

PROTECTED

Karratha Network Extension Native Vegetation Clearing Referral Supporting Document

April 2024

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1. Introduction

1.1 Project Context

Horizon Power is a Western Australian (WA) Government Trading Enterprise (GTE) and the state's regional and remote energy utility. Horizon Power operates under the *Electricity Corporations Act 2005* and is governed by a Board of Directors accountable to the Minister for Energy. Horizon Power is an experienced asset manager undertaking active management of vast electricity networks across WA, utilising mature and robust operational, health and safety, and environmental systems.

Horizon Power has been engaged for the provision of supporting infrastructure for the high voltage customer connection and other associated infrastructure located on the north side of the Karratha Airport, approximately 9 km north-west of the townsite of Karratha, WA. Horizon Power is proposing to install approximately 2.5 km of underground assets and associated infrastructure expanding to the proposed location of the customer's high voltage connection site on Lot 267 on Deposited Plan 093179.

The proposed work will involve clearing of vegetation, civil works, installation of underground cables and associated infrastructure. The total clearing footprint for the proposed works will not exceed 0.26 ha.

1.2 Scope and Purpose

The purpose of this document is to demonstrate that the proposed clearing of native vegetation for the extension of the existing electricity network satisfies the four Criterion outlined in 'Guideline: Native Vegetation Clearing Referrals' (DWER, 2021) and, as such, should be considered a 'very low environmental impact activity' that does not require a clearing permit.

To demonstrate this, Horizon Power has provided:

- An overview of the activity and a description of the proposed clearing.
- Avoidance, mitigation and management measures applied to minimise the clearing of native vegetation and reduce the likelihood of environmental impacts associated with the activity.
- An assessment of the clearing against the four Criterion specified in DWER (2021).

A Standard Construction Environmental Management Plan is also provided (Appendix A). This is a standard requirement of the Horizon Power Environmental Management System for projects clearing native vegetation where specific project approvals do not apply.

2. Description of the Activity

As discussed in Section 1, the work will involve the clearing of vegetation, civil works, installation of underground cables and associated infrastructure. The proposed clearing will extend from an existing Horizon Power asset in Lot 99 on Deposited Plan 213519, Reserve 30948. The total proposed clearing area will not exceed 0.26 ha.

Horizon Power intends to undertake these works through the exercise of powers conferred by sections 46 and 49 of the *Energy Operators (Powers) Act 1979* (the Act) and as such do not require landowner permission. As required under the Act, Horizon Power will notify all landowners of the proposed work through a formal Notice of Entry.

3. Description of Proposed Clearing

3.1 Extent of Proposed Clearing

The proposed clearing will occur within the Proposed Clearing Area (Figure 1; Table 1) which has a total clearing area of 0.26 ha in size.

3.2 Proposed Clearing Locations

Table 1 Karratha Network Extension land parcels

Lot on Plan	Volume	Folio	Area of clearing (ha)
Lot 99 on Deposited Plan 213519, Reserve 30948	LR3137	462	0.000445
Lot 4641 on Deposited Plan 220718	LR3117	687	0.217053
Lot 267 on Deposited Plan 093179	LR3013	889	0.042502

The proposed clearing locations will occur within the portion of Project Area observed in Figure 1 to Figure 5.

