

PROTECTED



Derby Future Energy System

Environmental Protection Act 1986 Section 38 – Referral Supporting Document

5/06/2025

HORIZON
POWER

Document control

Revision	Reviewer		Approved for issue		
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Executive Summary

Regional Power Corporation, trading as (T/A) Horizon Power, is a WA Government Trading Enterprise (GTE) and the state's regional and remote energy provider. Horizon Power operates under the *Electricity Corporations Act 2005* and is governed by a Board of Directors accountable to the Minister for Energy.

The Western Australian (WA) State Government is committed to reduce carbon emissions by 80% of 2020 levels by 2030 and Horizon Power is supporting the Government to achieve this. Many towns in the Kimberley are powered by high emission fossil fuels such as diesel and gas. In Derby, Horizon Power currently purchases power from an independent power producer. The power purchase agreement (PPA) is due to expire, providing Horizon Power with an opportunity to integrate grid-scale renewable electricity into the town supply

Horizon Power is proposing to construct a Future Energy System (FES) in Derby in the Kimberley region of WA (the Proposal). The Proposal will ensure security of energy supply to Derby after the expiry of the PPA. As part of this future energy system, Horizon Power is targeting higher renewables and a reduction in emissions as part of the decarbonisation strategy for the town. The Derby FES project will consist of solar PV system (nominally up to 21 megawatts alternating current (MWAC)), battery energy storage systems (BESS) (nominally up to 10 megawatts MW/ 55 megawatt-hr (MWh)), a transmission network connection route (up to 8.9 km) and a new thermal power station (nominally up to 8 megawatts (MW)).

The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5 km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby Lots 5, 14 and 15 on Deposited Plan 230140. As Site A is smaller than Site B, if Site A is selected, a smaller solar farm will be constructed, subject to ongoing survey requirements and detailed design.

The network connection route will follow Derby Highway, Wodehouse Street and Broome Street to connect the solar and BESS facility to a substation at the existing power station site on Broome Street in Derby. The network connection will either be an overhead or underground electrical transmission line and will be up to 8.9 km long. The thermal power station will be installed adjacent to the existing power station on Broome Street in Derby.

The Proposal has also been designed to limit impacts to flora and vegetation, terrestrial fauna and social surroundings. Final design of the Proposal will limit (where possible) direct and indirect impacts to identified environmental values.

Horizon Power is referring the Proposal to the Western Australia (WA) Environmental Protection Authority (EPA) under Part IV (Section 38) of the Environmental Protection Act 1986 (EP Act), as the Proposal has the potential to impact on one or more of the EPA's key environmental factors. The purpose of this document is to provide additional information to support the referral submission.

The following EPA factors are considered key environmental factors for the Proposal:

- Flora and Vegetation
- Terrestrial Fauna
- Social Surroundings.

An additional four factors have been identified as ‘other environmental factors’ for the Proposal, including:

- Inland Waters
- Terrestrial Environmental Quality
- Air Quality
- Greenhouse Gas (GHG) emissions.

It is considered that all factors can be managed through avoidance and mitigation measures to meet the EPA’s objectives. Tables ES-1 and ES-2 summarise the Proposal as required under current EPA guidance. Table ES-3 provides a summary of potential impacts of the Proposal, proposed mitigation and anticipated environmental outcomes for key environmental factors.

Table ES-1 General Proposal content description

Proposal title	Derby Future Energy System
Proponent name	Regional Power Corporation T/A Horizon Power
Short description	<p>Horizon Power is proposing to construct the Derby Future Energy System (FES) in Derby in the Kimberley region of WA (the Proposal). The Proposal will ensure security of energy supply to Derby after the expiry of the current Power Purchase Agreement. As part of this future energy supply, Horizon Power is targeting higher renewables and a reduction in emissions as part of the decarbonisation strategy for the town.</p> <p>The Derby FES will consist of ground-mounted solar PV system, battery energy storage systems (BESS), a network connection route and a thermal power station.</p> <p>The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5 km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby on Lots 5, 14 and 15 on Deposited Plan 230140.</p> <p>A network connection route will follow Derby Highway, Wodehouse Street and Broome Street to connect the solar and Battery Energy Storage System (BESS) facility to a substation at the existing power station site on Broome Street in Derby. The network connection will be either an overhead or underground electrical transmission line and will be up to 8.9 km long.</p> <p>The new thermal power station will be installed adjacent to the existing power station on Broome Street in Derby.</p>

Table ES-2 Proposal content elements

Proposal element	Location/description	Maximum extent, capacity or range
Physical elements		
Solar and BESS facility Network connection Thermal power station	The solar and BESS facility is proposed to be located at either Site A or Site B, approximately 2.5 km and 5 km south of Derby respectively, with the network connection route following Derby Highway, Wodehouse Street and Broome Street to connect the solar and BESS facility to the existing	Clearing within the Development Envelope (DE) of up to 73.5 ha of native vegetation within a total DE area of 307.4 ha.

	<p>power station in Derby. The new thermal power station would be installed adjacent to the existing power station on Broome Street in Derby.</p> <p>See Figure 2-1.</p>	
Construction elements		
Solar and BESS facility	<p>The solar and BESS facility is proposed to be located at either Site A or Site B, approximately 2.5 km and 5 km south of Derby respectively.</p> <p>See Figure 2-1.</p>	<p>Clearing within the DE of up to 60 ha to accommodate the following permanent and temporary project elements. This will involve clearing of vegetation, topsoil removal and stockpiling, grading and excavations.</p> <p>Permanent elements:</p> <ul style="list-style-type: none"> • Permanent clearing for construction and operation including weed control. • Construction of access roads and tracks. • Construction of water supply bore. • Installation of a solar PV and BESS including ground mounted solar panels, inverters, transformers, cabling, battery containers, substation and other ancillary infrastructure. <p>Temporary elements:</p> <ul style="list-style-type: none"> • Minor and preliminary works including site surveying and marking, Soil and geotechnical investigations • Temporary lay down areas, ablutions, kitchen, offices, crib room, first aid, water supply and generators. • Concrete supply via either establishment of a temporary on-site concrete batch plant or concrete truck deliveries.
Network connection	<p>The network connection route follows Derby Highway, Wodehouse Street and Broome Street to connect the solar and BESS facility to a substation at the existing power station site on Broome Street in Derby.</p> <p>See Figure 2-1.</p>	<p>Clearing within the DE of up to 12.5 ha to accommodate the following permanent and temporary project elements. This will involve clearing of vegetation, topsoil removal and stockpiling, grading and excavations</p> <p>Permanent elements:</p> <ul style="list-style-type: none"> • Permanent clearing for construction and operation including weed control. • Installation of either overhead or underground network connection • Construction of access roads and tracks.

		<p>Temporary elements:</p> <ul style="list-style-type: none"> • Minor preliminary works including site surveying and marking • Soil and geotechnical investigations • Temporary lay down areas, water supply and generators. • Temporary lay down areas, water supply and generators.
Thermal power station	<p>The new thermal power station would be installed adjacent to the existing power station on Broome Street in Derby.</p> <p>See Figure 2-1.</p>	<p>Clearing within the DE of up to 1.01 ha to accommodate the following permanent and temporary project elements. This will involve clearing of vegetation, topsoil removal and stockpiling, grading and excavations.</p> <p>Permanent elements:</p> <ul style="list-style-type: none"> • Potential construction of a water bore (water will otherwise be provided via truck) • Installation of the thermal power station consisting of engine generators, transformers, substation, cooling system, gas supply system, electrical and control cabling, gas pipelines and other auxiliary infrastructure. • Access tracks. <p>Temporary elements:</p> <ul style="list-style-type: none"> • Site surveying and marking • Clearing for soil and geotechnical investigations • Concrete supply via either establishment of a temporary on-site concrete batch plant or concrete truck deliveries • Supply of civil materials for ground levelling and fill will be trucked in from local sources • Temporary lay down areas, ablutions, kitchen, offices, crib room, first aid, water supply and generators.
Operational elements		
Solar and BESS facility	<p>The solar and BESS facility is proposed to be located at either Site A or Site B, approximately 2.5 km and 5 km south of Derby respectively.</p> <p>Derby FES project will consist of solar PV system (nominally up to 21 megawatts alternating current</p>	<p>Operational activities:</p> <ul style="list-style-type: none"> • Operation and maintenance of the solar and BESS facility • Routine maintenance activities including vegetation and weed control.

	(MWAC)), and battery energy storage systems (BESS) (nominally up to 10 megawatts MW/ 55 megawatt-hr (MWh)). See Figure 2-1.	
Network connection route	The network connection route (up to 8.9 km) follows Derby Highway, Wodehouse Street and Broome Street to a substation at the existing power station site on Broome Street in Derby. See Figure 2-1.	Operational activities: <ul style="list-style-type: none"> • Operation and monitoring of the network connection • Routine maintenance activities including vegetation and weed control.
Thermal power station	The new thermal power station will consist of a thermal generation system (nominally up to 8 megawatts (MW)) and will be installed adjacent to the existing power station on Broome Street in Derby. See Figure 2-1.	Operational activities: <ul style="list-style-type: none"> • Operation and monitoring of the thermal power station • Routine maintenance activities including vegetation and weed control.
Proposal elements with greenhouse gas emissions		
Construction elements:		
Scope 1	<ul style="list-style-type: none"> • Construction Fuel – 754 tCO₂-e • Vegetation clearing – 5,544 tCO₂-e 6,289 tCO ₂ -e	
Scope 2	0	
Scope 3	<ul style="list-style-type: none"> • Construction Fuel – 184 tCO₂-e • Materials – 12,575 tCO₂-e • Transport of materials – 839 tCO₂-e 13,598 tCO ₂ -e	
TOTAL	19,887 tCO₂-e	
Operation elements:		
Scope 1	5,448 tCO ₂ -e/year	
Scope 2	0	
Scope 3	901 tCO ₂ -e/year	
TOTAL	6,349 tCO₂-e/year	
Rehabilitation		
No rehabilitation will be undertaken as part of the Proposal. The DE is to be permanently cleared, with temporary impacted areas still within the permanent footprint.		

