monthly rainfall between 53.6 mm and 90.5 mm) between January and March (BoM, 2025). The highest and lowest annual rainfall recorded for Port Hedland was 713.2 mm (recorded in 2013) and 44.5 mm (recorded in 1944), respectively (BoM, 2025). The highest ever recorded daily rainfall for Port Hedland was recorded on 27 January 1967 with 387.1 mm (BoM, 2025) which is 71.5 mm over the current mean annual rainfall for Port Hedland.

The mean maximum temperatures in summer months (October to April) is 35.2°C to 36.8°C, and mean maximum temperatures in winter (May to September) are between 27.4°C and 32.5°C at Port Hedland Airport (BoM, 2025).

Mean daily evaporation at Port Hedland throughout the year is 9 mm/day (BoM, 2025a), which equates to 3.28 metres per year. Evaporation greatly exceeds rainfall in the region throughout the year and on a month-by-month basis (BoM, 2025).

3.2 BIOREGION, LANDFORMS AND LAND SYSTEMS

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

- Chichester subregion described as: “Northern section of the Pilbara Craton. Undulating Archaean granite and basalt plains include significant areas of basaltic ranges. Plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* (formerly *Triodia pungens*) hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges. The climate is semi-desert-tropical and receives 300 mm of rainfall annually. Drainage occurs to the north via numerous rivers (e.g. De Grey, Oakover, Nullagine, Shaw, Yule, Sherlock).” (Kendrick and McKenzie, 2001).
- Roebourne subregion described as: “Quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of Acacia stellaticeps or A. pyrifolia and A. *inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, Sporobolus and Mangal occur on marine alluvial flats and river deltas. Resistant linear ranges of basalts occur across the coastal plains, with minor exposures of granite. Islands are either quaternary sand accumulations, or composed of basalt or limestone, or combinations of any of these three. Climate is arid (semi-desert) tropical with highly variable rainfall, falling mainly in summer. Cyclonic activity is significant, with several systems affecting the coast and hinterland annually.” (Kendrick and Stanley, 2001).

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

Capricorn: “Prominent strike ridges and ranges (relief up to 180 m) of sandstone and other sedimentary rocks with steep slopes and skeletal soils.”

Nita: “Level, red sandplains and occasional dunes. The fifth largest land system (6.2%) in the survey area; occurring only in the north-east.”

Paradise: “Flood plains with duplex soils (sometimes weakly saline) and clays.”

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 types occur within the Application Area (CSIRO, 2021):

My54: “Broad very gently undulating plains with scattered rock outcrops occurring as mesas: chief soils are neutral and acid red earths (Gn2.12, Gn2.11), with some hard red soils occurring on pediments of unit Oc61.”

Oc40: “Alluvial plains, which are frequently badly surface eroded, and levees associated with prior streams: chief soils are hard alkaline red soils together with various sandy alkaline red soils. There are small areas of sandy soils on levees and prior stream channels, small areas of red dune soils, and some sandy red earths. In places erosion has removed the sandy surfaces and the resulting clay pans have sandy clay soils.”

3.4 FLORA, VEGETATION AND FAUNA

One flora and vegetation survey has been completed within the Application Area: *Goldsworthy South Detailed Flora and Vegetation Survey* (Biota, 2025a) (**Appendix 1**).

One vertebrate fauna survey has been completed within the Application Area: *Mt Goldsworthy South Targeted Significant Vertebrate Fauna Survey* (Biota, 2025b) (**Appendix 2**).

3.4.1 Vegetation Communities

The Application Area is located within the Interim Biogeographic Regionalisation for Australia (IBRA) Pilbara (Department of Environment and Heritage, 2005). According to the Government of Western Australia (2013), this bioregion is more than 99% vegetated (**Table 2**). The vegetation within the Application Area is classified as the following vegetation associations, as mapped by Beard (1975):

93 Hummock Grasslands, shrub steppe; kanji over soft spinifex
175 Short bunch grassland – savanna/grass plain (Pilbara)

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 (Government of Western Australia, 2013)

Vegetation Association	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Pre-European % in IUCN Class I-IV Reserves
Pilbara IBRA Bioregion	17,808,657	17,733,583	99.58	6.36
Vegetation association 93 within Western Australia	3,044,293	3,040,639	99.88	0.44
Vegetation association 93 within the Pilbara IBRA	3,042,114	3,038,471	99.88	0.44
Vegetation association175 within Western Australia	525,952	524,484	99.72	4.22
Vegetation association 175 within the Pilbara IBRA	507,860	507,466	99.92	4.37

Biota (2005a) identified a total of 3 broad floristic communities with 2 vegetation associations within the Application Area (**Table 3, Figure 2**). None of the vegetation associations or landforms identified within the boundary of the Application Area are associated with a TEC or PEC (Biota, 2005a). The closest PEC is more than 24 km north (Eighty Mile Land System) and more than 35 km east (Gregory Land System).

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 were affiliated with any TECs or PECs and there are no vegetation associations within the Application Area that would be likely to be included in any updates to TEC or PEC listings.

Vegetation condition within the Application Area ranges from excellent to completely degraded.

Table 3 Vegetation associations of the Application Area (Biota, 2025a)

Broad Floristic Formation	Vegetation Association	
Eragrostis closed tussock grassland	GP ErxErbErgg DishErte	Closed Tussock to Tussock Grassland of *Eragrostis xerophila*, *Eriachne benthamii* and *Eriachne glauca* var. *glauca* with an Open Bunch Grassland of *Dichanthium sericeum* subsp. *humilius* and *Eragrostis tenellula* on yellow to red gilgai clay plains.
Eucalyptus low open woodland	ME Ev AsyAcoAthe EuaErbChf Cyv	Low Open Woodland of *Eucalyptus victrix* with a High Open Shrubland of *Acacia synchronicia*, *Acacia colei* and *Atalaya hemiglauca* with a Tussock Grassland of *Eulalia aurea*, *Eriachne benthamii* and *Chrysopogon fallax* and Scattered Sedges of *Cyperus vaginatus* on reddish brown light to medium clay in a moderate creekline.
Triodia open hummock grassland	SS TeTsc AacAancAi ChCflCoz	Open Hummock Grassland of *Triodia epactia* and *T. schinzii* with an Open Shrubland to High Open Shrubland of *Acacia acradenia*, *A. ancistrocarpa* and *A. inaequilatera* with Scattered Low Trees of *Corymbia hamersleyana*, *C. flavescens* and *C. zygophylla* on red sands and sandy loams on sandy and stony plains.