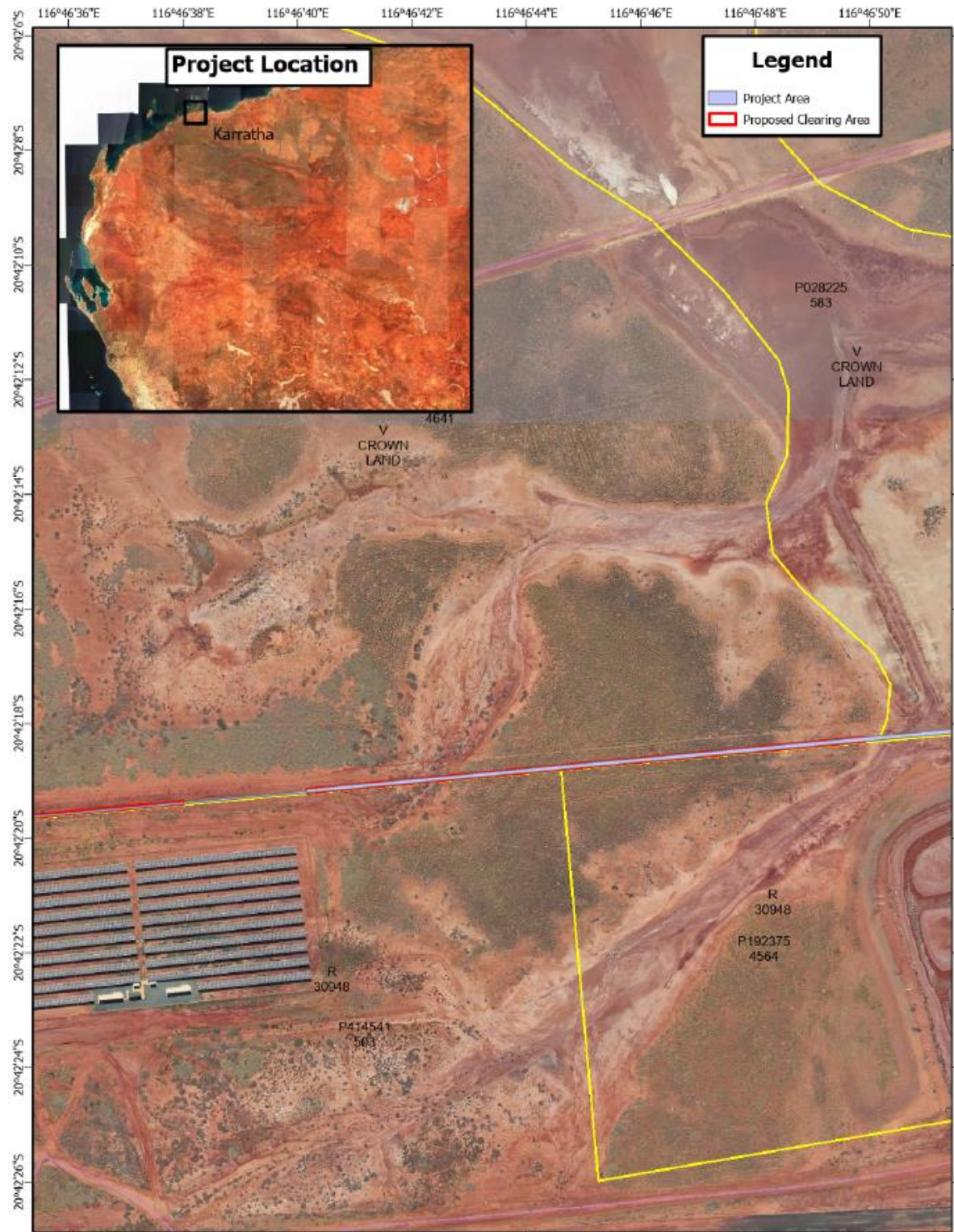
Figure 1. Proposed Clearing Area & Project Area.



Figure 2. Proposed Clearing Area & Project Area.



Figure 3. Proposed Clearing Area & Project Area.



Map

Figure 3 - Proposed Clearing Area & Project Area

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0 25 50 100
Meters
Scale: 1:2,500

Figure 4. Proposed Clearing Area & Project Area.