Commissioning		
There are no environmental impacts specific to commissioning.		
Decommissioning		
Infrastructure is expected to be permanent and become part of the Derby electricity network. The agreement with the independent power producer will likely be 20 years, with options for extension. The facility is expected to be refurbished/replaced as required and continue to be utilised. If the infrastructure should be decommissioned, this would be at end of asset life.		
Other elements which affect extent of effects on the environment		
Proposal time*	Maximum project life	23 years
	Construction phase	The construction phase of the Proposal is estimated to take three years subject to approvals from 2027 – 2029.
	Operations phase	20 years
	Decommissioning phase	N/A

Table ES-3 Summary of potential impacts, proposed mitigation and proposed environmental outcomes

Flora and Vegetation	
Potential impacts	<ul style="list-style-type: none"> • Native vegetation: <ul style="list-style-type: none"> ○ Clearing of up to 73.5 ha of native vegetation including: <ul style="list-style-type: none"> ▪ Native vegetation mapped across Vegetation Associations 127 and 764. ▪ Native vegetation across three vegetation types (VT02, VT03 and VT04). ○ Clearing of up to 2.6 ha of riparian vegetation within VT03. • Flora that represents a range extension: <ul style="list-style-type: none"> ○ Clearing of individuals of <i>Gyrocarpus americanus</i> subsp. <i>Americanus</i>. <p>Indirect impacts resulting from potential introduction and/or the spread of weeds, alteration of fire regimes, alteration to hydrological flows, generation of dust or spills or leaks of chemical, hydrocarbon and/or hazardous materials. These impacts will be avoided and mitigated through detailed design planning and standard construction management measures, including the implementation of an Environmental Management Plan (EMP) (Appendix A) during construction and operation activities.</p>
Mitigation hierarchy	<p><u>Minimise</u></p> <ul style="list-style-type: none"> • The network connection route follows an existing cleared corridor along Derby Highway, Wodehouse Street, Broome Street, reducing the amount of clearing required for access tracks. • Locating the thermal power station adjacent to the existing power station on Broome Street. Clearing impacts will be further reduced through the detailed design process, including the positioning of solar and BESS facility infrastructure, network connection infrastructure

	<p>and thermal power station to minimise impacts to vegetation and flora (including riparian vegetation where possible).</p> <ul style="list-style-type: none"> • Implementation of the management measures in the EMP (Appendix A) to minimise risks to vegetation and flora from the introduction and/or spread of weeds, alteration of fire regimes, alteration of hydrological flows, generation of dust, spills or leaks of chemical, hydrocarbon or other hazardous materials, and to provide monitoring during construction.
<p>Residual impacts, including assessment of significance</p>	<p>Direct and indirect impacts to flora and vegetation associated with the Proposal are not expected to be significant. These impacts will be mitigated and managed through Horizon Power’s mitigation and management measures, and the implementation of the EMP prepared for the Proposal (Appendix A).</p>
<p>Proposed environmental outcomes</p>	<p>The Proposal is not expected to result in significant residual impacts to flora and vegetation.</p> <p>The Proposal requires clearing of up to 73.5 ha of native vegetation, including up to 2.6 ha of riparian vegetation. The Proposal may also clear individuals of <i>Gyrocarpus americanus</i> subsp. <i>Americanus</i>, which is a flora species that represents a range extension.</p> <p>Indirect impacts to flora and vegetation may occur as a result of the introduction and/or spread of weeds, alteration of fire regimes, alteration to hydrology, generation of dust and spills or leak of chemical, hydrocarbon and/or hazardous materials.</p> <p>Horizon Power considers that with the implementation of the avoidance and minimisation measures proposed, the potential direct and indirect impacts to flora and vegetation will be sufficiently mitigated such that the Proposal) will meet the EPA’s objective for flora and vegetation.</p>
<p>Assessment of offsets (if relevant)</p>	<p>N/A</p>
<p>Terrestrial Fauna</p>	
<p>Potential impacts</p>	<ul style="list-style-type: none"> • Clearing of up to 73.5 ha of terrestrial fauna habitat, including up to: <ul style="list-style-type: none"> ○ 66.4 ha of open Eucalypt woodland, which provides habitat for Fork-tailed Swift (supporting habitat), Oriental Cuckoo (supporting habitat), Northern Coastal Free-tailed Bat (critical habitat), Grey Falcon (supporting habitat), Northern Blue-tongue Skink (critical habitat), Peregrine Falcon (supporting habitat), Barn Swallow (supporting habitat), Yellow Wagtail (supporting habitat), Northern Brushtail Possum (critical habitat) and Gouldian Finch (critical habitat). ○ 29.6 ha of mixed tall closed woodland sandplain, which provides habitat for Fork-tailed Swift (supporting habitat), Oriental Cuckoo (supporting habitat), Northern Coastal Free-tailed Bat (critical habitat), Grey Falcon (supporting habitat), Northern Blue-tongue Skink (critical habitat), Peregrine Falcon (supporting habitat), Barn Swallow (supporting habitat), Yellow Wagtail (supporting habitat), Northern Brushtail Possum (critical habitat), and Gouldian Finch (critical habitat). ○ 2.6 ha of mixed tall open shrubland sandplain, which provides habitat for Fork-tailed Swift (supporting habitat),

	<p>Oriental Cuckoo (supporting habitat), Northern Coastal Free-tailed Bat (critical habitat), Northern Blue-tongue Skink (critical habitat) and Gouldian Finch (critical habitat).</p> <ul style="list-style-type: none"> • Clearing of up to four identified hollow containing trees within the open mixed tall closed woodland sandplain habitat type, which could provide suitable important nesting/roosting/breeding habitat to the Northern Brushtail Possum, Northern Coastal Free-tailed Bat, and the Gouldian Finch. • Potential fauna injury/death from vehicle strike/clearing activities/direct collision with infrastructure. • Potential indirect impacts such as, fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, increased generation of dust during construction.
<p>Mitigation hierarchy</p>	<p><u>Avoid</u></p> <ul style="list-style-type: none"> • Presence of a licenced fauna specialist prior to the commencement of clearing activities to supervise avoidance, dispersal and relocation of any fauna. <p><u>Minimise</u></p> <ul style="list-style-type: none"> • Clearing impacts will be further reduced where possible through the detailed design process, including the positioning of solar and BESS facility infrastructure, network connection infrastructure and thermal power plant to minimise impacts to fauna habitat. • Locating the thermal power station adjacent to the existing power station on Broome Street. • Dust, noise, vibration and light management measures will be implemented during construction. • Implementation of the management measures in the EMP (Appendix A) and to minimise risks to terrestrial fauna, and to provide monitoring during construction. • A pre-clearance survey will be undertaken within the DE for the Northern Brushtail Possum and Northern Blue-tongue Skink, as detailed in the EMP (Appendix A). • Habitat trees suitable for the Northern Brushtail Possum, Northern Coastal Free-tailed Bat and the Gouldian Finch will be avoided where possible during site selection and design.
<p>Residual impacts, including assessment of significance</p>	<p>Direct and indirect impacts to terrestrial fauna associated with the Proposal are not expected to be significant. These impacts will be managed through Horizon Power’s mitigation and management measures, and the implementation of the EMP prepared for the Proposal (Appendix A).</p>
<p>Proposed environmental outcomes</p>	<p>The Proposal is not expected to result in significant residual impacts to terrestrial fauna.</p> <p>The Proposal requires the permanent clearing of up to 73.5 ha of potential fauna habitat which includes three habitat types. The Proposal will require the removal of habitat that potentially provides foraging, breeding, roosting, shelter and dispersal value to significant fauna species, however this impact is not expected to be significant due to the availability of similar suitable habitat in the wider region. Further refinement of the design of the Proposal will seek to minimise impacts to fauna habitats including potential habitat trees.</p> <p>Potential indirect impacts may occur as a result of fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, increased generation of dust during construction.</p>

	<p>Horizon Power considers that with the implementation of the avoidance and minimisation measures proposed, the potential direct and indirect impacts to terrestrial fauna will be sufficiently mitigated such that the Proposal will meet the EPA's objective for terrestrial fauna.</p>
<p>Assessment of offsets (if relevant)</p>	<p>N/A</p>
<p>Social Surroundings</p>	
<p>Potential impacts</p>	<ul style="list-style-type: none"> • Aboriginal cultural heritage: <ul style="list-style-type: none"> ○ No direct impact is proposed to any known Aboriginal cultural heritage sites (ID12392, ID12393 and ID14617) and potential new sites to be identified via a heritage survey. Implementation of avoidance areas to prevent impacts to Aboriginal cultural heritage. ○ Potential indirect impacts to Aboriginal cultural heritage values through dust generation, vibrations and accidental fires during construction or operations. • National and European heritage: <ul style="list-style-type: none"> ○ Two state heritage sites 'Frosty Pool '(Place Number: 7207) and 'Holman House' (Place Number: 09741) occur within the DE. Horizon Power is committed to avoid direct impacts to European heritage sites during the design phase. ○ Potential indirect impacts to European heritage values through dust generation, vibrations and accidental fires during construction or operations. • Amenity: <ul style="list-style-type: none"> ○ The Proposal has the potential to impact on the visual amenity of the local area, noting that proposed infrastructure is consistent with existing infrastructure in the region. ○ Potential indirect impacts to amenity through dust, noise and vibration emissions generated during construction.
<p>Mitigation hierarchy</p>	<p><u>Avoid</u></p> <ul style="list-style-type: none"> • The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners. • Prior to conducting ground disturbing activities, known Aboriginal cultural heritage sites will be delineated using avoidance zones within the DE. The avoidance zones will be visibly demarcated to ensure a suitable buffer is maintained between avoidance zones and construction activities (where permitted by and with assistance of Traditional Owners). • Aboriginal cultural heritage monitors may be present during initial ground disturbing works. • Impact to all Aboriginal cultural heritage sites (newly recorded and previously verified) will be avoided. • Potential new finds of Aboriginal Cultural Heritage (including human remains) uncovered during ground disturbing works are protected (i.e. cease work in the immediate area until assessed by Traditional Owners and a consultant archaeologist/anthropologist as appropriate and cleared by police if relating to human remains).