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) were identified within the Application Area.

Three Priority 3 Flora species have been clipped from the Application Area with a 10 m buffer (**Figure 2**):

- *Euphorbia clementii*;
- *Euphorbia inappendiculata* var. *queenslandica*; and
- *Uvedalia clementii.*

3.4.3 Weeds

Four introduced flora species (weeds) has been recorded within the Application Area (**Table 4**). One species **Calotropis procera* (Sodam Apple) is listed as a Declared Pest under the *Biosecurity and Agriculture Management Act 2007* (BAM Act). 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]
**Calotropis procera*	Sodam Apple	Not listed	Yes
**Cenchrus ciliaris*	Buffel Grass	High and Rapid	No
**Echinochloa colona*	Awnless Barnyard Grass	High and Rapid	No
**Vachellia farnesiana*	Mimosa Bush	High and Rapid	No

3.4.4 Fauna Habitats and Significant Fauna

Biota (2025b) identified three fauna habitats within the Application Area (**Figure 3**):

- **Sand Plain:** Sand plains of red sands and sandy loams with an Open Shrubland of Acacias including (but not limited to) *A. acradenia, A. ancistrocarpa* and *A. inaequilatera*, over an Open Hummock Grassland of *Triodia epactia* and *T. schinzii*. This habitat has a mixed burn history, with some areas recently burnt.
- **Gilgai Plain:** Clay plains with occasional cracks and sinkholes (Gilgai) supporting a Closed Tussock Grassland of *Eragrostis xerophila*, *Eriachne benthamii* and *E. glauca* var. *glauca* with none to very few shrubs or trees.
- **Minor Drainage Line:** Minor drainage lines with sandy or gravelly riverbeds, bordered by *Eucalyptus victrix* with a High Open Shrubland of *Acacia synchronicia*, *A. colei* and *Atalaya hemiglauca* over a Tussock Grassland of *Eulalia aurea*, *Eriachne benthamii* and *Chrysopogon fallax*. Some areas contained small amounts of water during the field survey (following above average rainfall).

No caves or waterholes have been recorded within the Application Area.

The fauna habitats identified within the Application Area extend beyond the project boundary and are common in the surrounding region.

No fauna species of significance have been recorded from the Application Area.

Based on the occurrence of the habitat types and significant fauna species previously recorded in the vicinity 18 species are considered to potentially occur within the Application Area (i.e. those considered 'likely' or 'possible' to occur within the Application Area):

- Australian Tern (*Gelochelidon macrotarsa*) (EPBC Act and BC Act Migratory);
- Barn Swallow (*Hirundo rustica*) (EPBC Act and BC Act Migratory);
- Brush-tailed mulgara (*Dasycercus blythi*) (DBCA Priority 4);
- Common Sandpiper (*Actitis hypoleucos*) (EPBC Act and BC Act Migratory);
- Fork-tailed Swift (*Apus pacificus*) (EPBC Act and BC Act Migratory);

[1] BAM Act s22

- Ghost Bat (*Macroderma gigas*) (EPBC Act and BC Act Vulnerable);
- Glossy Ibis (*Plegadis falcinellus*) (EPBC Act and BC Act Migratory);
- Greater Bilby (*Macrotis lagotis*) (EPBC Act and BC Act Vulnerable);
- Grey Falcon (*Falco hypoleucos*) (EPBC Act and BC Act Vulnerable);
- Little Curlew (*Numenius minutus*) (EPBC Act and BC Act Migratory);
- Northern Short-tailed Mouse (Leggadina lakedownensis) (DBCA Priority 4);
- Northern Quoll (*Dasyurus hallucatus*) (EPBC Act and BC Act Endangered);
- Oriental Plover (*Charadrius veredus*) (EPBC Act and BC Act Migratory);
- Oriental Pratincole (*Glareola maldivarum*) (EPBC Act and BC Act Migratory);
- Peregrine Falcon (*Falco peregrinus*) (BC Act 'Other Specially Protected Fauna');
- Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*) (EPBC Act and BC Act Vulnerable);
- Western Pebble-mound Mouse (*Pseudomys chapmani*) (DBCA Priority 4); and
- Yellow Wagtail (*Motacilla flava*) (EPBC Act and BC Act Migratory);

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

Table 5 Significant Fauna Potentially Occurring within the Application Area

Significant Species	Conservation Status	Distribution and Ecology	Habitat Relevance	Likelihood	Potential Impact on Species
Birds					
Australian Tern (*Gelochelidon macrotarsa*)	Migratory (EPBC Act) Migratory (BC Act)	Australian Terns are nomadic and occur widely across Australia, including both coastal and inland areas, but generally remain within Australia. They breed colonially on inland wetlands, and forage over sheltered coasts, estuaries, inland wetlands, and over open grassland and bare ground (Johnstone and Storr 1998)	No Australian Terns were recorded in the Application Area. There are records of this species along the De Grey River within 10 km of the Application Area meaning this species may utilise the small area of Minor Drainage Line habitat as well as the broader Sand Plain and Gilgai Plain habitats of the Application Area.	Possible	**Negligible** Potential impacts to this species are considered to be negligible as: • There is no suitable breeding habitat within the Application Area; and • There are large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Barn Swallow (*Hirundo rustica*)	Migratory (EPBC Act) Migratory (BC Act)	The Barn Swallow is found in open country and agricultural lands, especially near water.	Given known range of this species within Australia, it is likely that it visits the Application Area during the migratory period, mostly September to March.	Possible	**Negligible** This species is wide ranging, and is unlikely to rely just on habitats within the Application Area, given that suitable habitat occurs in the Application Area surrounds.
Common Sandpiper (*Actitis hypoleucos*)	Migratory (EPBC Act) Migratory (BC Act)	*Actitis hypoleucos* is a nonbreeding migratory shorebird which utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. The muddy margins utilised by the species are often narrow, and may be steep. The species is often associated with mangroves, and sometimes found in areas of mud littered with rocks or snags (Geering *et al*. 2007).	No Common Sandpipers were recorded in the Application Area. There are records of this species along the De Grey River within 7 km of the Application Area meaning this species may utilise the small area of Minor Drainage Line habitat of the Application Area.	Possible	**Negligible** Potential impacts to this species are considered to be negligible as there is large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Fork-tailed Swift (*Apus pacificus*)	Migratory (EPBC Act) Migratory (BC Act)	The Fork-tailed Swift breeds in north-east and east Asia, wintering in Australia and southern New Guinea (Johnstone and Storr, 1998). Fork-tailed Swifts are entirely aerial within the Pilbara and may forage sporadically over the Application Area in the summer months, associated with thunderstorms and cyclonic systems (Johnstone and Storr, 1998).	The Fork-tailed Swift is largely an aerial species and has a broad distribution across much of Western Australia. It is viewed as a nomadic species and may fly over the Application Area.	Likely	**Negligible** As this species is entirely aerial and not reliant on terrestrial habitats, the impact to this species is considered to be negligible.