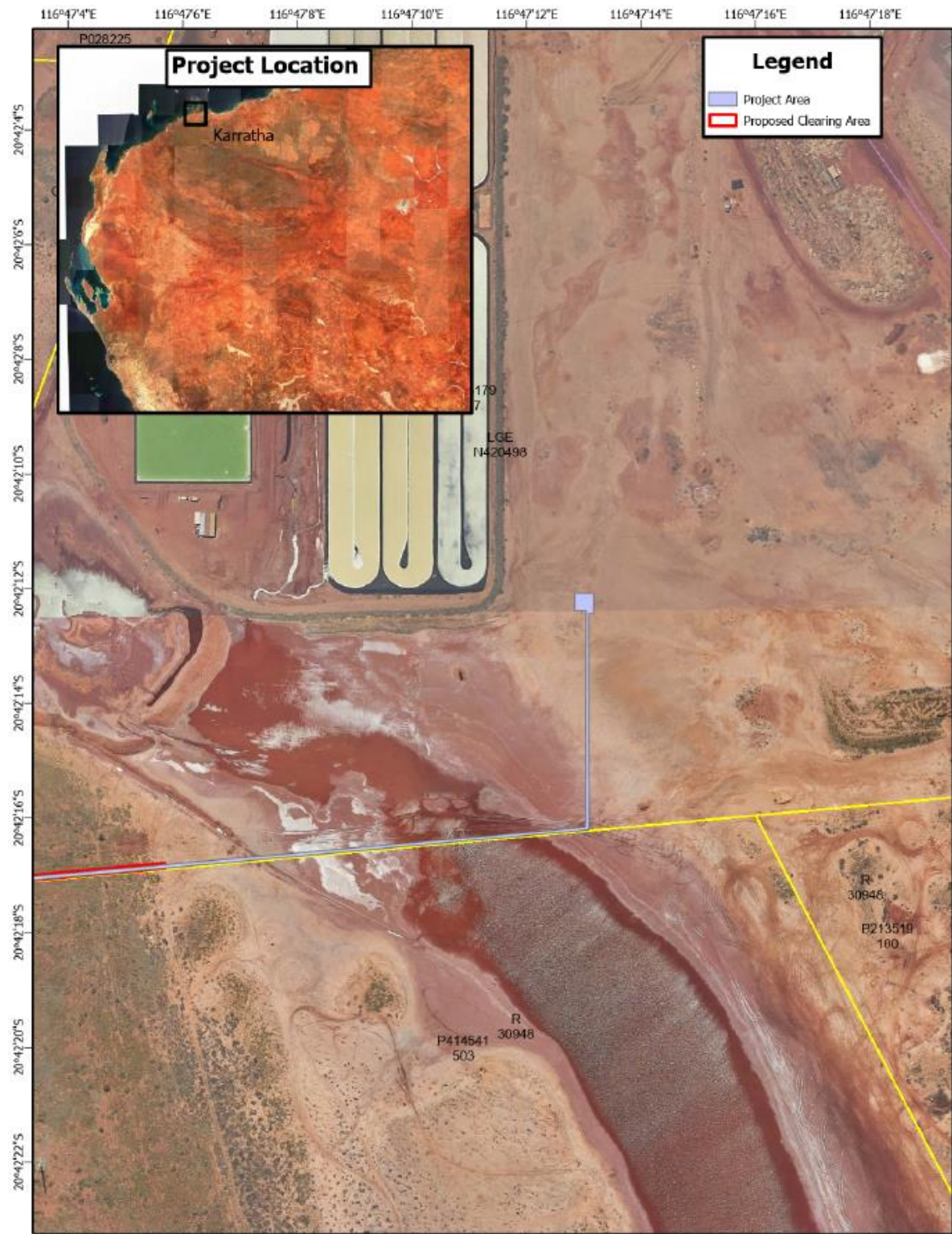
Map

Figure 4 - Proposed Clearing Area & Project Area



0 25 50 100
Meters
Scale: 1:2,500

Figure 5. Proposed Clearing Area & Project Area.



Map Figure 5 - Proposed Clearing Area & Project Area



0 25 50 100
Meters

Scale: 1:2,500

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3.3 Proposed Clearing Method

Clearing will be undertaken by hand tools, light vehicles for access with mechanical assistance of machinery to trench at the proposed underground asset locations (i.e. mechanical and non-mechanical clearing).

3.4 Avoidance, Mitigation and Management Measures

Sites have been selected to locate them in areas within and adjacent to existing disturbance while minimising disturbance to vegetation where possible. Utilising the existing access track and previously cleared area will reduce the disturbance and clearing to vegetation. Including the placement of proposed new underground assets and associated infrastructure where minimal vegetation is located to further reduce clearing and disturbance to vegetation.

Horizon Power is a mature and competent asset manager with an established Environmental Management System and extensive assets across Western Australia under active management. Clearing activities are undertaken following standardised processes and will be implemented in accordance with our Standard Construction Environmental Management Plan (Appendix A), which includes the following measures to minimise potential impacts.

- Clearing will be minimised where possible through placement of assets in existing cleared or areas of minimal vegetation where possible, along with utilising the existing access track.
- The clearing locations demarcated prior to clearing activities.
- Standard weed and hygiene management practices which will be applied to these works.
- Clearing will be undertaken slowly and in a one-way direction to allow fauna to move offsite if present.

4. Suitability for the Clearing Referral Process

The 'Guideline: Native Vegetation Clearing Referrals' (DWER, 2021) Section 5.3 outlines those clearing activities not considered to be suitable for the Clearing Referral process. Table 2 demonstrates that the proposed clearing activity is suitable for assessment under the Clearing Referral process.

Table 2 Assessment of Suitability for the Clearing Referral Process

Aspect	Assessment	Suitable? (Yes/No)
The referral process cannot be used for proposed clearing on land subject to an agreement to reserve or a conservation covenant under the Soil and Land Conservation Act 1945 (SLC Act)	Land is not subject to a conservation covenant.	Yes
The referral process cannot be used for proposed clearing on land subject to an environmental protection covenant under Part VB of the EP Act	Land is not subject to an environmental protection covenant.	Yes
The referral process is not suitable for proposed clearing that is not likely to be completed within two years.	The works are proposed to commence in May 2024.	Yes
The referral process is not suitable for proposed clearing that will contravene the requirements of a soil conservation notice issued under Part V of the SLC Act	The proposed clearing activity will not contravene the requirements of a soil conservation notice issued under Part V of the SLC Act.	Yes
The referral process is not suitable for proposed clearing that will or is likely to have a significant impact on matters of national environmental significance (MNES)	The proposed clearing is not likely to have a significant impact on MNES. No EPBC Act listed flora, fauna or ecological communities are likely to be impacted.	Yes
The referral process is not suitable for proposed clearing that includes marine native vegetation clearing activities	No clearing of marine native vegetation is proposed.	Yes
The referral process is not suitable for proposed clearing that may impact on protected or otherwise significant flora or fauna	The proposed clearing is not likely to have a significant impact on protected or otherwise conservation significant flora or fauna (as detailed in Section 5).	Yes
The referral process is not suitable for proposed clearing that will be within a highly cleared landscape or an area containing limited or restricted native vegetation types.	The proposed clearing is not within an extensively cleared landscape or an area containing limited or restricted native vegetation types, as detailed in Section 5. More than 99% and 87% of Pre-European Vegetation Association extents remain.	Yes
The referral process is not suitable for proposed clearing that is on land previously reserved as an environmental offset under the conditions of another approval under the EP Act.	A review of the DWER Offsets Register (via spatial dataset DWER-078; GoWA, 2022) indicates that the land is not reserved as an environmental offset under the conditions of an approval under the EP Act.	Yes

5. Assessment Against DWER Criterion

5.1 Criterion 1: The area proposed to be cleared is small relative to the total remaining vegetation

The proposed clearing activity satisfies Criterion 1, as detailed in the following tables.