	<p><u>Minimise</u></p> <ul style="list-style-type: none"> • Alignment of network connection route with existing roads. • Locating the thermal power station adjacent to the existing power station on Broome Street. • Use of existing disturbed areas to minimise clearing • Dust, noise, vibrations and fire risk will be managed in accordance with the Environmental Management Plan (EMP) (Appendix A). EMP mitigation measures will include (but are not limited to): <ul style="list-style-type: none"> ○ Construction works will be undertaken in accordance with the Environmental Protection (Noise) Regulations 1997 ○ Dust suppression controls (i.e. use of water carts) to be implemented.
<p>Residual impacts, including assessment of significance</p>	<p>Based on the impacts identified and the mitigation proposed, the Proposal is not expected to have a significant residual impact on social surroundings.</p>
<p>Proposed environmental outcomes</p>	<p>The Proposal is expected to meet EPA’s objective for social surroundings due to the following proposed environmental outcomes:</p> <ul style="list-style-type: none"> • No direct impacts to known Aboriginal cultural heritage sites within or adjacent to the DE. • Works undertaken for the Proposal will comply with the <i>Aboriginal Heritage Act 1972</i> (AH Act). • Indirect impacts to social surroundings may occur as a result of dust and vibrations for a short duration (intermittent and only during the construction phase) with mitigation implemented in accordance with the EMP. • Long-term minor impacts on visual amenity. Horizon Power considers that with the implementation of the avoidance and minimization measures proposed (i.e., through Proposal design, and DE alignment with existing developed areas and situated as far as possible from the Mowanjum Community), impacts on visual amenities will be sufficiently mitigated. As such the Proposal will meet the EPA’s objective for social surroundings. • Short-term minor impacts to amenity from noise, dust and vibrations are adequately managed through the EMP. • No direct impact to nature reserves.
<p>Assessment of offsets (if relevant)</p>	<p>N/A</p>

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Abbreviation	Definition
ACHIS	Aboriginal Cultural Heritage Inquiry System
AH Act	Aboriginal Heritage Act 1972
ALA	Atlas of Living Australia
ASS	Acid Sulfate Soils
BAM Act	Biosecurity and Agriculture Management Act 2007
BC Act	Biodiversity Conservation Act 2016
BESS	Battery Energy Storage System
CALM Act	Conservation and Land Management Act 1984
CER	Customer Energy Resources
CO ₂ e	Carbon Dioxide Equivalent
DBCA	Department of Biodiversity Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DE	Development Envelope
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning, Lands and Heritage
EMP	Environmental Management Plan
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESA	Environmentally Sensitive Area
GHG	Greenhouse Gas
GTE	Government Trading Enterprise
ha	Hectare
IBRA	Interim Biogeographic Regionalisation of Australia
IDF	Indicative Disturbance Footprint
km	Kilometres
LA Act	<i>Land Administration Act 1997</i>
m	Metres
MNES	Matters of National Environmental Significance
MWAC	Megawatts Alternating Current

Abbreviation	Definition
MW	Megawatts
NVCP	Native Vegetation Clearing Permit
PDWSA	Public Drinking Water Source Area
PEC	Priority Ecological Community
PMST	Protected Matters Search Tool
PPA	Power Purchase Agreement
PV	Photovoltaic
RIWI Act	Rights in Water and Irrigation Act 1914
RNTBC	Registered Native Title Body Corporate
TEC	Threatened Ecological Community
WA	Western Australia

1 Introduction

1.1 Background

Regional Power Corporation, trading as (T/A) Horizon Power, is a Western Australian (WA) Government Trading Enterprise (GTE) and the state's regional and remote energy provider. Horizon Power operates under the Electricity Corporations Act 2005 and is governed by a Board of Directors accountable to the Minister for Energy.

The Western Australian (WA) State Government is committed to reduce carbon emissions by 80% of 2020 levels by 2030 and Horizon Power is supporting the Government to achieve this. Many towns in the Kimberley are powered by high emission fossil fuels such as diesel and gas. In Derby, Horizon Power currently purchases power from an independent power producer. The power purchase agreement (PPA) is due to expire, providing Horizon Power with an opportunity to integrate grid-scale renewable electricity into the town supply.

Horizon Power is proposing to construct a Future Energy System (FES) in Derby in the Kimberley region of WA (the Proposal). The Proposal will ensure security of energy supply to Derby after the expiry of the PPA. As part of this future energy system, Horizon Power is targeting higher renewables and a reduction in emissions as part of the decarbonisation strategy for the town.

The Derby FES project will consist of a solar PV system (nominally up to 21 megawatts alternating current (MWAC)), battery energy storage systems (BESS) (nominally up to 10 megawatts MW/ 55 megawatt-hour (MWh)), a new thermal power station (nominally up to 8 MW) and a network connection route (up to 8.9 km).

The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5 km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby on Lots 5, 14 and 15 on Deposited Plan 230140. As Site A is smaller than Site B, if Site A is selected, a smaller solar farm will be constructed, subject to ongoing survey requirements and detailed design.

The network connection route corridor will follow Derby Highway, Wodehouse Street and Broome Street to connect the solar PV and BESS to a substation at the existing power station site on Broome Street in Derby. The network connection will either be an overhead or underground electrical transmission line and will be up to 8.9 km long.

The thermal power station will be installed adjacent to the existing power station on Broome Street in Derby on Lot 648 on Deposited Plan 209773.

The Proposal location is shown in Figure 2-1. Along with the solar and BESS facility, network connection route and thermal power station, the additional construction and operational requirements for the Proposal are detailed in Section 2.1.

1.2 Scope and purpose of this document

The Proposal is being referred to the WA Environmental Protection Authority (EPA) under Part IV (Section 38) of the *Environmental Protection Act 1986* (EP Act), as the Proposal has the potential to impact on one or more of the EPA's key environmental factors. Horizon Power is also referring the Proposal to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the *Environment Protection and*

Biodiversity Conservation Act 1999 (EPBC Act) as the Proposal has the potential to impact Matters of National Environmental Significance (MNES). The purpose of this document is to support Horizon Power with their referral submission to the EPA.

The following EPA factors are considered preliminary key environmental factors for the Proposal:

- Flora and Vegetation
- Terrestrial Fauna
- Social Surroundings.

An additional four factors have been identified as ‘other environmental factors’ for the Proposal, including:

- Inland Waters
- Terrestrial Environmental Quality
- Air Quality
- Greenhouse Gas (GHG) emissions.

This supporting document has been prepared in accordance with the ‘Environmental Impact Assessment (Part IV Division 1 and 2) Administrative Procedures 2021’ (EPA, 2021a) and ‘Procedures Manual’ (EPA, 2021b), and the ‘Instructions for the referral of a Proposal to the EPA under Section 38 of the EP Act’ (EPA, 2021c) to inform the EPA and DCCEEW consideration of the referral.

Consistent with the EPA instructions for referral, this supporting document is structured according to the ‘Instructions on how to prepare an Environmental Review Document’ (EPA 2021d). This document details the key characteristics of the Proposal and provides an environmental impact assessment against the EPA’s environmental factors. The assessment summarises:

- The EPA environmental factors that may potentially be impacted
- Relevant policy and guidance that has been considered
- The condition of the receiving environment
- Potential environmental impacts and risks associated with the Proposal
- Proposed management and mitigation measures
- Outcomes of stakeholder consultation.

A GHG assessment was undertaken for the Proposal as two one of Horizon Power’s larger GHG emitting towns. This assessment includes project elements that are subject to this referral, plus additional requirements that could be needed in the future such as new power station infrastructure. This approach was taken to demonstrate that both the towns would be well below the safeguard threshold (100,000 tonnes carbon dioxide equivalent (tCO₂e) per year).

1.3 Proponent

The proponent for this Proposal is Horizon Power. Contact details are provided in Table 1-1.

Table 1-1 Proponent contact details

Contact	Details
Horizon Power	ABN: 57 9550 116 97 Address: 18 Brodie Hall Drive Technology Park, Bentley WA 6102
Proposal key contact	Oliver Scheidegger Project Manager decarbonisation@horizonpower.com.au

2 Proposal

The Proposal is located in Derby, Western Australia. The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby on Lots 5, 14 and 15 on Deposited Plan 230140. The network connection route follows Derby Highway, Wodehouse Street and Broome Street to connect the solar and BESS facility to a substation at the existing power station site on Broome Street in Derby. The thermal power station will be installed adjacent to the existing power station on Broome Street in Derby. The lot information for the Development Envelope (DE) is provided in Table 3-3.

A DE has been utilised for the Proposal approvals, as the exact location of Proposal elements are unknown, and will be subject to detailed design in the future. The DE comprises the existing power station, network connection route and two sites where the solar facility and BESS could be located (Site A or Site B).

The DE has a total extent of 307.4 ha and represents the boundary surrounding the Proposal within which all development will be contained. Construction and operation of the Proposal will require permanent clearing of up to 73.5 ha of native vegetation within the DE. It should be noted that the 73.5 ha clearing extent within the DE represents the maximum area of disturbance required to construct and install the Proposal, where opportunities are available clearing will be minimised. The DE has been developed as the area within which the least environmental constraints were identified in the biological survey (detailed in Section 2.3.4, Figure 2-2 and Figure 2-3).

The DE is shown on Figure 2-1 and Horizon Power will remain flexible with the Proposal design. To ensure the Proposal avoids impacts to significant environmental and heritage values identified within the DE, avoidance areas will be developed within the DE to minimise impacts to environmental and Aboriginal cultural heritage values as much as possible.