Significant Species	Conservation Status	Distribution and Ecology	Habitat Relevance	Likelihood	Potential Impact on Species
Glossy Ibis (*Plegadis falcinellus*)	Migratory (EPBC Act) Migratory (BC Act)	The Glossy Ibis inhabits areas of freshwater wetlands, irrigated areas, and margins of dams, floodplains, brackish and saline wetlands, tidal mudflats, pastures, lawns and public gardens (Johnstone and Storr, 2004). This species is a casual vagrant in dry and hilly areas and is mainly a non-breeding visitor to Western Australia (Johnstone and Storr, 1998).	No Glossy Ibis were recorded in the Application Area. There are records of this species along the De Grey River within 6.5 km of the Application Area meaning this species may utilise the small area of Minor Drainage Line habitat of the Application Area.	Possible	**Negligible** Potential impacts to this species are considered to be negligible as there is large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Grey Falcon (*Falco hypoleucos*)	Vulnerable (EPBC Act) Vulnerable (BC Act)	This species appears to have a distribution centred on ephemeral or permanent drainage lines (Garnett and Crowley, 2000) with numerous records from the Fortescue Marsh region. Grey Falcons prefer sparsely-treed, open plains and drainage lines for hunting (Slater *et al*., 2009). They typically nest in the abandoned nest of a raptor or corvid (Slater *et al*. 2009) in trees or man-made structures, most notably repeater towers.	No Grey Falcons were recorded in the Application Area. There are records of this species within 5 km of the Application Area. There is no suitable nesting habitat within the Application Area, however given its highly mobile nature it is likely that this species would forage over the habitats of the Application Area.	Likely	**Low** Potential impacts to this species are considered to be low as: • There is no suitable breeding habitat within the Application Area; and • There are large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Little Curlew (*Numenius minutus*)	Migratory (EPBC Act) Migratory (BC Act)	The Little Curlew is a medium sized shorebird and is typically found on short, dry grasslands. Flocks are highly mobile moving unpredictably according to grassland conditions, often congregating in wetlands to drink when conditions are hot. This species breeds in north-east Siberia and migrates to the sub-coastal plains of northern Australia during summer (Geering *et al*. 2007).	No Little Curlews were recorded in the Application Area. There is a single record of this species 9 km north of the Application Area meaning this species may be a sporadic foraging visitor from September to April.	Possible	**Negligible** Potential impacts to this species are considered to be negligible as there is large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Oriental Plover (*Charadrius veredus*)	Migratory (EPBC Act) Migratory (BC Act)	The Oriental Plover occurs in the Kimberley and in the north-eastern interior at Lake Gregory and on the north-west coastal plains (Johnstone and Storr, 1998). It is found on sparsely vegetated plains including Samphire, Spinifex plains (particularly after fire), as well as beaches and tidal flats (Johnstone and Storr, 1998). This species often feeds on insects (Johnstone and Storr, 1998).	No Oriental Plovers were recorded in the Application Area. There is a single record of this species 9 km north of the Application Area meaning this species is likely to be a regular visitor to sparsely vegetated parts of the Sand Plain and Gilgai Plain habitats, and the margins of minor drainage line habitat from September to April.	Likely	**Low** The proposed activities are unlikely to have an impact on this species given its high mobility and large areas of its preferred habitat is present in the surrounding region in the same or better condition to that of the Application Area.

Significant Species	Conservation Status	Distribution and Ecology	Habitat Relevance	Likelihood	Potential Impact on Species
Oriental Pratincole (*Glareola maldivarum*)	Migratory (EPBC Act) Migratory (BC Act)	The Oriental Pratincole occurs in the Kimberley and along the northern coast of Western Australia, and is a summer migrant. It occurs around tidal flats and floodwaters where it feeds aerially on flying insects and roosts on bare ground (Johnstone and Storr 1998).	No Oriental Pratincoles were recorded in the Application Area. The closest record is 13 km southwest of the Application Area. This species is likely to forage across the habitats of the Application Area as a wet season migrant, primarily from December to March.	Likely	**Low** The proposed activities are unlikely to have an impact on this species given its high mobility and large areas of its preferred habitat is present in the surrounding region in the same or better condition to that of the Application Area.
Peregrine Falcon (*Falco peregrinus*)	Other Specially Protected Fauna (BC Act)	The Peregrine Falcon is uncommon but wide ranging across Australia. They occur mainly along coastal cliffs, rivers and ranges as well as wooded watercourses and lakes. The Peregrine Falcon nests primarily on cliffs, granite outcrops and quarries, and feed mostly on birds (Johnstone and Storr 1998).	No Peregrine Falcons were recorded in the Application Area. There are records of this species within 3 km of the Application Area. Given its highly mobile nature it is likely that this species would forage over the habitats of the Application Area.	Likely	**Low** Potential impacts to this species are considered to be low as: • There is no suitable breeding habitat within the Application Area; and • There are large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Yellow Wagtail (*Motacilla flava*)	Migratory (EPBC Act) Migratory (BC Act)	The Yellow Wagtail is a regular non-breeding summer migrant to northern Australia, primarily from late September to late April (Menkhorst *et al*. 2017). It favours open country, particularly short grasslands and open margins of water bodies, including human-modified environments such as sports fields and sewage ponds (Menkhorst *et al*. 2017).	No Yellow Wagtails were recorded in the Application Area. Potentially suitable habitat exists in the Application Area in more open sections of the Minor Drainage Line habitat, and less vegetated areas of the Gilgai Plain habitat meaning it may occur as a non-breeding migrant, primarily from October to April.	Possible	**Low** The proposed activities are unlikely to have an impact on this species given its high mobility and large areas of its preferred habitat is present in the surrounding region in the same or better condition to that of the Application Area.
Mammals					
Brush-tailed Mulgara (*Dasycercus blythi*)	Priority 4 (DBCA)	Brush-tailed Mulgaras occur 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). Note: Woolley, et. al. (2013) noted that the Crest-tailed Mulgara (*Dasycercus cristicauda*) is unlikely to occur within the Pilbara.	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. Should any active Brush-tailed Mulgara burrows be identified they will be avoided using a 10 m buffer, where practicable.	Possible	**Low** 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; and • Should any active Brush-tailed Mulgara burrows be identified they will be avoided using a 10 m buffer, where practicable.