Table 3 Assessment of the Proposed Clearing Activity Against Criterion 1

Aspect	Assessment
Extent of proposed clearing	The total proposed clearing is 0.26 ha This is less than the 10 ha threshold for clearing activities located north of the 26° latitude line.
Threshold for remaining extent of native vegetation association or complex in the relevant IBRA bioregion	More than 30% of the relevant vegetation associations remain within the relevant IBRA bioregion, therefore; a permit is not required on this basis.
Threshold for remaining native vegetation surrounding the boundary of the proposed clearing	Within a 10 km buffer of the proposed clearing more than 30% native vegetation is remaining. Therefore, a permit is not required on this basis.

Table 4 Pre-European Vegetation Association Extents

Site	Vegetation association	Scale	Pre-European extent (ha)	Current extent (ha)	% Remaining	% of current extent in all Department of Biodiversity Conservation and Attractions (DBCA) managed land (proportion of current extent)
Karratha, WA	127 Abydos Plain; Bare areas, mudflats.	State: WA	737,724.05	697,871.38	94.60	12.30
		IBRA Bioregion: Pilbara	177,749.75	159,595.04	89.79	2.32
		IBRA Subregion: Roebourne	177,178.87	159,024.16	89.75	2.33
		LGA: City of Karratha	96,204.40	83,703.29	87.01	4.37

Table 5 Pre-European Vegetation Association Extents

Site	Vegetation association	Scale	Pre-European extent (ha)	Current extent (ha)	% Remaining	% of current extent in all Department of Biodiversity Conservation and Attractions (DBCA) managed land (proportion of current extent)
Karratha, WA	589 Abydos Plain; Short bunch-grass savanna / Grass-steppe.	State: WA	807,698.58	802,713.40	99.38	1.91
		IBRA Bioregion: Pilbara	728,768.20	724,695.82	99.44	2.11
		IBRA Subregion: Roebourne	675,391.80	671,327.48	99.40	2.14
		LGA: City of Karratha	312,813.64	310,512.32	99.26	0.78

5.2 Criterion 2: There are no known or likely significant environmental values within the area

The proposed clearing activity satisfies Criterion 2, as detailed in the following tables.

Table 6 Assessment of the Proposed Clearing Activity Against Criterion 2

Environmental value	Assessment
Vegetation type and condition	Based on photographs of the site locations, the proposed clearing sites are comprised of scattered and loosely-spaced hummock grassland with minimal trees, consisting mainly of spinifex (<i>Triodia spp.</i>) and associated vegetation which is commensurate with the mapped vegetation known to occur in Vegetation Association 127 and 589. Vegetation is sparse and scattered, showing evidence of degradation including possible weeds and edge effects from the previously cleared access track and fire break (Appendix B). The proposed clearing of 0.26 ha required for this scope of works is not considered likely to impact significant environmental values.
Significant fauna and habitat	Eighty-seven conservation significant fauna species were considered likely or possibly occurring within the vicinity of the proposed clearing with a 10 km buffer applied (Appendix C). Significant impacts are not expected given the widespread availability of habitat in the region and poor condition of the vegetation to be cleared.
Significant ecological linkage	The proposed clearing is not part of a significant ecological linkage.
Mapped ecological community	No Threatened Ecological Communities listed under the EPBC Act or EP Act were identified within the proposed clearing area. No Priority Ecological Communities listed by DBCA were identified from desktop searches to be within the proposed clearing area.
Significant flora	No Threatened or Priority species were identified as likely to occur within the proposed clearing area. Desktop searches identified seven Priority flora species within 10 km of the proposed clearing area. <i>Stackhousia clementii</i> , a Priority 3 taxon has been recorded approximately 2.2 km south-west of the proposed clearing area. This species habitats consists of arid shrubland and hummock grasslands with swamp margins, plains and ridges within saline soils. Given the existing disturbance and poor quality of the proposed clearing area, this species is not considered likely to occur (Appendix B). <i>Themeda sp. Hamersley Station</i> , a Priority 3 taxon has been recorded approximately 2.3 km south-west of the proposed clearing area. This species habitats consists of alluvial plains, clayey soils and cracking clay soils and clay flats. Given the existing disturbance and poor quality of the proposed clearing area, this species is not considered likely to occur (Appendix B).

Environmental value	Assessment
	The proposed clearing of 0.26 ha of native vegetation is not anticipated to impact significant flora or their habitat.
Water resources	The proposed clearing area is located approximately 3 km west of the coast, installation of the proposed new underground cables and infrastructure require trenching of approximately 1.00 m below ground level, no groundwater impacts are expected from the proposed activities. No Internationally (Ramsar) or nationally important wetlands are located within 10 km of the proposed clearing area.
Conservation Reserve	No conservation areas are present within 10 km of the proposed clearing. No impacts to conservation areas are anticipated in association with this scope of works.
Environmentally Sensitive Areas	The proposed works are not in an Environmentally Sensitive area.
Land and soil quality	A review of the Australian Soil Resource Information System (ASRIS) indicates a low to moderate risk of Acid Sulphate Soils (ASS) occurring within 3 m of the natural soil surface. Given the depth of trenching is approximately 1 m below ground level for the proposed scope of work, the soil is likely to have previously been oxidised and exposed to air, therefore the risk of ASS is very low. The sites do not intersect any known contamination. No off-site impacts are anticipated in association with the activity. Land and soil quality is not likely to be impacted by the activity.
Heritage-related values and native title matters	No known Aboriginal heritage sites are within the proposed clearing areas. Registered Aboriginal Heritage Site 8919 is located approximately 330 m south-east of the proposed clearing area. No impacts are expected to this heritage site. Horizon Power has an Aboriginal Cultural Heritage Management Policy and established internal processes to protect and mitigate the risk of impacting Aboriginal cultural heritage. There are no native title implications of the proposed works. None of the proposed clearing areas are within a World Heritage Area or National Heritage Area.