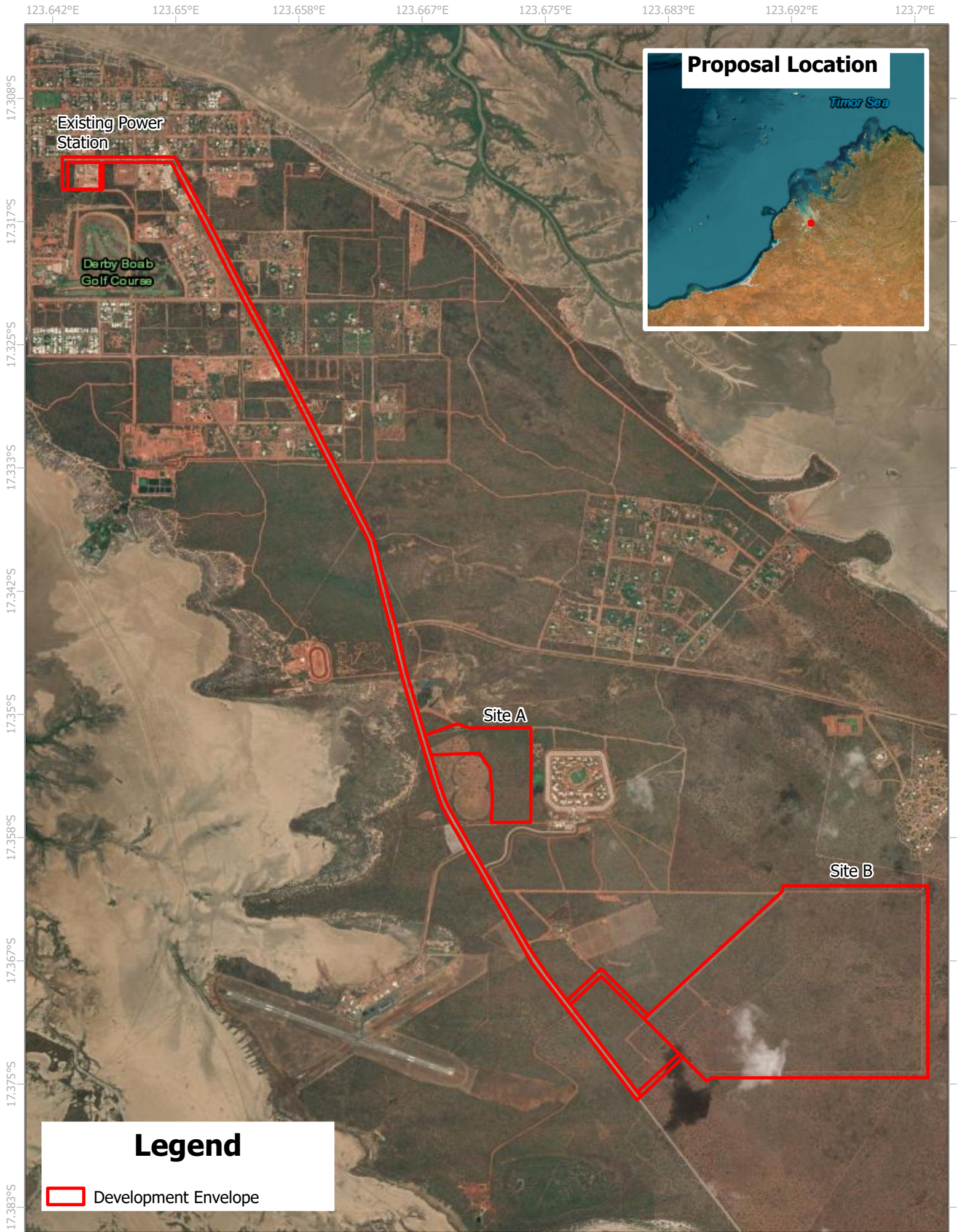


Figure 2-1 | Proposal Location and Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



All figures have the projection GDA2020

2.1 Construction and operational requirements

2.1.1 Pre-construction

Pre-construction activities will occur up to 12 months prior to construction and involve the following activities:

- Solar and BESS facility, network connection route and thermal power station site surveying and marking – surveying personnel utilising Global Positioning System equipment to mark project boundaries and exclusion zones.
- Solar and BESS facility soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig will conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 20 boreholes to a depth of 25 metres (m) and up to 15 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.
- Network connection route soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig to conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 20 boreholes to a depth of 25 m and up to 15 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.
- Thermal power station soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig to conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 10 boreholes to a depth of 25 m and up to 5 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.

2.1.2 Construction

The construction phase is expected to commence in 2027 for a duration of up to 24 months. Construction personnel will consist of a project workforce of up to 50 staff for the solar and BESS facility, up to 40 staff for the network connection route and up to 50 staff for the thermal power station. Construction works will consist of:

- Clearing of up to 73.5 hectares (ha) of native vegetation, topsoil removal and stockpiling, grading and excavations.
- Weed control measures to manage the spread of invasive weeds.
- Supply of concrete will be via the establishment of a temporary on-site concrete batch plant or concrete truck deliveries.
- Supply of water for construction purposes will be via trucked water or construction of a bore in accordance with regulations.
- Civil materials for ground levelling and fill will be trucked in from local sources.
- During construction, temporary laydown areas, ablutions, kitchen, offices, crib room, first aid, water supply and generators will be established onsite. All site works will operate under a safety management system.

- Installation of the solar PV and BESS consisting of ground mounted solar panels, inverters, transformers, cabling, battery containers, power station and other ancillary infrastructure:
 - Solar PV panels and frame will be up to 4 m tall from ground level. The battery containers, power station and office building will typically be up to 5 m tall.
 - Footings of the solar system will involve either installed piles or concrete blocks. The piles solution may involve up to 10,000 steel piles (250 mm diameter) installed to a depth of up to 5 m.
 - Excavation works for footings for the power station, battery system, office building and other ancillary infrastructure may involve excavation of up to 1,200 m³ of soil (footing depth typically up to 2 m deep).
 - Excavation works for internal electrical cabling may involve excavation of up to 5 km of trenching and up to 1.5 m deep, resulting in excavation of up to 11,000 m³ of soil.
- Installation of a network connection route from the solar and BESS facility, following Derby Highway, Wodehouse Street and Broome Street to a substation at the existing power station in Derby. The network connection will either be an overhead or underground transmission line:
 - Underground – Trenching excavations of up to 8.9 km and up to 3 m wide and up to 2 m deep, total excavation of up to 60,000 m³ of soil.
 - Overhead – Electrical poles of up to 20 m height installed at spans of up to 200 m. Total of up to 50 poles installed along the 8.9 km connection route, and excavation for each pole up to 2.5 m deep, total excavations of up to 900m³ of soil.
- Installation of the thermal power station:
 - Excavation works for footings for the thermal power station may involve excavation of up to 1,000 m³ of soil (footing depth typically up to 2.5 m deep).
 - Excavation works for internal electrical cabling and gas piping may involve excavation of up to 1km of trenching and up to 2.5 m deep, resulting in excavation of up to 2,500 m³ of soil.
 - Installation of the power station including up to 10 engine generators, transformers, power station, cooling system, gas supply system, electrical and control cabling, gas pipelines and other auxiliary infrastructure. Engine generators, transformers and power station will be up to 5 m tall from ground level, while engine stacks may be up to 30 m tall.
- Construction of access tracks.

Machinery and vehicles used onsite during the construction phase will include:

- Bulldozer
- Excavator
- Grader
- Telehandler
- Trenching machines
- Horizontal directional driller
- Cable reel trailers

- Hydraulic pullers
- Water cart
- Loader
- Cranes
- Semi-trailer truck
- Light vehicles.

2.1.3 Operations

The operational phase is expected to commence in 2029, with operational personnel shifts conducted during daylight hours at the solar facility and BESS while the solar is producing energy. Operational personnel shifts at the thermal power station will be conducted 24 hours and seven days a week. Operations personnel will consist of a local workforce of up to four personnel per shift for the solar and BESS facility, and three personnel per shift for the thermal power station. There will be no accommodation onsite, personnel will commute to site daily.

Activities associated with the operational phase will include:

- Operation and maintenance of the solar and BESS facility, network connection, and thermal power station.
- Routine maintenance activities for the solar and BESS facility including visual inspections, solar panel cleaning (if required), solar panel replacement, electrical inspections and testing.
- Regular maintenance of the network connection. Activities will depend on whether it is an overhead or underground transmission line:
 - Overhead – visual inspections, thermal imaging, tower and pole maintenance, conductor and insulator cleaning, vegetation management and protection system testing.
 - Underground – visual inspections, thermal imaging and electrical testing.
- Routine maintenance activities for the thermal power station including visual inspections, minor and major services, electrical inspections and testing.
- Environmental management activities.

Machinery and vehicles used onsite during operational phase will include light vehicles, semi-trailer truck, cranes and telehandler.

2.2 Proposal benefits and justification

As a renewable energy proposal, the Proposal has the potential to reduce emissions up to 12,060 tonnes of CO₂e per annum compared to the emissions of the existing Derby power station. If the FES were to operate for 20 years, this would equate to a reduction of approximately 220,000 tonnes of CO₂e. The Proposal provides a potential pathway for further decarbonisation of the town. The Proposal will ensure security of energy supply to Derby after the expiry of the PPA and contribute to the local economy through construction and operation phase job opportunities.

2.3 Proposal alternatives

2.3.1 Alternative Sites

The biological survey covered five sites and the network connection route, totalling 655.7 ha. These areas combined are referred to as the Survey Area and provide regional context for this Proposal. These surveys were undertaken to inform environmental constraints in Derby, and to aid in site selection for the Proposal. The DE for this Proposal was selected as it presented the fewest environmental constraints. Selection of the location of the DE allowed the following environmental sensitivities to be avoided (as shown in Figure 2-2 and Figure 2-3):

- Seven habitat trees suitable for the Northern Brushtail Possum, all of which have hollows suitable for breeding. These trees are also considered suitable habitat for the Northern Coastal Free-tailed Bat and Gouldian Finch (as described in Section 6.1.6)
- Records of 100 individuals of *Haemodorum capitatum* (Priority 1 flora species).