Significant Species	Conservation Status	Distribution and Ecology	Habitat Relevance	Likelihood	Potential Impact on Species
Ghost Bat (*Macroderma gigas*)	EPBC Act Vulnerable BC Act Vulnerable	Ghost Bats are patchily distributed across most of northern Australia, however the recent contraction in the distribution in central Australia has left the Pilbara population of ghost bats isolated by extensive sandy deserts (Worthington-Wilmer et al. 1994). They are generally associated with Gorge / Gully or drainage line habitats, requiring an undisturbed cave, deep fissure or disused mine shaft in which to roost. The Ghost Bat forages in areas of open woodland (Churchill, 2008).	No Ghost Bats were recorded in the Application Area. There are no suitable caves for this species in the Application Area, however there are caves in the broader region that are suitable as feeding roosts and possibly day roosts for the Ghost Bat (Biologic, 2013). It is possible that this species may forage over the Application Area while travelling to and from these caves.	Possible	**Low** Potential impacts to this species are considered to be low as: • There are no suitable caves for this species in the Application Area; and • There are large amounts of suitable foraging and nesting habitat for this species outside of the Application Area.
Greater Bilby (*Macrotis lagotis*)	EPBC Act Vulnerable BC Act Vulnerable;	Three major vegetation types associated with the Greater Bilby are listed by Southgate (1990) including: open tussock grassland on uplands and hills, Mulga woodland/shrubland on ridges and rises, and hummock grassland in plains and alluvial areas. Other habitats used by the species include stony downs, cracking clays, desert sandplains and dune fields, spinifex grassland and *Acacia* species shrublands on red earths (Johnson, 2008).	No Greater Bilbies were recorded in the Application Area. 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.	Likely	**Low** 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; and • Should any active Greater Bilby burrows be identified they will be avoided using a 10 m buffer, where practicable.
Northern Short-tailed Mouse (*Leggadina lakedownensis*)	Priority 4 (DBCA)	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).	No Northern Short-tailed Mice were recorded in the Application Area. 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.	Possible	**Low** Larger, more suitable, areas of Gilgai plain habitat occur outside of the Application Area, therefore the proposed clearing is unlikely to impact this species.
Northern Quoll (*Dasyurus hallucatus*)	EPBC Act Endangered BC Act Endangered	Northern Quoll populations occur in six geographical centres around Australia, including: Drummond Range, Central Queensland; the wet tropics of Northern Queensland; northern Cape York Peninsula; northern and western Top End, Northern Territory; north Kimberley and the Pilbara, Western Australia (Braithwaite and Griffiths, 1994). Northern Quoll denning habitat in the Pilbara is associated with rocky habitats or riverine habitats with mature Eucalypt trees with hollows (SEWPaC, 2011).	No Northern Quolls were recorded in the Application Area. This species has been records 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.	Possible	**Low** 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.

Significant Species	Conservation Status	Distribution and Ecology	Habitat Relevance	Likelihood	Potential Impact on Species
Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*)	EPBC Act Vulnerable BC Act Vulnerable;	As they are poor thermoregulators, the Pilbara Leaf-nosed Bat requires hot, humid, deep caves or disused mine shafts in which to roost (van Dyck and Strahan, 2008). These bats have been recorded in isolated populations in the Pilbara, and are present only where suitable roosting niches are available. They are generally sparsely distributed. The Pilbara Leaf-nosed Bat forages in areas of open woodland (Churchill, 2008).	No Pilbara Leaf-nosed Bats were recorded in the Application Area. There are no caves suitable for roosting sites in the Application Area or the adjacent area. While there is no suitable habitat for this species within the Application Area, it is likely that there is an unknown roost in the vicinity of Goldsworthy, outside of the Application Area (Biologic, 2013) and therefore this species may be a transitory visitor to the Application Area.	Possible	**Low** While this species may forage over the habitats within the Application Area and surrounds. The Pilbara Leaf-nosed Bat is not dependant on habitat within the Application Area as no suitable roosts for this species occur within the Application Area.
Western Pebble-mound mouse (*Pseudomys chapmani*)	DBCA Priority 4	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).	No Western Pebble-mound Mice were recorded in the Application Area. 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.	Possible	**Low** There is likely to be a low impact on this species given that: • Key habitat for this species is not located within the Applciation 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; and • Should any active Western Pebble-mound Mouse mounds be identified they will be avoided using a 10 m buffer, where practicable.

3.5 GROUNDWATER

The Application Area is located in the Pilbara Groundwater Area, proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) (DoW, 2009a).

There is one main aquifer within the Application Area:

- **Pilbara Fractured Rock:** The Pilbara fractured rock aquifer consists of Precambrian granite-greenstone terrain overlain by surficial sediments in the river valleys. The water table is generally within 5 to 10 metres of the surface in the granitic areas, but may be quite deep below the greenstone hills. The major aquifers within these rocks are quartz veins, and chert layers. Groundwater is mainly fresh, ranging up to brackish towards the coast. Bore yields vary depending on intersection of fractures. Marble Bar town water supply is drawn from bores in acid volcanic rocks. Nullagine's town water supply is drawn from both shallow alluvium (less than 12 m deep) and fractured sandstones. Water has also been produced by dewatering from the iron ore mines in the Goldsworthy-Shay Gap-Yarrie area. There are not considered to be any major regional groundwater resources in the Pilbara fractured rock. Development will be on a local basis principally for mining and town water supply. Pastoral bores intercept both the fractured rock and the overlying weathered zone (DoW, 2015).

3.6 SURFACE WATER

The Application Area is situated in the Pilbara Surface Water Area, proclaimed under the RIWI Act (DoW, 2009b).

Surface water drainage is to the south across the Application area before joining the eastern arm of Paroo Creek (**Figure 1**). 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.

4 ENVIRONMENTAL MANAGEMENT

The management of the environmental aspects of BHP's operations at the Application Area are managed under the company's AS/NZS ISO 14001:2004 certified Environmental Management System (EMS). The EMS describes the organisational structure, responsibilities, practices, processes and resources for implementing and maintaining environmental objectives at all BHP sites

Additionally, operational controls for environmental management for the Project area are guided by BHP's Charter values. The Charter Values outline a commitment to develop, implement and maintain management systems for sustainable development that drive continual improvement and set and achieve targets that promote efficient use of resources. In order to give effect to the Charter Values, a series of Global Standards documents have been developed.