5.3 Criterion 3: The state of scientific knowledge of native vegetation within the region is adequate

The Project area is located within the Pilbara bioregion and Roebourne subregion; both have over 89% and 99% of Pre-European vegetation remaining for the Vegetation Association ID# 127 and Vegetation Association ID# 589, respectively. Short bunch-grass savanna / Grass-steppe is a vegetation type that is made up of hummock grassland with minimal trees or shrubs and comprises of predominantly *Triodia spp.* which has been identified to be an extensive vegetation type, covering a total area of over 900,000 ha in Western Australia. Similarly, bare areas and mud flats cover a total area of nearly 740,000 ha in Western Australia (Beard et al. 2013). Beard et al. (2013) describes the vegetation mosaic as occurring throughout alluvial flats and lower reaches of wetlands and rivers in the Pilbara and Carnarvon Bioregions. In addition, 374 surveys of the Pilbara Bioregion are detailed on the Index of Biodiversity Surveys for Assessments (IBSA) database (DWER 2022). It is, therefore, considered that the state of scientific knowledge of native vegetation within the region is adequate.

5.4 Criterion 4: Conditions will not be required to manage environmental impacts

Due to the small scale of clearing and low environmental impact of the clearing activity, non-standard controls are not considered to be required to manage environmental impacts for this work. Avoidance, mitigation and management measures have been applied to the scope of works, as detailed in Section 3.4. A standard CEMP will be applied during construction (Appendix A). Given the application of these measures, as well as the abundance of native vegetation within and surrounding the impact area and the limited clearing proposed, it is considered that clearing can be undertaken without conditions being applied to further manage environmental impacts.

6. References

Beard, J.S, Beeston, G.R, Judith, H., Hopkins, A. J. M 2013, The Vegetation of Western Australia at the 1:3,000,000 Scale. Explanatory Memoir. Second Edition. Conservation Science Western Australia. 9. 1-152.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2021, Environment Protection and Biodiversity Conservation Act 1999 Protected Matters Search Tool Results, retrieved February 2024 from <http://www.environment.gov.au/epbc/pmst/index.html>

Department of Water and Environmental Regulation (DWER), 2021. *Guideline: Native Vegetation Clearing Referrals*, Available at: <https://www.wa.gov.au/service/environment/environment-information-services/guideline-native-vegetation-clearing-referrals>, Accessed January 2024

DWER, 2022. Index of Biodiversity Surveys for Assessments (IBSA), https://biocollect.ala.org.au/ibsa#q%3D*pilbara*%26queryText%3D*pilbara*%26max%3D30%26sort%3DdateCreatedSort , accessed April 2024

GoWA (2022). *Data WA*. Available at: <https://data.wa.gov.au/>, accessed February 2024.

Environmentally Sensitive Areas (DWER-046)

Pre-European vegetation (DPIRD-006)

Aboriginal heritage sites (DPLH-001)

Heritage Council WA – State Register (DPLH-006)

Legislated Lands and Waters (DBCA-011)

RIWI Act, Rivers (DWER-036)

Public Drinking Water Source Areas (DWER-033)

RIWI Act, Surface Water and Irrigation Districts (DWER-037)

RIWI Act, Groundwater Areas (DWER-034)