2.3.2 Wind energy system

A combined option of wind, solar, PV and energy storage system was considered for the Proposal. Desktop assessments, energy modelling and financial assessments were conducted, and wind energy was not considered a feasible option due to the following factors:

- Poor wind resource – low wind speeds, diurnal pattern mismatch and seasonal variability
- High cyclone risk – structural challenges, high cost of mitigation measures
- Remoteness – high maintenance, logistics, supply issues
- Higher capital cost (compared to solar)
- Environmental and regulatory approval challenges and environmental impacts.

2.3.3 Customer energy resources

Horizon Power is embracing technology and products that enable more Customer Energy Resources (CER) for greater community participation in decarbonisation. CER will be a complimentary solution to the Derby FES.

2.3.4 Do nothing

A 'do-nothing' approach and continuing to operate a thermal power station to meet Derby's electricity requirements was considered unfavourable due to the economic, environmental and energy security concerns and would likely result in:

- High electricity supply costs due to volatile fuel prices and transport logistics
- Reduced grid reliability due to fuel supply chain disruptions
- Increased carbon emissions
- Missed economic opportunities of a renewable transition.

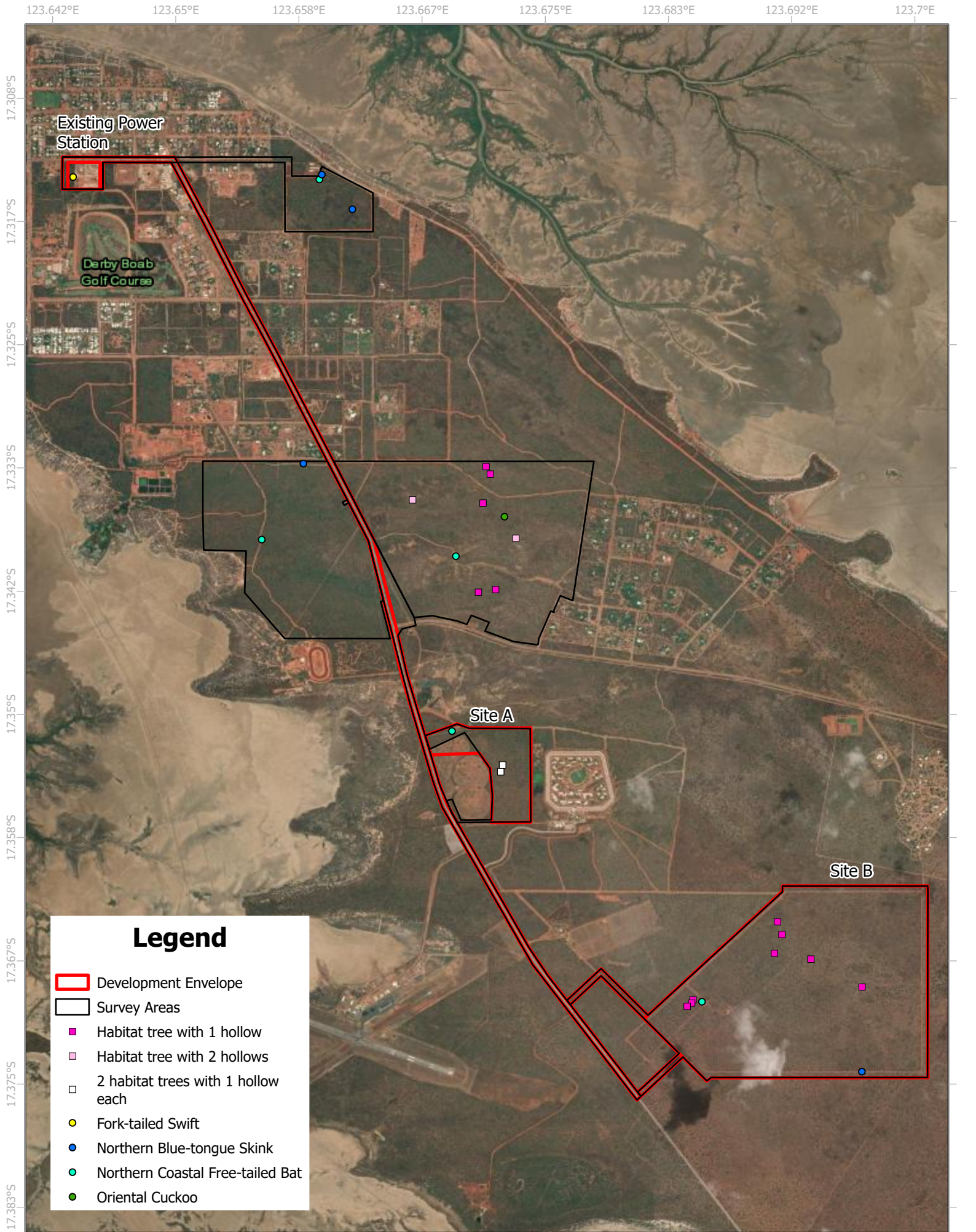
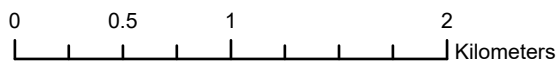


Figure 2-2 | Survey Area and Fauna Sensitivities Recorded



Scale: 1:35,000



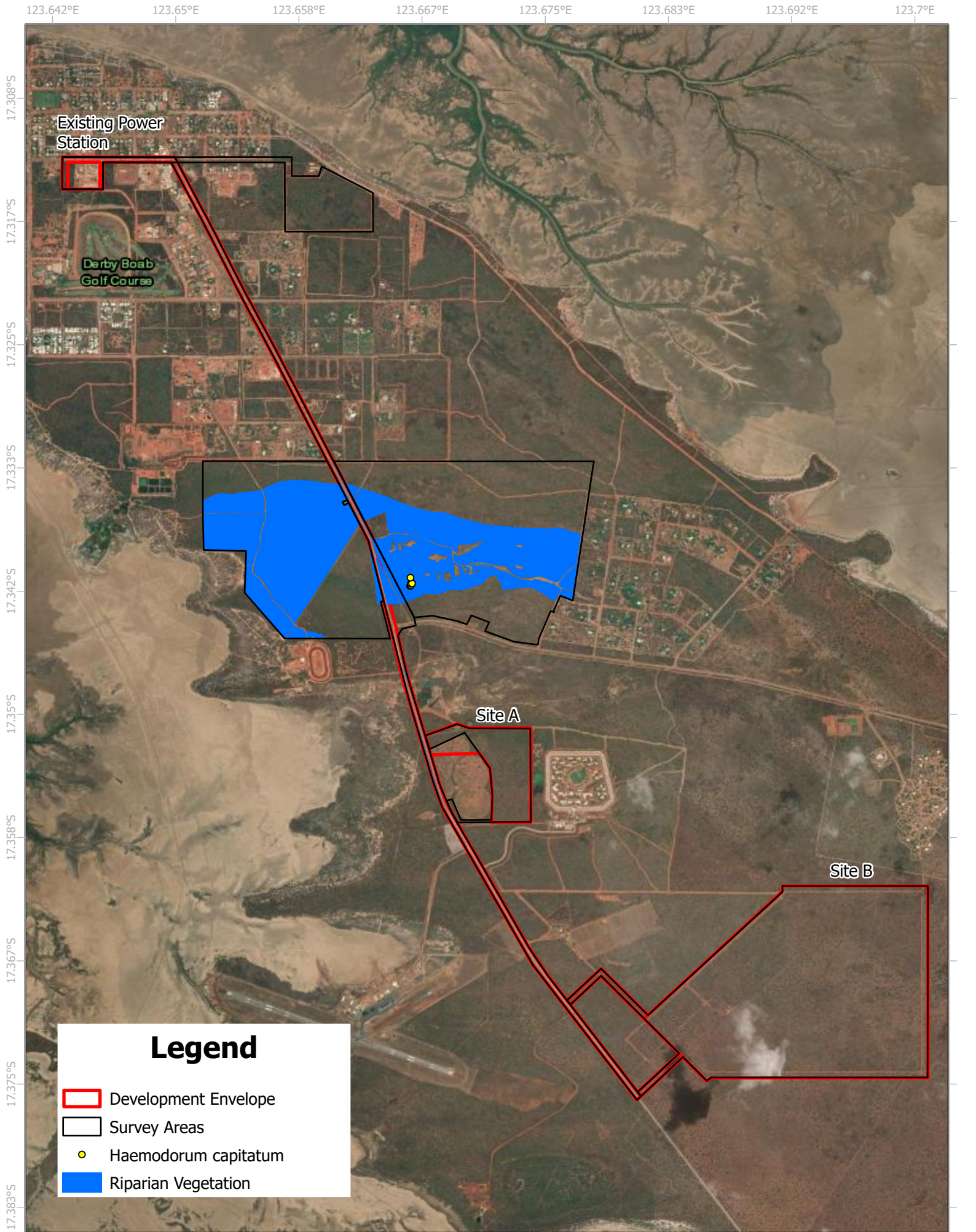
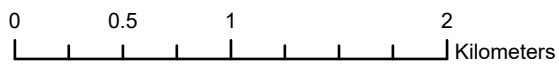


Figure 2-3 | Survey Area and Flora and Vegetation Sensitivities Recorded



Scale: 1:35,000



2.4 Local and regional context

2.4.1 Climate

The Proposal is located in Derby within the Kimberley region of WA, which experiences a tropical climate. Temperatures are warm to hot all year and there is a wet and dry season. The wet season is generally from November to April. The closest meteorological recording station is located at Derby Aero (Site No. 003032). Climatic data from this station indicates the mean maximum temperature ranges from 38.2 °C in November, to 30.7 °C in June. The mean minimum temperature ranges from 26.3°C in December 14.6°C in July. The mean annual rainfall is 702 mm, receiving highest rainfall in January (average of 208.9 mm) (BoM, 2025).