BHP has also developed a Sustainable Development Policy for its operations. The Sustainable Development Policy outlines a commitment to setting objective and targets to achieve sustainable outcomes and to continually improve our performance.

BHP also has an internal Project Environmental and Aboriginal Heritage Review (PEAHR) Procedure. The purpose of the procedure is to manage implementation of environmental, Aboriginal heritage, land tenure and legal commitments prior to and during land disturbance. All ground disturbance activities will meet the requirements of the PEAHR procedure, all relevant legislative and regulatory requirements, the BHP Charter, industry standards, and codes of practice.

All personnel carrying out works associated with clearing activities are required to comply with BHP's Charter Values, BHP's Global Standards, and relevant legislative and licensing requirements.

5 PROJECT COMPLIANCE WITH THE TEN CLEARING PRINCIPLES

BHP considers that native vegetation clearing within the Application Area will not result in any significant environmental or social impacts, and complies with the Ten Clearing Principles, as defined in Schedule 5 of the EP Act. **Section 6** provides an assessment of project compliance with the Ten Clearing Principles.

6 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

The information used to assess the application against the Ten Clearing Principles has been based on the findings of multiple baseline surveys (**Section 3**).

6.1 PRINCIPLE A

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

This proposal is not likely to be at variance to this Principle.

Similar habitat to the Application Area is located outside the Application Area. These other areas of similar vegetation type are therefore expected to have a similar biological diversity and conservation value than that of the Application Area.

The proposed clearing is therefore unlikely to have any significant impact on the biodiversity of the region.

Table 6 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle A.

Table 6 Assessment against Principle A components

Principle	Criteria	Assessment	Outcome
a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	a1) Native vegetation should not be cleared if it is representative of an area of outstanding biodiversity in the Bioregion.	The native vegetation within the Application Area is represented in the same condition within the broader region and is not considered to be of outstanding biodiversity in the Bioregion.	Not at variance with clearing principle.
	a2) Native vegetation should not be cleared if it has higher diversity of indigenous aquatic or terrestrial plant or fauna species than native vegetation of that ecological community in good or better condition in the Bioregion.	The native vegetation within the Application Area is in the same condition as other areas of similar vegetation type within the broader region.	Not at variance with clearing principle.
	a3) Native vegetation should not be cleared if it has higher diversity of indigenous aquatic or terrestrial plant or fauna species than the remaining vegetation of that ecological community in the local area.	The native vegetation within the Application Area is not considered to have higher biodiversity and conservation value than that of the surrounding vegetation within the local area.	Not at variance with clearing principle.
	a4) Native vegetation should not be cleared if it has higher ecosystem diversity than other native vegetation of that local area.	The native vegetation within the Application Area is not considered to have a higher ecosystem diversity than other native vegetation of that local area.	Not at variance with clearing principle.
	a5) Native vegetation should not be cleared if it has higher genetic diversity than the remaining native vegetation of that ecological community.	The native vegetation within the Application Area is not considered to have a higher genetic diversity than the remaining native vegetation of that ecological community as the vegetation is contiguous with adjacent native vegetation and has no special features.	Not at variance with clearing principle.
	A6) Native vegetation should not be cleared if it is necessary for the continued in situ existence of significant habitat for priority flora species published by the Department of Environment and Conservation.	The three known species of Priority flora have been excluded from the Application Area using a 10 m buffer.	Not at variance with clearing principle.

6.2 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 indigenous to Western Australia

This proposal is not likely to be at variance to this Principle.

There are three broad fauna habitat types within the Application Area (**Figure 3**).

The vegetation and habitats found within the Application Area are considered to be well represented in the Pilbara bioregions.

No fauna species of significance have been recorded from the Application Area with 18 species considered to potentially occur within the Application Area (**Table 5**). As described in **Section 3.4.4** and **Table 5** clearing of the Application Area is expected to have a low impact on these species.

Table 7 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle B.

Table 7 Assessment against Principle B components

Principle	Criteria	Assessment	Outcome
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 indigenous to Western Australia.	b1) Native vegetation should not be cleared if it is or is likely to be habitat for fauna that is declared Specially Protected under the BC Act.	No BC Act listed species have been recorded from the Application Area. Fifteen BC Act protected species are considered 'possible' or 'likely' to occur within the Application Area (**Table 5**). The proposed activities are unlikely to have a significant impact on these species as: • All species are wide-ranging and found throughout the broader region; • Most species are only likely to forage within the Application Area; • Any resident potential residents have the ability to disburse away from the clearing activities with large areas of suitable habitat in the surrounds. • These species do not exclusively depend on any habitat type or feature within the Application Area; • Should any active Greater Bilby burrows be identified they will be avoided using a 10 m buffer, where practicable. • Similar habitat is well represented outside the Application Area.	Not at variance with clearing principle.
	b2) Native vegetation should not be cleared if it is or is likely to be habitat for Priority Listed Fauna.	No Priority fauna species have been recorded from the Application Area and three other priority species are considered 'possible' or 'likely' to occur. As detailed in **Table 5** these species are unlikely to be impacted for the following reasons: • The preferred habitat for these species is well represented outside the Application Area; • Similar habitat within close vicinity to the Application Area was found to be the same or better condition than that of the Application Area; • Should any active Brush-tailed Mulgara burrows be identified they will be avoided using a 10 m buffer, where practicable. • Should any active Western Pebble-mound Mouse mounds be identified they will be avoided using a 10 m buffer, where practicable.	Not at variance with clearing principle.
	b3) Native vegetation should not be cleared if it is or is likely to be habitat for fauna that is otherwise significant.	Habitat found within the Application Area may be suitable for use by conservation significant fauna, however similar habitat in the same or better condition is widespread in the Application Area surrounds	Not at variance with clearing principle.
	b4) Native vegetation should not be cleared if it provides significant habitat for fauna species in the local area.	Habitat within the Application Area is not considered significant habitat for fauna species within the local area. Similar habitat to that proposed to be cleared is located to the area surrounding of the Application Area.	Not at variance with clearing principle.
	b5) Native vegetation should not be cleared if it maintains ecological functions and processes that protect significant habitat for fauna.	The clearing of native vegetation is not considered to alter ecological functions and processes that protect significant habitat for fauna.	Not at variance with clearing principle.

