Native Vegetation Clearing Permit Application Supporting Document

March 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 located approximately 90 km north west of Newman Township;
- Orebodies 18 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 Yarrie Mining Operations are located 180 km east of Port Hedland in the Pilbara region of Western Australia. These operations are currently in care and maintenance with most activities at the site related to ongoing rehabilitation activities.

The existing potable water bores which supplied Yarrie Camp are no longer serviceable and therefore BHP is seeking to construct a new potable water bore. The new bore will be located in close proximity to the old bores and will tie into the existing water supply pipeline, adjacent to the old potable bore locations.

BHP is therefore seeking a new Native Vegetation Clearing Permit (NVCP) to allow for the clearing of up to 3 hectares (ha) of native vegetation for the purposes of construction and maintenance of potable bores and associated infrastructure (**Figure 1**).

In accordance with Part V Division 2 of the *Environmental Protection Act 1986* (EP Act), BHP hereby refers the application for a new NVCP to the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS).

BHP considers that the proposed amendment 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 Amendment Application Area is located approximately 165 km east of Port Hedland in the Pilbara region of Western Australia (**Figure 1**).

1.2 TENURE

The Application Area is located on the Shay Gap Borefield Lease LGE I123410.

1.3 LOCAL GOVERNMENT JURISDICTION

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

1.4 **PROPONENT**

The Project is managed and operated by BHP on behalf of the owners, the Mount Goldsworthy Joint Venture (MGJV). The split between the partners of the MGJV is as follows:

•	BHP Minerals Pty Ltd	85%
•	Itochu Minerals and Energy Australia Pty Ltd	8%
•	Mitsui Iron Ore Corporation Pty Ltd	7%



The key contact for this proposal is: Mr Chris Hopkins Principal Environmental Approvals BHP Iron Ore Pty Ltd Level 37, 125 St George's Terrace PERTH WA 6000 Phone: 0417 093 070 Email: <u>chris.s.hopkins@bhp.com</u>

1.5 **PROJECT DESCRIPTION**

Dermit Characteristic

The proposed works will involve the clearing of up to 3 ha of native vegetation for the purposes of construction and maintenance of potable bores and associated infrastructure.

1.6 **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

Authorising Agency DEMIRS					
Permit Title	Yarrie Potable Water Bores				
Area to be cleared	3 ha				
Amendment Application Area	10.04 ha				
Purpose of the permit Clearing for the purposes of construction and maintenance of po bores and associated infrastructure.					
Tenure	Tenure Shay Gap Borefield Lease LGE I123410.				
Clearing Duration	Clearing Duration Until 30 November 2029				
Permit Duration Until 30 November 2034					
Proposed Annual Reporting Date 01 October for the previous Financial Year					
Proposed Final Reporting Date	30 November 2034				
Application boundary	Map Reference: • YAR_006NVCP_001_RevA_0 • YAR_006NVCP_002_RevB_0 • YAR_006NVCP_003_RevA_0 BHP Shapefile D2 Reference: https://waio- dctm.bhp.com/D2/?docbase=bhpbio_od_prod&locateId=0b03c41a8481 4a9a&application=ManagedDocuments				
Application Commitments	Application Commitments Section				
The known record of Gardenia pyriformis subsp. keartlandii will be avoided using a 10m buffer, where practicable3.4.2 6(a)					
Control of established weed populations will be carried out according to BHP's standard Weed 3.4.3 Control and Management Procedures.					
A preclearance fauna inspection will be conducted over the area, prior to any disturbance to identify any active burrows. 3.4.4 6(b)					
Should any active Bilby burrows be identified, they will be avoided using a 50m buffer. Inactive3.4.4burrows will be avoided using a 10m buffer, where practicable6(b)					
Should any Brush-tailed Mulgara burrows (either active or inactive) be identified, they will be avoided using 10 m buffer, where practicable.3.4.4 6(b)					

2 ASSOCIATED APPROVALS

Any other additional approvals (e.g. 26D and 5C under the *Rights in Water and Irrigation Act 1914* [RIWI Act]) 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 314.1 millimetres (mm) with a dry season (mean monthly rainfall <5 mm) between August and November and a wet season (mean monthly rainfall between 54.2 mm and 88.3 mm) between January and March (BoM, 2024a). 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, 2024a). The highest ever recorded daily rainfall for Port Hedland was recorded on 27 January 1967 with 387.1 mm (BoM, 2024a) which is 68.6 mm over the current mean annual rainfall for Port Hedland. The mean maximum temperatures in summer months (October to April) is 35.1°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, 2024a).