2.4.2 Geology, landform and soils

The Proposal is located within the Derby Sandplain Zone, which is described as ‘sandplains and dunes (with some sandy plateaux and coastal mudflats) on sedimentary rocks of the Canning Basin; Red deep sands with some Yellow sandy earths and Tidal soils; Pindan shrublands with spinifex/tussock grasslands’ (DPIRD, 2022a). The Proposal overlaps the following land systems (Figure 2-4) (DPIRD, 2022b):

- Wanganut System: Sandplains and linear dunes supporting pindan woodlands with acacias and bloodwoods and curly spinifex- ribbon grass, and broad low-lying swales supporting bloodwood-grey box woodlands with curly spinifex-ribbon grass.
- Carpentaria System: Bare coastal mudflats, minor sandy margins and seaward margins, little vegetation except for mangrove fringing thickets.

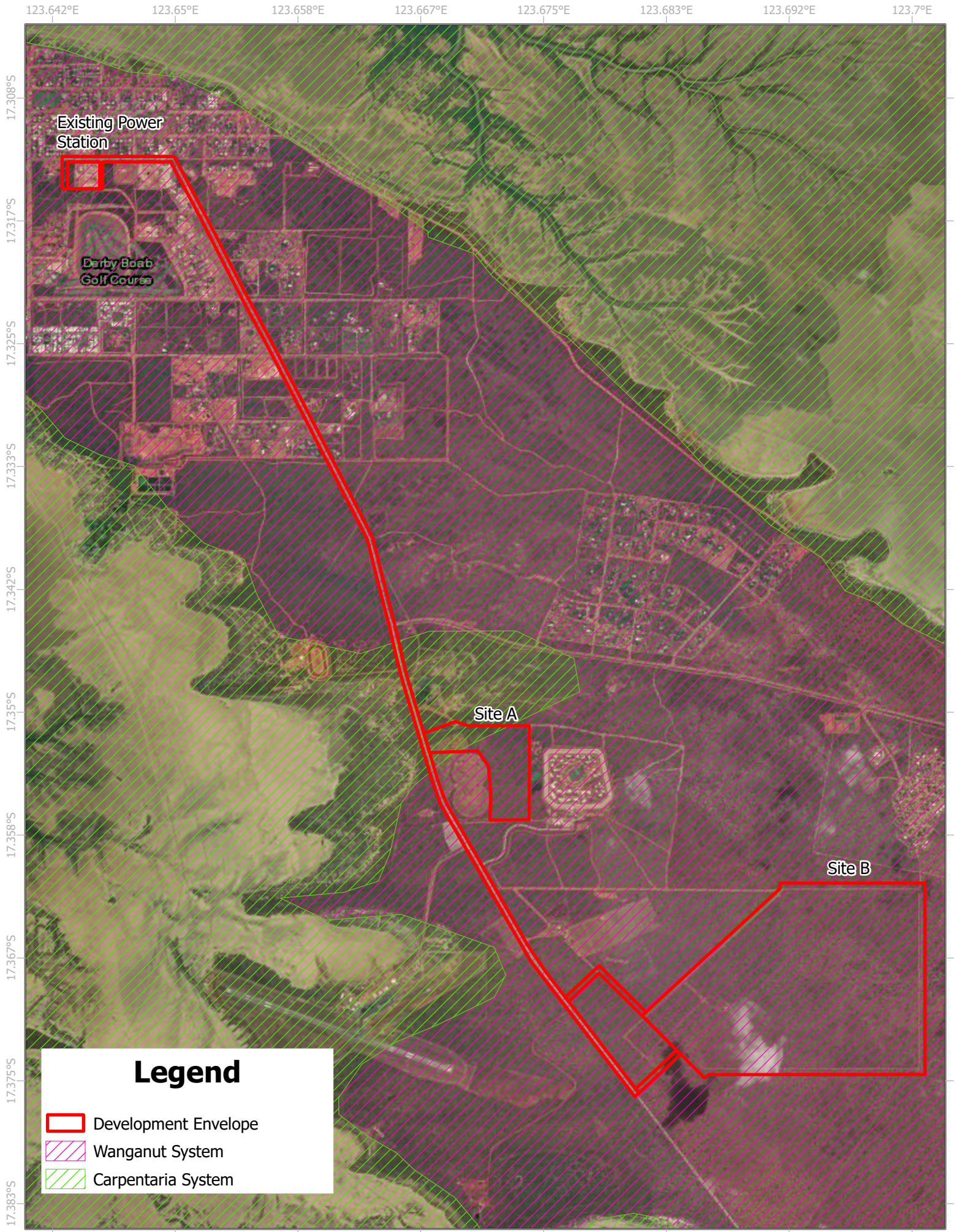


Figure 2-4 | Land Systems within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



2.4.3 Acid Sulfate Soils

The Atlas of Australian Acid Sulfate Soils describes the national map of available ASS mapping on coastal states and territories. The vast majority of the DE (92.35%) is described as having an extremely low probability of occurrence of ASS. However, this classification has a confidence level 4, which means that this is a provisional classification inferred from surrogate data with no on-ground verification (Fitzpatrick et al., 2011). The detailed classification is described in Table 2-1.

Table 2-1 Potential Acid Sulfate Soils within the DE

Classification	Probability of occurrence in mapping unit	Area within DE (ha)	Proportion within DE (%)	Description
Ad(p4)	High Probability of occurrence - >70% chance of occurrence in mapping unit.	2.1	0.70%	ASS generally within upper 1m in extratidal flats.
Am(p4)	High Probability of occurrence - >70% chance of occurrence in mapping unit.	20.2	6.57%	ASS generally within upper 1 m in wet / riparian areas with Hydrosols (Isbell, 1996).
Aq(p4)	High Probability of occurrence - >70% chance of occurrence in mapping unit.	1.2	0.38%	ASS generally within upper 1 m in wet / riparian areas with andosols, Ferrosols, Tenosols, Rudosols and Podosols (Isbell, 1996).
Cq(p4)	Extreme Low Probability of occurrence – 1-5% chance of occurrence in mapping unit with any occurrences in small, localised areas.	283.9	92.35%	ASS1 generally within upper 1 m in wet / riparian areas with Kandosols, Ferrosols, Tenosols, Rudosols and Podosols (Isbell, 1996).

P - Potential acid sulfate soil (PASS) = sulfidic material; Level of confidence: p4 - No necessary analytical data are available, and classifier has little knowledge or experience with ASS, hence classification is provisional.

2.4.4 Hydrology and Hydrogeology

No permanent water bodies or drainage lines are located within the DE. The network connection route portion of the DE overlaps the Derby Water Reserve, which is a Priority 1 Public Drinking Water Source Area (PDWSA), and it also overlaps the Derby and Canning – Kimberley Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act).

The DE is located 1.8 km from the closest watercourse, a minor perineal watercourse, tributary of Airport Creek.

No significant or nationally important wetlands occur within the DE (DBCA, 2017).

The hydrology of the DE is further described in Section 6.4.

2.4.5 Regional biogeography

The Proposal is located within the Dampierland bioregion, and the Fitzroy Trough subregion (DL01) as described by IBRA. The Fitzroy Trough is the semi-arid northern edge of the Canning Basin, encompassing the middle and lower catchments of the Fitzroy River. It includes alluvial plains, sandplains, and eroded dune surfaces derived from the Canning Basin. Extensive coastal mudflats are associated with the Fitzroy delta, while remnants of Devonian limestone barrier reefs are preserved along its northern and eastern edges. The region features woodlands of Pindan, Boab (*Adansonia gregorii*), and Eucalyptus, with rainforest patches and hummock grasslands thriving on limestone (Graham, 2001).

2.4.6 Social context

2.4.6.1 Native title

There are currently two registered native title claims within the DE: Booroola Moorool Morrool (WC2016/005, WAD598/2016) and Warrwa Combined (WC2014/004, WAD33/2019) (NNTT, 2025). Whilst there is no native title determination yet, where the Proposal would impact native title rights and interests due to the need for formal land tenure, the current land tenure is freehold, which is inconsistent with native title rights and interests. The proposed network connection route does not affect any undetermined native title rights and interests.

2.4.6.2 Land Use

The solar and BESS facility is proposed to be located at either Site A or Site B, approximately 2.5 km and 5 km south of Derby respectively, with the network connection route following Derby Highway, Wodehouse Street and Broome Street to the existing power station on Broome Street in Derby. The new thermal station will be installed adjacent to the existing power station on in Derby (Figure 2-1).

The lot information for the DE is provided in Table 3-3. The DE is located on dedicated roads, reserve land, freehold land and unallocated Crown Land (Landgate, 2025a). The surrounding land uses are roads, Crown Land, Crown Reserves, Freehold land, unallocated Crown land and residential areas (Landgate, 2025a).

The Proposal is located within the Shire of Derby - West Kimberley with the northern portion of the DE associated with the existing power station and network connection route within Derby township.

Derby has a population of approximately 3,222 people (ABS, 2021a). Within Derby:

- Approximately 24.9% of the population is younger than 20 years, 57.4% of the population is aged between 20 – 60 years, and approximately 17.7% of the population is aged over 60 years.
- Unemployment rate is 4.6%. Approximately 69.9% of those working is employed full time, and a further 17.3% are employed on a part-time basis.
- The largest sector of the economy in Shire of Derby – West Kimberley is construction, followed by agriculture, forestry and fishing, retail trade and retail activities (ABS, 2024).
- The DE is located on Road Reserves, Crown Land and Reserve (Type 3 R) (Landgate, 2025a).

2.4.6.3 Conservation reserves and environmentally sensitive areas

There are no DBCA managed lands (DBCA, 2024a) or Environmentally Sensitive Areas (ESAs) within the DE. The closest ESA is 48 km northeast of the DE (DWER, 2021).