Principle	Criteria	Assessment	Outcome
	b6) Native vegetation should not be cleared if it forms, or is part of, an ecological linkage that is necessary for the maintenance of fauna.	No ecological linkages run through the Application Area that are necessary for the maintenance of fauna.	Not at variance with clearing principle.
	b7) Native vegetation should not be cleared if it provides significant habitat for fauna communities (assemblages) and meta-populations.	The Application Area is not considered to contain significant habitat for faunal assemblages that are not also present in other areas within the vicinity. The Application Area is not considered likely to contain geographically isolated fauna populations.	Not at variance with clearing principle.

6.3 PRINCIPLE C

Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora

This proposal is not likely to be at variance to this Principle.

No species listed under the EPBC Act or gazetted as Threatened under the BC Act were recorded in the Application Area. Three species listed as Priority Flora by the DBCA have been clipped from the Application Area with a 10 m buffer (**Section 3.4.2**).

Table 8 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle C.

Table 8 Assessment against Principle C components

Principle	Criteria	Assessment	Outcome
c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	c1) Native vegetation should not be cleared if it is necessary for the continued *in situ* existence of populations of Declared Rare Flora under the *BC Act 2016*	No Threatened flora species were recorded in the Application Area (Biota, 2025a).	Not at variance with clearing principle.
	c2) Native vegetation should not be cleared if it is necessary for the continued *in situ* existence of other significant flora.	No species listed under the EPBC Act or other significant flora species were recorded in the Application Area (Biota, 2025a).	Not at variance with clearing principle.

6.4 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

This proposal is not likely to be at variance to this Principle.

None of the vegetation associations or landforms identified within the proposed Application Area are associated with a TEC or PEC. The closest PEC is more than 24 km north of the Application Area (**Section 3.4.1**).

Table 9 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle D.

Table 9 Assessment against Principle D components

Principle	Criteria	Assessment	Outcome
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.	d1) Native vegetation should not be cleared if threatened ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* are present.	No EPBC Act TECs are present in the Application Area.	Not at variance with clearing principle.
	d2) Native vegetation should not be cleared if it is necessary for the maintenance of Threatened Ecological Communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.	No EPBC Act TECs or associated native vegetation will be impacted by the proposed works.	Not at variance with clearing principle.
	d3) Native vegetation should not be cleared if other significant ecological communities are present.	No other significant ecological communities are known to occur or are likely to occur within the Application Area.	Not at variance with clearing principle.
	d4) Native vegetation should not be cleared if it is necessary for the maintenance of other significant ecological communities.	No DBCA listed TECs or associated native vegetation will be impacted by the proposed works.	Not at variance with clearing principle.
	d5) Native vegetation should not be cleared if it is necessary for the continued *in situ* existence of significant examples of priority threatened ecological communities published by the Department of Environment and Conservation.	No DBCA listed PECs or associated native vegetation will be impacted by the proposed works.	Not at variance with clearing principle.

6.5 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

This proposal is not likely to be at variance to this Principle.

The habitats and vegetation within the Application Area are well represented in the Land Systems of the region (**Section 3.4.1**), and therefore it is unlikely individual species would be restricted to a particular habitat and / or vegetation occurring in the Application Area.

Table 10 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle E.

Table 10 Assessment against Principle E components

Principle	Criteria	Assessment	Outcome
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.	e1) Native vegetation should not be cleared if the remaining native vegetation represents less than 30%, or the clearing would reduce the representation of remaining native vegetation to less than 30% in the Bioregion (or subregion where applicable).	Clearing native vegetation within the Application Area will not reduce the extent of native vegetation below 30% in the bioregion or subregion.	Not at variance with clearing principle.
	e2) Native vegetation should not be cleared if an ecological community represents less than 30% of its original extent or clearing would reduce the representation of any ecological community to less than 30% of its original extent in the Bioregion (or subregion where applicable).	Clearing native vegetation within the Application Area will not significantly reduce the known extent of the ecological community from pre-European extents. Current remaining extents of the vegetation communities in the bioregion is more than 98% of pre-European extents.	Not at variance with clearing principle.
	e3) Native vegetation should not be cleared if clearing would reduce an ecological community to less than 1% of the Bioregion (or subregion where applicable)	Clearing native vegetation within the Application Area will not significantly reduce the known extent of the vegetation community in the bioregion.	Not at variance with clearing principle.
	e4) Native vegetation should not be cleared if the remaining native vegetation represents less than 30% or the clearing would reduce the representation of remaining native vegetation to less than 30% in the Local Area.	Clearing native vegetation within the Application Area will not reduce the representation of remaining native vegetation to less than 30% in the local area.	Not at variance with clearing principle.
	e5) Native vegetation should not be cleared if an ecological community represents less than 30% of its original extent or clearing will reduce the representation of any ecological community to less than 30% of its original extent in the Local Area.	Clearing native vegetation within the Application Area will not reduce the representation of any ecological community to less than 30% of its original extent in the local area.	Not at variance with clearing principle.
	e6) Native vegetation should not be cleared if clearing would reduce any ecological community to less than 1% of the Local Area.	Clearing native vegetation within the Application Area will not significantly reduce the known extent of the vegetation community in the local area.	Not at variance with clearing principle.

6.6 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

This proposal is unlikely to be at variance to this Principle.

Surface water drainage is to the south across the Application area before joining the eastern arm of Paroo Creek (**Figure 1**). 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.

Table 11 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle F.

Table 11 Assessment against Principle F components

Principle	Criteria	Assessment	Outcome
f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	f1) Native vegetation should not be cleared if it is growing in a watercourse or wetland that has been identified as having significant environmental values.	No watercourses of significant environmental value occur within the Application Area	Unlikely to be at variance with clearing principle.
	f2) Native vegetation should not be cleared if it provides a buffer area for watercourses and wetlands identified in criteria (f1) and (f2).	No native vegetation occurs within the Application Area that provides a buffer to watercourses or wetlands that have been identified as having significant environmental values.	Unlikely to be at variance with clearing principle.
	f3) Native vegetation should not be cleared if water tables are likely to change and adversely affect ecological communities that are wetland or groundwater dependent.	Due to the purpose of the clearing this project is not considered likely to adversely alter water tables, and as such will not impact on any ecological communities that are wetland or groundwater dependent.	Not at variance with clearing principle.
	f4) Native vegetation should not be cleared if it is growing in other watercourses or wetlands.	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.	Unlikely to be at variance with clearing principle.

6.7 PRINCIPLE G

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

This proposal is not likely to be at variance to this Principle.

Land degradation may include impacts such as erosion, changes to pH, water logging, salinisation or spread of weeds. These potential impacts are assessed in the sections below. **Table 12** provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle G.