Wittenoom meteorological site (005026) is the closest station to the Application Area that records daily evaporation. Wittenoom is located approximately 290 km northeast of the Application Area. Mean daily evaporation at Wittenoom throughout the year is 8.6 mm/day (BoM, 2024b), which equates to 3.1 metres per year. Evaporation greatly exceeds rainfall in the region throughout the year and on a month-by-month basis (BoM, 2024b).

3.2 BIOREGION, LANDFORMS AND LAND SYSTEMS

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

• Great Sandy Desert McLarty subregion (GSD1) of the Pilbara region described as: "This is mainly tree steppe grading to shrub steppe in south; comprising open hummock grassland of *Triodia pungens* and *Triodia schinzii* with scattered trees of *Owenia reticulata* and Bloodwoods, and shrubs of *Acacia* spp, *Grevillea wickhamii* and *G. refracta*, on Quaternary red longitudinal sand dune fields overlying Jurassic and Cretaceous sandstones of the Canning and Armadeus Basins. *Casuarina decaisneana* (Desert Oak) occurs in the far east of the region. Gently undulating lateritised uplands support shrub steppe such as *Acacia pachycarpa* shrublands over *Triodia pungens* hummock grass. Calcrete and evaporite surfaces are associated with occluded palaeo-drainage systems that traverse the desert; these include extensive salt lake chains with samphire low shrublands, and *Melaleuca glomerata - M. lasiandra shrublands*. It includes the Mandora Paleoriver System. Red-brown dunefields with finer texture than further south. Includes gravely surfaces of Anketell Ridge along its northern margin.

The subregion is arid tropical with summer rain and is influenced by monsoonal activity. Morning fogs are recorded during the dry season. Subregional area is 13, 173, 266 ha." (Graham, 2001)

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

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

This 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 two soil types occur within the Amendment Application Area (CSIRO, 2021):

AB21: "Pindan country--gently undulating sand plain with a few small rocky sandstone residuals; no external drainage: chief soils are red earthy sands (Uc5.21), with associated (Uc5.11) and hummocks of siliceous sands (Uc1.23)."

3.4 FLORA, VEGETATION AND FAUNA

The most recent survey over the Application Area is *Yarrie Bore Line Road Biological Survey* (Biota, 2025) (Appendix 1).



3.4 FLORA, VEGETATION AND FAUNA

3.4.1 Vegetation Communities

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

117 Hummock grasslands, grass steppe; soft Spinifex

There is more than 98% of the pre-European vegetation remaining of these vegetation association (**Table 2**). The Amendment Application Area is not part of any significant remnant vegetation in the wider regional area.

Table 2Extent of pre-European and current vegetation in the Pilbara bioregion and
vegetation associations represented in 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
Great Sandy Desert IBRA Bioregion	29,538,805	29,535,816	99.99	2.67
Vegetation association 117 within Western Australia	897,108	883,704	98.51	13.33
Vegetation association 117 within the Great Sandy Desert	467,579	467,122	99.9	0.19

There is one vegetation association within the Application Area (**Figure 2**): Triodia open hummock grassland *SA Tsc AerAancAma OwrCozErare* described as: "Open hummock grassland of *Triodia schinzii* with high open shrubland of *Acacia eriopoda*, *A. ancistrocarpa*, *A. monticola* and scattered low trees of *Owenia reticulata*, *Corymbia zygophylla*, *Erythrophleum arenarium* on orange Pindan sand plains." (Biota, 2025). Vegetation condition within the Application Area ranges from Very Good to Completely Degraded. The surrounding area provides better quality habitat that the Application Area.

No Threatened Ecological Community (TEC) listed under the *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) or *Biodiversity Conservation Act, 2016* (BC Act), no Environmentally Sensitive Areas under the EP Act, and no Priority Ecological Communities (PEC) listed by the Department of Biodiversity Conservation and Attractions (DBCA) are known to occur within or in the vicinity of the Application Area.

3.4.2 Significant Flora

No Threatened flora species pursuant to the EPBC Act or taxa gazetted as Threatened pursuant to the *BC* Act or listed as Priority flora by the DBCA have been identified within the Application Area (Biota, 2025).

One flora species recorded *Gardenia pyriformis* subsp. *keartlandii* represents a range extension (**Figure 2**). The known record of *Gardenia pyriformis* subsp. *keartlandii* will be avoided using a 10m buffer, where practicable.

3.4.3 Weeds

Control of any established weed populations will be carried out according to BHP's standard *Weed Control and Management Procedures.*

3.4.4 Fauna Habitats and Significant Fauna

One fauna habitat, Sand Plain, occurs within the Application Area (Biota, 2025).

Two fauna of significance were recorded within the Application Area (Figure 3):

- Dasycercus blythi (Brush-tailed Mulgara) (DBCA Priority 4); and
- *Macrotis lagotis* (Greater Bilby) EPBC Act and BC Act Vulnerable).