2.4.7 Other Proposals in the surrounding area

There are several reasonably foreseeable developments within the Proposal region and, more broadly, within the Fitzroy Trough subregion of the Dampierland bioregion generally with similar dominant land systems. These developments include:

- Napier Downs Irrigation Project: located approximately 70 km northeast of the DE. The project was referred to the EPA under Section 38 of the EP Act in 2023. The referral was examined and the proposal not assessed under Part IV of the EP Act.
- Three active Native Vegetation Clearing Permits (NVCP) within the Fitzroy Trough Subregion, totalling 411.8 ha and mainly related to renewable energy, commercial and pastoral developments.

The above Projects have been used to inform the assessment of cumulative impacts of the Proposal with other nearby developments.

3 Legislative context

3.1 Environmental impact assessment process

3.1.1 *Environmental Protection Act 1986*, Part IV Environmental Impact Assessment

The Proposal is being referred to determine if assessment is required under Part IV of the EP Act. Part IV of the EP Act is the primary legislation governing environmental protection and impact assessment in WA. Division 1 of Part IV of the EP Act provides for the referral and assessment of significant or strategic Proposals. If the EPA chooses not to assess the project, it will be sent to the Department of Water and Environment Regulation (DWER) for a clearing permit under Part V of the EP Act.

3.1.2 *Environment Protection and Biodiversity Conservation Act 1999*

A Proposal that may have a significant impact on a MNES requires approval from the Commonwealth DCCEEW under the EPBC Act. The EPBC Act provides that a 'controlled action' is one that is likely to cause a significant impact to a MNES and which must be approved under the EPBC Act. Parts 7 and 8 of the EPBC Act provides for the referral and assessment of controlled actions.

The Proposal will be referred to DCCEEW under the EPBC Act due to potential impacts to habitats for listed Threatened and Migratory species. Should the EPA decide to assess, and the Proposal be determined a controlled action, Horizon Power would request that the EPBC Act assessment approach be an 'accredited assessment' of MNES to be undertaken as part of the EPA assessment of the Proposal. The EPA assessment will then inform a decision by the Federal Minister for Environment and conditions for the Proposal under the EPBC Act.

3.2 Other approvals and regulation

Following primary environmental approval of the Proposal under Part IV of the EP Act, additional regulatory approvals potentially required to develop and operate the Proposal are summarised in Table 3-1. Other statutory decision-making process which can mitigate potential impacts on the environment are summarised in Table 3-2.

Table 3-1 Other approvals

Decision-making authority	Legislation or Agreement regulating the activity	Approval required (and specify which Proposal element the approval is related to)	Whether and how statutory decision-making process can mitigate impacts on the environment?
Department of Planning, Lands and Heritage (DPLH)	<i>Aboriginal Heritage Act 1972 (AH Act)</i>	<p>All Proposal activities must be undertaken in accordance with the AH Act, which are relevant to the Social Surroundings element of the Proposal.</p> <p>Horizon Power is engaging with the Traditional Owners to undertake heritage surveys and to put procedures in place to ensure that there will be no disturbance, damage, impact or removal of any Aboriginal Heritage sites as part of Proposal activities.</p> <p>However, if impact to Aboriginal heritage cannot be avoided, it would only be done if it could be performed in accordance with the AH Act and any other applicable legislation, as well as being in accordance with the Horizon Power Aboriginal Cultural Heritage Management Policy and consultation with the Traditional Owners.</p>	<p>Yes: The AH Act is relevant to management of the risk associated with “Direct physical disturbance of Aboriginal heritage features from construction and operational activities” which is further described in Section 6.3. This is aligned to the EPA factor objectives for Social Surroundings.</p>
DPLH	<i>Land Administration Act 1997 (LA Act)</i>	<p>Construction and operation within the solar infrastructure portion of the DE will require a management order under the <i>Land Administration Act 1997</i>.</p>	<p>Yes: Land tenure for the solar and BESS facility will be arranged as required, including lease and purchase of relevant parcels prior to construction.</p> <p>The new thermal power station will be located adjacent to the existing power station, currently under Management Order to Regional Power Corporation for the purpose of "Powerhouse, Depot and Quarters".</p> <p>As an ‘energy operator’, Horizon Power has certain rights under sections 46 and 49 of the <i>Energy Operators (Powers) Act 1979</i> which allow Horizon</p>

Decision-making authority	Legislation or Agreement regulating the activity	Approval required (and specify which Proposal element the approval is related to)	Whether and how statutory decision-making process can mitigate impacts on the environment?
			Power to access and use land for the purpose of constructing, maintaining and operating electricity infrastructure. Horizon Power will utilise these powers for the network connection route portion of the DE.
Department of Biodiversity Conservation and Attractions (DBCA)	BC Act	Authorisation to Take or Disturb Threatened Fauna	<p>Yes: Any conditions attached to the approved Authorisations will be adhered to during clearing and disturbance works.</p> <p>A Ministerial Authorisation under section 40 of the BC Act is required to take or disturb threatened species (critically endangered, endangered or vulnerable). Regulation 76 of the Western Australia's Biodiversity Conservation Regulations 2018 outlines the requirements for considering applications for section 40 authorisations related to wildlife licences, emphasising the conservation and protection of biodiversity.</p> <p>All applications will be considered in the context of the objective of the BC Act in section 3(1)(a) to conserve and protect biodiversity and biodiversity components in the State.</p>

PROTECTED

Decision-making authority	Legislation or Agreement regulating the activity	Approval required (and specify which Proposal element the approval is related to)	Whether and how statutory decision-making process can mitigate impacts on the environment?
Department of Water and Environmental Regulation (DWER)	EP Act (Part V)	<p>Construction and operation of prescribed activities and premises.</p> <p>The Proposal may include the construction and operation of solar infrastructure, new concrete batching plant, wastewater treatment plant and other supporting infrastructure which may require approval from DWER through a works approval/licence application under Part V of the EP Act.</p>	<p>Yes: The Works Approvals and Licensing process is intended to prevent, control, abate, and mitigate pollution or environmental harm. It sets limits and focuses on management controls to minimise impacts on the environment from emissions associated with the proposed prescribed activities and categories under Part V of the EP Act. Assessment of the Works Approval and subsequent Licence applications includes a risk assessment of the identified emissions and discharges and their potential to cause environmental harm.</p>
DWER	RIWI Act	<p>The Proposal may include groundwater abstraction for dewatering during construction and construction of a bore to supply water for construction purposes. These activities may require approval from DWER through Section 5C and 26D Licences under the RIWI Act.</p>	<p>Yes: Sets limits on the location and quantity of water abstraction to ensure impacts to groundwater levels and quality are minimised. Relevant licences related to the Proposal include licence to:</p> <ul style="list-style-type: none"> • take water (a 5C groundwater or surface water licence) • construct wells, including bores and soaks (a 26D licence). <p>As part of the approvals process, impacts on the water environment will be considered and assessed. These licences have terms, conditions and limits which must be complied with.</p>
Department of Energy, Mines, Industry Regulation and Safety	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007	Dangerous Goods Site Licence	<p>Possible: A Dangerous Goods Licence is likely to be required for operation of the FES if Dangerous Goods are required to be stored on site.</p>

Table 3-2 Other statutory decision-making process which can mitigate potential impacts on the environment

Environmental impact	How is the impact regulated by other decision-making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact e.g. time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
Potential impacts to Aboriginal cultural heritage	All Proposal activities must be undertaken in accordance with the AH Act, which regulates disturbance, damage or removal of registered Aboriginal cultural heritage sites.	The AH Act applies to all Aboriginal heritage, whether registered, lodged or publicly unknown. Without appropriate due diligence and management, there is a risk to publicly unknown heritage.	<p>Horizon Power undertakes heritage surveys with relevant traditional owners prior to ground disturbing activities to ensure it can practice site avoidance. As such there will be no planned disturbance, damage, impact or removal of any Aboriginal Heritage sites as part of Proposal activities.</p> <p>Should unknown heritage sites be uncovered during the Proposal, they will be handled in accordance with the AH Act and any other applicable legislation, Horizon Power's Aboriginal Cultural Heritage Management Policy, and in consultation with Traditional Owners. Any necessary approval</p>	Conditions, enforcement and review processes under the AH Act are limited to section 18 approvals. As Horizon Power practices site avoidance and works closely with the Traditional Owners to ensure there are no impacts to heritage as a result of Horizon Power's activities, it is not anticipated that a section 18 AH Act approval will be required.	<p>Aboriginal and Torres Strait Islander stakeholder engagement has been occurring in two streams. Broad town-by-town community engagement planned through the Community Engagement and Communications Plan and regionally through dedicated Customer and Community staff to engage with residents.</p> <p>The Traditional Owner Relationships & Reconciliation (TORR) team have provided back-up support where needed. The TORR team reviewed and adapted communication materials for Traditional Owners and Aboriginal community engagement.</p>

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Environmental impact	How is the impact regulated by other decision-making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact e.g. time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
			<p>under the AH Act only regulates impacts to registered sites, not other cultural heritage values and as such is only partially aligned with EPA objectives for Social Surroundings. Consultation with the Traditional Owners is being undertaken to mitigate risk to cultural heritage aspects that are not protected under the AH Act.</p>		<p>The TORR team continue to coordinate the engagement with Traditional Owners through Land Councils and Prescribed Body Corporates (PBC's). This engagement has occurred separate to CE due to governance models and their respective annual calendar of meeting dates. There are two claimant groups with interest in Native Title across the Derby townsite.</p>
<p>Clearing associated with the proposal</p>	<p>The access to portions of the DE will be governed and managed by a licence and management order under the LA Act.</p>	<p>The requirements of the LA Act are administrative and unlikely to mitigate impacts to the environment, however they will constrain the location where aspects of the Proposal can be constructed.</p>	<p>The decision-making process will limit the extent the DE.</p>	<p>No conditions, enforcements or review processes are expected.</p>	<p>Engagement with DPLH has been undertaken regarding the land tenure requirements.</p>

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Environmental impact	How is the impact regulated by other decision- making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact e.g. time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
Terrestrial fauna	Authorisation to Take or Disturb Threatened Fauna is required under the BC Act.	This authorisation only applies to Threatened species and not Priority species.	Any conditions attached to the approved Authorisations will be adhered to during clearing and disturbance works. This is consistent with EPA Objective for Terrestrial Fauna.	Reporting is typically required for any disturbance undertaken to Threatened fauna.	Stakeholder engagement has not been undertaken with DBCA for terrestrial fauna as this licence is an administrative requirement for all disturbance to Threatened fauna species, the requirements of licencing are well understood.
Pollution	The Proposal may include the construction and operation of solar infrastructure, new concrete batching plant, wastewater treatment plant and other supporting infrastructure which may require approval from DWER through a works approval/licence application under Part V of the EP Act.	The Works Approvals and Licensing process only applies to Prescribed Premises and activities.	The Works Approvals and Licensing process has been designed to prevent, control, abate, and mitigate pollution or environmental harm. It sets limits and focuses on management controls to minimise impacts on the environment from emissions associated with the prescribed activities and categories under Part V of the EP Act. Assessment of the Works Approval and subsequent Licence	Reporting is typically required for any disturbance undertaken and annual reporting may be required.	Stakeholder engagement has not been undertaken, this approval would be applied for by the construction contractor once the construction requirements are understood.