Given the proposed investigation activities and associated management strategies within the Application Area and the low susceptibility of the soils to erosion, it is considered that the project will not be at variance to Principle G.

6.7.1 Erosion

It is not anticipated that the removal of vegetation will contribute to increased amounts of wind or water erosion in the Application Area or adjacent areas.

6.7.2 Changes to pH

The proposed contaminated sites investigation is to identify the extend of impacts of AMD from an existing waste rock stockpile at Mount Goldsworth. The clearing associated with the contaminated sites investigation will not result in an increase in the risk of run off from the waste rock stockpile, nor result in changes to soil pH.

6.7.3 Water logging and salinisation

It is not expected that there will be a significant reduction in groundwater uptake due to the proposed clearing. No water logging or increased salinisation is expected to occur as a result of the proposed clearing.

6.7.4 Weeds

Four introduced flora species has been recorded in the Application Area (**Table 4**). One species **Calotropis procera* (Sodam Apple) is listed as a Declared Pest under the BAM Act.

Control of established weed populations will be carried out according to the *BHP Weed Control and Management Procedure*.

Table 12 Assessment against Principle G components

Principle	Criteria	Assessment	Outcome
g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	g1) Native vegetation should not be cleared if wind or water erosion of soil is likely to be increased (on or off site).	Soil erosion is not anticipated to occur as any areas cleared will be revegetated where practicable, if not required for ongoing use.	Not considered to be at variance with clearing principle.
	g2) Native vegetation on land with soils with high or low pH should not be cleared.	The Application Area is not considered to contain soils at risk of having acid sulphate soils present. There is a minor risk that some isolated areas within the Application Area may have a significantly low pH as a result of runoff from the Goldsworthy Waste Rock dump. 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.	Unlikely to be at variance with clearing principle.
	g3) Native vegetation should not be cleared if water logging is likely to be increased (on or off site).	It is not expected that water logging would be increased by the clearing of native vegetation within the Application Area.	Not at variance with clearing principle.
	g4) Native vegetation should not be cleared if land salinisation is likely to be increased (on or off site).	Soil salinity is not considered to be increased in the Application Area (on or off site) by the clearing of native vegetation.	Not at variance with clearing principle.

6.8 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

This proposal is not likely to be at variance to this Principle.

The Application Area is not within any conservation areas as listed by the DBCA or those protected under the EPBC Act. The closest conservation area is Millstream Chichester National Park which is more than 200 km southwest of the Application Area.

The Application Area is not considered to form an ecological linkage to these conservation areas.

An assessment of the proposed clearing activities within the Application Area against the components of clearing Principle H is provided in **Table 13** below.

Table 13 Assessment against Principle H components

Principle	Criteria	Assessment	Outcome
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.	h1) Native vegetation should not be cleared if it contributes significantly to the environmental values of a conservation area.	The vegetation of the Application Area does not contribute to the environmental values of a conservation area.	Not at variance with clearing principle.
	h2) Native vegetation should not be cleared if that vegetation provides a buffer to a conservation area.	There are no conservation areas within the vicinity of the Application Area.	Not at variance with clearing principle.
	h3) Native vegetation should not be cleared if the land contributes to an ecological linkage to a conservation area.	The nearest conservation area is more than 140 km west of the Application Area.	Not at variance with clearing principle.
	h4) Native vegetation should not be cleared if it provides habitats not well represented on conservation land.	There are no habitats within the Application Area that are not well represented on conservation land.	Not at variance with clearing principle.

6.9 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

This proposal is not likely to be at variance to this Principle.

Surface water drainage is to the south across the Application area before joining the eastern arm of Paroo Creek (**Figure 1**). 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.

Table 14 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle I.

Table 14 Assessment against Principle I components

Principle	Criteria	Assessment	Outcome
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.	i1) Native vegetation should not be cleared if clearing the vegetation will reduce the quality of surface or underground water in proclaimed, gazetted or declared areas or catchments.	The clearing of native vegetation is not considered likely to alter the quality of surface or ground water within the Application Area due to the limited nature of the clearing within the Application Area.	Not at variance with clearing principle.
	i2) Native vegetation should not be cleared if sedimentation, erosion, turbidity or eutrophication of water bodies on or off site is likely to be caused or increased.	Localised erosion will not impact any waterbodies as clearing will be restricted to a bare minimum near surface water features and cleared areas that are no longer required will be revegetated.	Not at variance with clearing principle.
	i3) Native vegetation should not be cleared if water tables are likely to change significantly altering salinity or pH.	The clearing of native vegetation is not considered likely to alter the quality of surface or ground water within the Application Area.	Not at variance with clearing principle.
	i4) Native vegetation should not be cleared if the clearing is likely to alter the water regimes of groundwater-dependent ecosystems on or off site, causing degradation to the biological communities associated with these systems.	The clearing of native vegetation is not considered likely to alter the regimes of surface or groundwater dependent vegetation within the vicinity of the Application Area.	Not at variance with clearing principle.

6.10 PRINCIPLE J

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

This proposal is not likely to be at variance to this Principle.

Massive surface water runoff and localised flooding occurs following intense rainfall events during December to April. However, the incidence or intensity of flooding is not likely to be significantly influenced by the proposed vegetation clearing. It is highly improbable that surface runoff generated from the cleared area could create sufficient concentrated water volumes to cause even a localised flood event. 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.

Table 15 provides an assessment of the proposed clearing activities within the Application Area against the components of clearing Principle J.

Table 15 Assessment against Principle J components

Principle	Criteria	Assessment	Outcome
j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	j1) Native vegetation should not be cleared if it is likely to lead to an incremental increase in peak flood height.	The clearing of native vegetation is not considered likely to cause any alteration to peak flood height.	Not at variance with clearing principle.
	j2) Native vegetation should not be cleared if it is likely to lead to an incremental increase in duration of flood peak.	The clearing of native vegetation is not considered likely to cause any impact on duration of flood peak.	Not at variance with clearing principle.

7 HERITAGE

BHP complies with the *Aboriginal Heritage Act*, *1972*, and all other state and federal heritage legislation. All land disturbance activities are subject to ethnographic and archaeological surveys as part of an internal PEAHR. The PEAHR process ensures that all heritage sites in the vicinity of the Project Area are identified and avoided where practicable.

The Application Area falls within the Ngarla and Ngarla 2 (Area A) Native Title Claim (WC1999/026) and the Nyamal People Native Title Claim (WC1999/008).