Appendix A: Standard Construction Environmental Management Plan



Appendix B: Site photographs





Appendix C: Species that may or are likely to occur

Scientific Name	Common Name	Presence	Commonwealth Threatened Category	State listing category (Under EP Act or listed by DBCA)	Migratory Status	Preferred habitat
<i>Thunnus maccoyii</i>	Southern Bluefin Tuna	Species or species habitat likely to occur within area	Conservation Dependent			Eastern Indian Ocean and south-west Pacific Ocean
<i>Sphyrna lewini</i>	Scalloped Hammerhead	Species or species habitat likely to occur within area	Conservation Dependent			Coastal warm temperate oceans and tropical seas
<i>Aipysurus foliosquama</i>	Leaf-scaled Sea Snake	Species or species habitat known to occur within area	Critically Endangered			Within reef flats and along shallow waters
<i>Aipysurus apraefrontalis</i>	Short-nosed Sea Snake	Species or species habitat likely to occur within area	Critically Endangered			Coastal waters along remote reefs and coral reefs
<i>Calidris ferruginea</i>	Curlew Sandpiper	Species or species habitat known to occur within area	Critically Endangered	Critically Endangered	Migratory	Intertidal mudflats and sheltered coastal regions
<i>Numenius madagascariensis</i>	Eastern Curlew	Species or species habitat known to occur within area	Critically Endangered	Critically Endangered	Migratory	Intertidal mudflats and sandflats associated with seagrass
<i>Tringa nebularia</i>	Common Greenshank	Species or species habitat known to occur within area	Endangered		Migratory	Along inland wetlands and coastal habitats
<i>Macronectes giganteus</i>	Southern Giant-Petrel	Species or species habitat may occur within area	Endangered		Migratory	Coastal waters to open oceans and subtropical zones
<i>Limosa lapponica menzbieri</i>	Northern Siberian Bar-tailed Godwit	Species or species habitat known to occur within area	Critically Endangered	Critically Endangered		Intertidal sandflats and banks, estuaries and mudflats
<i>Phaethon rubricauda westralis</i>	Red-tailed Tropicbird (Indian Ocean)	Species or species habitat likely to occur within area	Endangered	Priority 4	Migratory	Oceanic islands and coastal zones
<i>Dasyurus hallucatus</i>	Northern Quoll	Species or species habitat known to occur within area	Endangered	Endangered		Rocky regions, hills, eucalypt forest, shrubland, grassland and desert
<i>Pezoporus occidentalis</i>	Night Parrot	Species or species habitat may occur within area	Endangered	Critically Endangered		Arid and semi-arid regions associated with spinifex
<i>Erythrotriorchis radiatus</i>	Red Goshawk	Species or species habitat may occur within area	Endangered	Vulnerable		Coastal and sub-coastal areas within warm tropical regions
<i>Dermochelys coriacea</i>	Leatherback Turtle	Breeding likely to occur within area	Endangered	Vulnerable	Migratory	Atlantic, Pacific and Indian Oceans, tropical beaches

<i>Caretta caretta</i>	Loggerhead Turtle	Foraging, feeding or related behaviour known to occur within area	Endangered	Endangered	Migratory	Tropical and subtropical oceans, coral reefs and bays
<i>Balaenoptera musculus</i>	Blue Whale	Species or species habitat likely to occur within area	Endangered	Endangered	Migratory	Indian, Pacific and Atlantic Oceans
<i>Limosa limosa</i>	Black-tailed Godwit	Species or species habitat known to occur within area	Endangered		Migratory	Coastal mudflats, freshwater marshes and intertidal zones
<i>Rostratula australis</i>	Australian Painted Snipe	Species or species habitat may occur within area	Endangered	Endangered		Shallow terrestrial freshwater, wetlands and lakes
<i>Charadrius mongolus</i>	Lesser Sand Plover	Species or species habitat known to occur within area	Endangered	Endangered	Migratory	Sheltered bays, harbours, estuaries and intertidal mudflats
<i>Xenus cinereus</i>	Terek Sandpiper	Species or species habitat known to occur within area	Vulnerable		Migratory	Intertidal mudflats and sheltered estuaries
<i>Pristis pristis</i>	Freshwater Sawfish	Species or species habitat may occur within area	Vulnerable	Priority 3	Migratory	Coastal and estuarine habitats, mudflats and coastal regions
<i>Natator depressus</i>	Flatback Turtle	Breeding known to occur within area	Vulnerable	Vulnerable	Migratory	Tropical Australian beaches and islands
<i>Falco hypoleucos</i>	Grey Falcon	Species or species habitat likely to occur within area	Vulnerable	Vulnerable		Arid and semi-arid regions
<i>Carcharodon carcharias</i>	Great White Shark	Species or species habitat may occur within area	Vulnerable	Vulnerable	Migratory	Coastal waters and pelagic waters, temperate and subtropical oceans
<i>Calidris tenuirostris</i>	Great Knot	Species or species habitat known to occur within area	Vulnerable	Critically Endangered	Migratory	Sheltered coastal habitats, intertidal mudflats and sandflats
<i>Arenaria interpres</i>	Ruddy Turnstone	Species or species habitat known to occur within area	Vulnerable		Migratory	Coastal regions and inland wetlands, rivers, lakes and rocky areas
<i>Pristis zijsron</i>	Green Sawfish	Species or species habitat known to occur within area	Vulnerable	Vulnerable	Migratory	Muddy coastal regions, estuaries, river mouths and beaches
<i>Pristis clavata</i>	Dwarf Sawfish	Species or species habitat known to occur within area	Vulnerable	Priority 1	Migratory	Shallow coastal waters and marine habitats
<i>Rhincodon typus</i>	Whale Shark	Species or species habitat may occur within area	Vulnerable		Migratory	Tropical and warm temperate oceans
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Breeding known to occur within area	Vulnerable	Vulnerable		Estuaries, islands and wetlands
<i>Carcharias taurus</i>	Grey Nurse Shark	Species or species habitat likely to occur within area	Vulnerable	Vulnerable		Shallow inshore waters, coastal reefs and rocky reefs
<i>Macrotus gigas</i>	Ghost Bat	Species or species habitat likely to occur within area	Vulnerable	Vulnerable		Caves, old mine tunnels and mine shafts
<i>Calidris canutus</i>	Red Knot	Species or species habitat known to occur within area	Endangered	Endangered	Migratory	Intertidal mudflats and sandflats, estuaries
<i>Rhinonicteris aurantia</i>	Pilbara Leaf-nosed Bat	Species or species habitat may occur within area	Vulnerable	Vulnerable		Hummock grasslands, hills and shallow gullies
<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Breeding known to occur within area	Vulnerable	Vulnerable	Migratory	Tropical and subtropical waters within all major oceans