One inactive Greater Bilby burrow was identified, and one active Brush-tailed Mulgara burrow was identified within the Project Area.

Any fauna species that are likely to be found in the Application Area are highly mobile and not reliant upon the vegetation of the Application Area.

A preclearance fauna inspection will be conducted over the area, prior to any disturbance to identify any active burrows.

Should any active Bilby burrows be identified, they will be avoided using a 50m buffer. Inactive burrows will be avoided using a 10m buffer, where practicable; and

Should any Brush-tailed Mulgara burrows (either active or inactive) be identified, they will be avoided using 10 m buffer, where practicable.

3.5 GROUNDWATER

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

There is one main aquifer within the Amendment Application Area:

Canning – Wallal unconfined, Wallal confined which is described as: "The Wallal Sandstone and the Alexander Formation together form a large aquifer which underlies most of the northwest part of the Canning Basin, extending from Cape Leveque to Pardoo." (DoW, 2015).

3.6 SURFACE WATER

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

There are no surface water features within the Application Area.

4 ENVIRONMENTAL MANAGEMENT

The management of the environmental aspects of BHP's operations at the Amendment 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 Our Requirements 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 Our Requirements, and relevant legislative and licensing requirements.

5 PROJECT COMPLIANCE WITH THE TEN CLEARING PRINCIPLES

BHP considers that native vegetation clearing within the Amendment 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 proposed activities are not likely to be at variance to any of the ten clearing principles.

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

Clearing of vegetation within the Application Area is not considered to be at variance with this principle as the small area proposed to be cleared is highly degraded, is not considered to represent a higher level of biodiversity compared to surrounding vegetated areas, does not support conservation significant vegetation or threatened flora species, and is not considered to represent an area of regionally significant vegetation.

The vegetation of the Application Area is of a similar type and is in a worse condition than the surrounding area.

One flora species recorded *Gardenia pyriformis* subsp. *keartlandii* (**Figure 2**) represents a range extension. The known record of *Gardenia pyriformis* subsp. *keartlandii* will be avoided using a 10m buffer, where practicable.

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.

No conservation significant species are expected to occur, in the Application Area. Clearing of vegetation within the Application Area is not likely to be at variance with this principle given:

- 1. The highly disturbed nature of the Application Area;
- 2. The small amount of clearing to be undertaken; and
- 3. The Application Area is surrounded by vegetation of the same type in better condition.

A preclearance fauna inspection will be conducted over the area, prior to any disturbance to identify any active burrows.

Should any active Bilby burrows be identified, they will be avoided using a 50m buffer. Inactive burrows will be avoided using a 10m buffer, where practicable; and

Should any Brush-tailed Mulgara burrows (either active or inactive) be identified, they will be avoided using 10 m buffer, where practicable.

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

Clearing of vegetation within the Application Area is not considered to be at variance with this principle as no Threatened Flora are known, or are likely, to occur within the Application Area.

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.

Clearing of vegetation is not considered to be at variance with this principle as no TECs occur or are considered likely to occur in the Application Area.

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.

Clearing of vegetation within the Application Area is not considered to be at variance with this principle as the Application Area is not considered representative of an area of remnant vegetation within a largely cleared landscape. Rather, the site represents a relatively small area of vegetation that has experienced some disturbance within a wider area supporting large areas of intact vegetation which is of the same type and condition as the Application Area.

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

No watercourses, wetlands or drainage lines occur within or adjacent to the Application Area. Therefore, the proposed clearing of vegetation within the Application Area is not considered to be at variance with this principle.



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

Clearing of vegetation within the Application Area is not considered to be at variance with this principle. Clearing will be minimal and within highly disturbed areas. Clearing activities will not result in an increased risk of salinity. It is not anticipated that the removal of vegetation will contribute to increased amounts of wind or water erosion in adjacent areas.

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.

Clearing is not considered to be at variance with this principle as there are no conservation areas located adjacent to or nearby the Application Area.

 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.
 The clearing of native vegetation is not considered likely to alter the quality of surface or ground

waters within the Application Area due to the small amount of proposed clearing. Therefore, clearing of vegetation within the Application Area is not considered to be at variance with this principle.

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

Clearing is not considered to be at variance with this principle. The proposed clearing will not cause or exacerbate the incidence or intensity of flooding.

7 CONCLUSION

The proposed clearing of up to 3 ha within the 10.04 ha Application Area is unlikely to have any significant negative impacts on biodiversity and environmental values in the area and is therefore unlikely to be at variance to any of the Ten Clearing Principles.



8 REFERENCES

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Figures



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Appendix 1: Yarrie Bore Line Road Biological Survey (Biota, 2025)