8 CONCLUSION

The proposed clearing in the Application Area is unlikely to be at variance to any of the Ten Clearing Principles. The proposed clearing of up to 15 ha within a 363.61 ha Application Area is unlikely to have any significant negative impacts on biodiversity and environmental values in the area.

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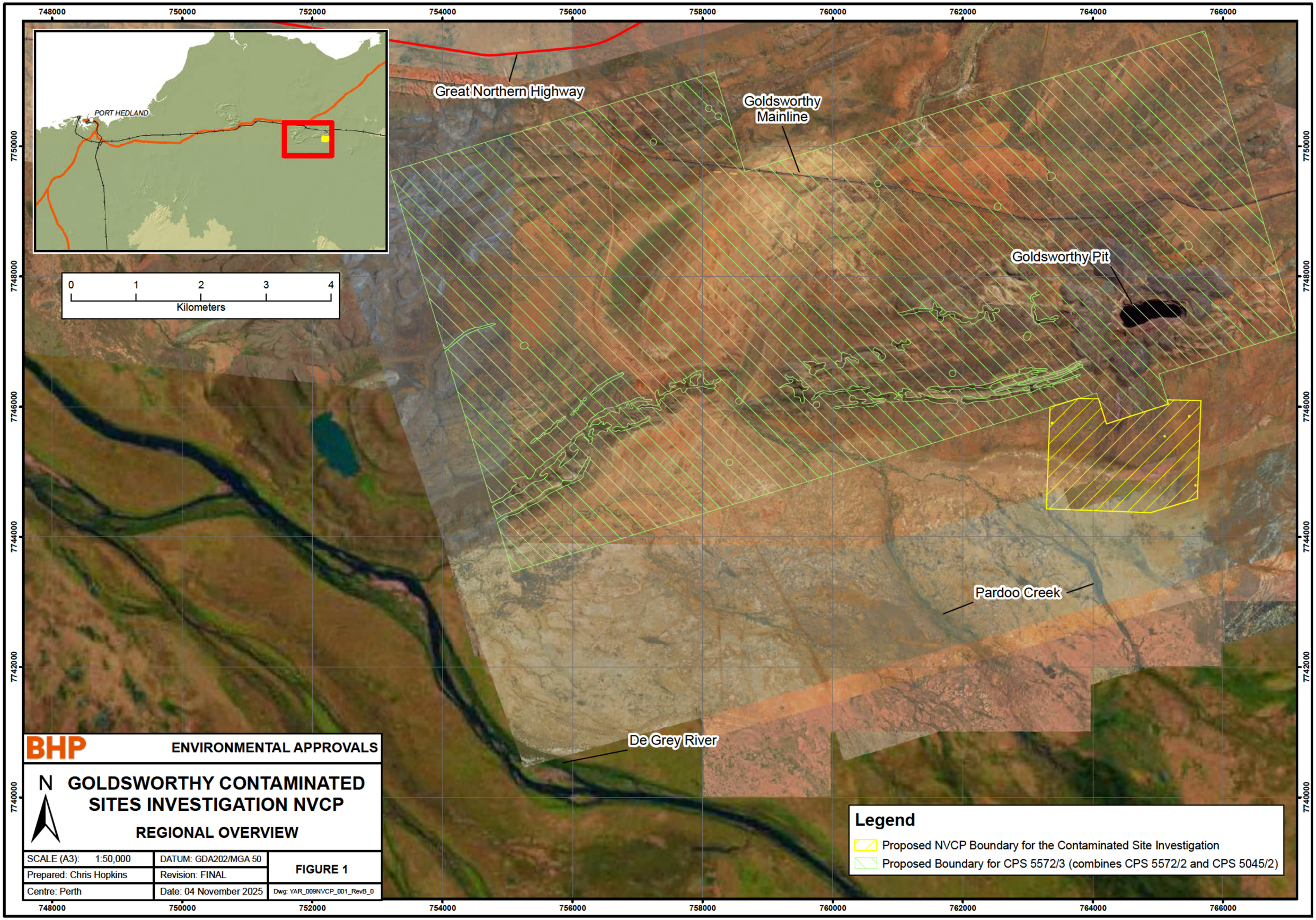
Figures



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BHP ENVIRONMENTAL APPROVALS

GOLDSWORTHY CONTAMINATED SITES INVESTIGATION NVCP

VEGETATION ASSOCIATIONS AND SIGNIFICANT FLORA

SCALE (A3): 1:10,000	DATUM: GDA2020/MGA 50	FIGURE 2
Prepared: Chris Hopkins	Revision: FINAL	
Centre: Perth	Date: 03 November 2025	Dwg: YAR_009NVCP_002_RevA_0

N

0 200 400 600 800
Meters

762000 763000 764000 765000

7746000 7745000 7744000

Goldsworthy Acidic OSA

Pardoo Creek (East)

Legend

Proposed NVCP Boundary for the Contaminated Site Investigation

Significant Flora

- Euphorbia clementii (P3)
- Euphorbia inappendiculata var. queenslandica (P3)
- Uvedalia clementii (P3)

Vegetation Associations

- Eragrostis closed tussock grassland (GP ErxErbErgg DishErte)
- Eucalyptus low open woodland (ME Ev AsyAcoAthe EuaErbChf Cyv)
- Triodia open hummock grassland (SS TeTsc AacAancAi ChCflCoz)
- Cleared

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BHP

ENVIRONMENTAL APPROVALS

GOLDSWORTHY CONTAMINATED SITES INVESTIGATION NVCP

VERTEBRATE HABITAT AND SIGNIFICANT FAUNA

SCALE (A3): 1:10,000	DATUM: GDA2020/MGA 50	FIGURE 3
Prepared: Chris Hopkins	Revision: FINAL	
Centre: Perth	Date: 03 November 2025	Dwg: YAR_009NVCP_003_RevA_0

N

0 200 400 600 800
Meters

762000 763000 764000 765000

7746000

7745000

7744000

Goldsworthy Acidic OSA

Pardoo Creek (East)

Legend

- Proposed NVCP Boundary for the Contaminated Site Investigation

Fauna Habitat

- Sand Plain
- Gilgai Plain
- Minor Drainage Line
- Cleared (C)

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Appendices

Appendix 1: *Goldsworthy South Detailed Flora and Vegetation Survey* (Biota, 2025a)

Appendix 2: ***Mt Goldsworthy South Targeted Significant Vertebrate Fauna Survey*** **(Biota, 2025b)**

Attachments

Attachment 1: Consent to access Pastoral Lease De Grey Pastoral Lease N050027