<i>Chelonia mydas</i>	Green Turtle	Breeding known to occur within area	Vulnerable	Vulnerable	Migratory	Coral reefs that are rich in seaweed and seagrass, warm tropical waters
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Species or species habitat known to occur within area	Vulnerable		Migratory	Grassy sedges and shallow inland wetlands
<i>Charadrius leschenaultii</i>	Greater Sand Plover	Species or species habitat known to occur within area	Vulnerable	Vulnerable	Migratory	Coastal estuarine habitats, muddy beaches and intertidal mudflats
<i>Liasis olivaceus barroni</i>	Pilbara Olive Python	Species or species habitat known to occur within area	Vulnerable	Vulnerable		Escarpments, gorges and water holes
<i>Pluvialis squatarola</i>	Grey Plover	Species or species habitat known to occur within area	Vulnerable		Migratory	Sheltered estuaries, lagoons and mudflats
<i>Actitis hypoleucos</i>	Common Sandpiper	Species or species habitat known to occur within area			Migratory	Estuaries and river deltas, lakes, dams and claypans
<i>Tringa stagnatilis</i>	Marsh Sandpiper	Species or species habitat known to occur within area			Migratory	Coastal and inland wetlands
<i>Pluvialis fulva</i>	Pacific Golden Plover	Species or species habitat known to occur within area			Migratory	Beaches, mudflats, sandflats, marches and mangroves
<i>Anous stolidus</i>	Common Noddy	Species or species habitat may occur within area			Migratory	Tropical and subtropical seas
<i>Hirundo rustica</i>	Barn Swallow	Species or species habitat may occur within area			Migratory	Open flats and low vegetation habitats
<i>Pandion haliaetus</i>	Osprey	Species or species habitat known to occur within area			Migratory	Wetlands and coastal regions
<i>Orcaella heinsohni</i>	Australian Snubfin Dolphin	Species or species habitat likely to occur within area		Priority 4	Migratory	Shallow coastal regions and estuarine waters
<i>Calonectris leucomelas</i>	Streaked Shearwater	Species or species habitat may occur within area			Migratory	Forests and hills, coastal regions
<i>Mobula alfredi</i>	Reef Manta Ray	Species or species habitat known to occur within area			Migratory	Tropical and subtropical waters along the Indian and Pacific Oceans
<i>Mobula birostris</i>	Giant Manta Ray	Species or species habitat likely to occur within area			Migratory	Tropical and subtropical waters and within temperate seas
<i>Apus pacificus</i>	Fork-tailed Swift	Species or species habitat likely to occur within area			Migratory	Inland plains and coastal regions
<i>Sternula albifrons</i>	Little Tern	Species or species habitat may occur within area			Migratory	Coastal regions, beaches, estuaries and lakes
<i>Sterna dougallii</i>	Roseate Tern	Species or species habitat likely to occur within area			Migratory	Coral reefs, lagoons and sheltered estuaries
<i>Dugong dugon</i>	Dugong	Species or species habitat known to occur within area			Migratory	Warm waters along the coasts and coral reefs
<i>Anoxypristis cuspidata</i>	Narrow Sawfish	Species or species habitat likely to occur within area			Migratory	Coastal and estuarine habitats
<i>Limicola falcinellus</i>	Broad-billed Sandpiper	Species or species habitat known to occur within area			Migratory	Estuarine mudflats, saltmarshes, lagoons and intertidal mudflats
<i>Limosa lapponica</i>	Bar-tailed Godwit	Species or species habitat known to occur within area			Migratory	Coastal habitats, intertidal mudflats, beaches, estuaries and lagoons
<i>Tursiops aduncus</i>	Spotted Bottlenose Dolphin	Species or species habitat known to occur within area			Migratory	Harbours, bays, gulfs and estuaries, along with coastal waters and deeper waters along the continental shelf

<i>Sousa sahalensis</i>	Australian Humpback Dolphin	Species or species habitat known to occur within area		Priority 4	Migratory	Tropical and subtropical waters and estuarine waters
<i>Tringa brevipes</i>	Grey-tailed Tattler	Species or species habitat known to occur within area		Priority 4	Migratory	Sheltered coasts and reefs, rocky platforms and intertidal mudflats
<i>Calidris melanotos</i>	Pectoral Sandpiper	Species or species habitat may occur within area			Migratory	Shallow wetlands, fresh to saline lagoons, estuaries and swamps
<i>Tringa totanus</i>	Common Redshank	Species or species habitat known to occur within area			Migratory	Sheltered coastal wetlands, bays, rivers and estuaries
<i>Motacilla flava</i>	Yellow Wagtail	Species or species habitat may occur within area			Migratory	Wet meadows, marshland, muddy lakes and inundated grassland
<i>Motacilla cinerea</i>	Grey Wagtail	Species or species habitat may occur within area			Migratory	Rocky habitats with flowing water, shorelines and open grassland
<i>Numenius phaeopus</i>	Whimbrel	Species or species habitat known to occur within area			Migratory	Open tundra, beaches and mudflats
<i>Phaethon lepturus</i>	White-tailed Tropicbird	Species or species habitat may occur within area			Migratory	Sandy regions, rainforest, rocky cliffs and quarries
<i>Phalaropus lobatus</i>	Red-necked Phalarope	Species or species habitat known to occur within area			Migratory	Lakes, bogs and marshes
<i>Fregata ariel</i>	Lesser Frigatebird	Species or species habitat known to occur within area			Migratory	Tropical and subtropical waters across the Indian and Pacific Oceans
<i>Glareola maldivarum</i>	Oriental Pratincole	Species or species habitat known to occur within area			Migratory	Open plains, floodplains and short grassland
<i>Megaptera novaeangliae</i>	Humpback Whale	Species or species habitat known to occur within area		Conservation Dependent	Migratory	All oceans globally
<i>Calidris alba</i>	Sanderling	Species or species habitat known to occur within area			Migratory	Beaches along with rocky outcrops
<i>Orcinus orca</i>	Killer Whale	Species or species habitat may occur within area			Migratory	Cold oceans, along with tropical and subtropical waters
<i>Balaenoptera edeni</i>	Bryde's Whale	Species or species habitat may occur within area			Migratory	Tropical and subtropical waters globally
<i>Charadrius veredus</i>	Oriental Plover	Species or species habitat known to occur within area			Migratory	Open upland flats, elevated areas, open fields of grassland
<i>Calidris ruficollis</i>	Red-necked Stint	Species or species habitat known to occur within area			Migratory	Sheltered beaches, banks and saltmarshes
<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark	Species or species habitat may occur within area			Migratory	Tropical and subtropical waters globally
<i>Calidris subminuta</i>	Long-toed Stint	Species or species habitat known to occur within area			Migratory	Terrestrial wetlands, shallow freshwater and brackish wetlands
<i>Hydroprogne caspia</i>	Caspian Tern	Species or species habitat may occur within area			Migratory	Sheltered coastal regions such as harbours, lagoons and inlets
<i>Limosa lapponica</i>	Common bar-tailed Godwit	Species or species habitat may occur within area			Migratory	Coastal habitats consisting of intertidal mudflats, inlets and lagoons
<i>Leggadina lakedownensis</i>	Northern Short-tailed Mouse	Species or species habitat may occur within area		Priority 4		Open plains and desert grasslands
<i>Plegadis falcinellus</i>	Glossy Ibis	Species or species habitat may occur within area			Migratory	Grasslands, sedges and grass meadows

<i>Numenius minutus</i>	Little Curlew	Species or species habitat may occur within area			Migratory	Low, dry grassland, sedgeland and floodplains
<i>Thalasseus bergii</i>	Crested Tern	Species or species habitat may occur within area			Migratory	Along coastal regions, dunes and rocky areas
<i>Notoscincus butleri</i>	Lined soil-crevice Skink	Species or species habitat may occur within area		Priority 4		Tropical forests, desert regions and alpine areas
<i>Tringa glareola</i>	Wood Sandpiper	Species or species habitat may occur within area			Migratory	Shallow freshwater wetlands, lakes and swamps
<i>Pseudomys chapmani</i>	Western Pebble Mound Mouse	Species or species habitat may occur within area		Priority 4		Along spinifex grassland and gravelly regions or slopes
<i>Falco peregrinus</i>	Peregrine Falcon	Species or species habitat may occur within area		Other Specially Protected		Rainforests and arid regions, coastal to alpine regions
<i>Dolichocarpa sp. Hamersley Station</i>		Species or species habitat may occur within area		Priority 3		Rocky ironstone regions within the Hamersley Range and clayey soils
<i>Rhynchosia bungarensis</i>		Species or species habitat may occur within area		Priority 4		Pebbly and gravelly coarse sand and boulders. Within banks of drainage lines and gullies.
<i>Terminalia supranitifolia</i>		Species or species habitat may occur within area		Priority 3		Sandy locations associated with basalt rocks.
<i>Gomphrena axillaris</i>		Species or species habitat may occur within area		Priority 1		Sub-saline habitats, salt lakes and hummock or tussock grasslands on sand
<i>Stackhousia clementii</i>		Species or species habitat may occur within area		Priority 3		Sandstone hill regions. Open woodland and arid shrubland with limestone and calcrete areas
<i>Neptunia longipila</i>		Species or species habitat may occur within area		Priority 2		Clay soils and cracking clay soils
<i>Vigna triodiophila</i>		Species or species habitat may occur within area		Priority 3		Basalt rock piles, cobbles and boulder habitats with red-brown clayey sand or loam
<i>Themeda sp. Hamersley Station</i>		Species or species habitat may occur within area		Priority 3		Alluvial plains, clayey soils and cracking clay soils and clay flats

Appendix D: Standard Construction Environmental Management Plan