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Environmental impact	How is the impact regulated by other decision-making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact e.g. time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
	The Proposal may require utilisation of Dangerous Goods. A Dangerous Goods Site Licence will be obtained under the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007.	The Licence only applies to Dangerous Goods as defined under the Regulations.	applications includes a risk assessment of the identified emissions and discharges and their potential to cause environmental harm. This is consistent with EPA objectives for Flora and Vegetation, Terrestrial Fauna, Social Surrounds, Human Health and Air Quality. A Dangerous Goods Licence is likely to be required for operation of the Proposal if Dangerous Goods are required to be stored on site. This is consistent with EPA objectives for Social Surrounds and Human Health.	Reportable situations are defined under the Reporting and investigating incidents and other situations involving dangerous goods: Guideline. Enforcement, offences and penalties apply.	Stakeholder engagement has not been undertaken, this approval would be applied for by the construction contractor once the construction requirements are understood.
Impacts to bed and banks, and extraction of water	The Proposal may include groundwater abstraction for dewatering during construction and construction of a bore to	The RIWI Act only applies in Proclaimed areas.	These approvals set limits on the location and quantity of water abstraction to ensure impacts to groundwater levels and quality are	These licences have terms, conditions and limits which must be complied with. Reporting is often required under the licence.	Stakeholder engagement has not been undertaken, this approval would be applied for by the construction contractor

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Environmental impact	How is the impact regulated by other decision-making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact e.g. time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
	<p>supply water for construction purposes. These activities may require approval from DWER through Section 5C and 26D Licences under the Rights in Water and Irrigation Act 1914 (RIWI Act).</p>		<p>minimised. Relevant licences related to the Proposal include licence to:</p> <ul style="list-style-type: none"> • Take water (a 5C groundwater or surface water licence) • Construct wells, including bores and soaks (a 26D licence). <p>As part of the approval process, impacts on the water environment will be considered and assessed.</p> <p>The RIWI Act licencing requirements are consistent with the EPA objectives for Inland Waters.</p>		<p>once the construction requirements are understood.</p>

3.2.1 Land access

The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5 km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby on Lots 5, 14 and 15 on Deposited Plan 230140. Land tenure will be arranged as required, including lease and purchase of relevant parcels prior to construction.

The new thermal power station will be located adjacent to the existing power station on Lot 648 on Deposited Plan 209773, currently under Management Order to Regional Power Corporation for the purpose of "Powerhouse, Depot and Quarters".

As an 'energy operator', Horizon Power has certain rights under sections 46 and 49 of the *Energy Operators (Powers) Act 1979* which allow Horizon Power to access and use land for the purpose of constructing, maintaining and operating electricity infrastructure. Horizon Power will utilise these powers for the network connection route portion of the DE.

The lot information for the DE is provided in Table 3-3.

Table 3-3 Lot information for Development Envelope

Tenure	Lot/Plan/Title	Notes
Dedicated Road	PIN 11433626	Broome Street
Dedicated Road	PIN 11433669, PIN 11433623, PIN 11433670, PIN 11433671, PIN 11433697, PIN 11434260	Derby Highway
Dedicated Road	PIN 11434262	Derby-Gibb River Road
Dedicated Road	PIN 11433633	Gladstone Street
Dedicated Road	PIN 11433619	Wodehouse Street
Dedicated Road	PIN 11434271, PIN 11434270, PIN 11434275, PIN 11434265, PIN 11434272	Unnamed Roads
Reserve 29376	Lot 648 on Deposited Plan 209773, LR3121/167	Management Order to Regional Power Corporation for the purpose of "Powerhouse, Depot and Quarters"
Reserve 1326	Lot 1410 on Deposited Plan 211020, LR3114/772	Management Order to Shire of Derby West Kimberley for the purpose of "Common"
Freehold	Lot 31 on Deposited Plan 207640, CT1408/265	This lot has a Registered Proprietor
Freehold	Lot 14 on Deposited Plan 230140, CT2645/415	This lot has a Registered Proprietor
Freehold	Lot 5 on Deposited Plan 230140, CT2645/416	This lot has a Registered Proprietor
Freehold	Lot 15 on Deposited Plan 230140, CT2645/414	This lot has a Registered Proprietor
Unallocated Crown Land	Lot 1409 on Deposited Plan 211020, LR3114/771	Responsible agency: DPLH

3.2.2 Decision-making authorities

The authorities listed in Table 3-4 have been identified as decision-making authorities for the Proposal.

Table 3-4 Decision-making authorities

Decision-making authority	Relevant legislation
Minister for Aboriginal Affairs	AH Act
Minister for the Environment	BC Act, EP Act
Minister for Water	RIWI Act
Minister for Lands	LA Act
Commonwealth Minister for Environment	EPBC Act
Department of Energy, Mines, Industry Regulation and Safety	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007

4 Stakeholder engagement

4.1 Key stakeholders

The key stakeholders identified for the Proposal are provided in Table 4-1.

Table 4-1 Key project stakeholders

Category	Stakeholders
Agencies acting on behalf of the Commonwealth Government	<ul style="list-style-type: none"> Regional Development Australia Kimberley, DCCEEW
State Government – Departmental Ministers	<ul style="list-style-type: none"> Hon Divina D’Anna – Member for Kimberley
State Government - Agencies	<ul style="list-style-type: none"> DPLH, Kimberley Development Commission, Water Corporation, Department of Communities, DBCA, Main Roads WA, Telstra, Development WA, Air Services Australia.
Local Government	<ul style="list-style-type: none"> Shire of Derby/West Kimberley
Traditional owners	<ul style="list-style-type: none"> Derby Claim #1 - Warrwa Derby Claim #2 - Borrooloola Moorool Moorool Madanaa Nada Aboriginal Corporation Kimberley Land Council
Aboriginal Community-Controlled Organisations (ACCO’s)	<ul style="list-style-type: none"> Emama Nguda Aboriginal Corporation Dambimangari Aboriginal Corporation Mowanjum Aboriginal Corporation
Corporate	<ul style="list-style-type: none"> Major Account Holders, Derby Chamber of Commerce and Industry, Clean Energy Council, First Nations Clean Energy Network, Kimberley Land Council, Kimberley Aboriginal Lands Trust, EDL Energy
Derby Community	<ul style="list-style-type: none"> Customer and community members
Community-led environmental organisations	<ul style="list-style-type: none"> Derby Landcare Group Hon. Robin Chappel & Chappel Research

4.2 Stakeholder engagement process

The stakeholder engagement process is guided by an Engagement and Communications Plan that is informed by a strategic engagement framework. This framework combines the principles of the International Association for Public Participation, The Energy Charter and Free Prior and Informed Consent approach to engagement.

By integrating these principles, Horizon Power aims to foster inclusive, transparent, and rights-respecting engagement processes that empower communities and uphold fundamental rights.

Horizon Power is committed to working with communities and engaging with them on projects that impact them. We are committed to sharing the journey with our communities to gain their valuable knowledge, enabling us to translate their worthy ideas into our decisions and actions.

Each engagement activity is tailored to the local context, encouraging two-way dialogue. Information has been delivered in-person where possible. Throughout engagement and communications, queries and concerns have been captured and responses provided and documented via a stakeholder consultation register.

A dedicated project website with FAQs has been established, providing access to information, and a portal for community members to sign up and receive further project updates. Community members and stakeholders can contact the team via a dedicated project email address or through the regional Horizon Power depot in Broome.

On 19 September 2023, a face-to-face community information session was held in Derby. The session was attended by representatives from Horizon Power's various divisions, including Customer & Community and Future Energy Systems. The session saw a good turnout with 25 RSVPs and 19 attendees representing a diverse group of Derby residents. As a key local stakeholder, Derby Landcare Group were invited to the event and members encouraged to attend.

Shire of Derby/West Kimberley Councillors were invited to attend and subsequently requested a copy of the presentation which was provided.

The project was presented to the RDA Kimberley Committee, in Derby on 7 September 2023. Horizon Power met with the Shire of Derby/West Kimberley on 26 June 2024 and further communications remain ongoing.

Horizon Power engaged with 300 key Kimberley stakeholders in attendance at the Kimberley Economic Forum in Kununurra and Broome, August 2024 and May 2025 respectively. Project information was disseminated via a presentation and print information and delegates were able to access Horizon Power staff in attendance for more questions.

Two electronic mail direct campaigns have been issued to Derby and Kimberley Horizon Power customers via a dedicated project update notification and as part of a quarterly update. All information disseminated is tailored to the Derby audience. The insights outlined below informed the content. The current database for the Derby community members requesting information about Kimberley FES totals 56 people.

Both the broome@horizonpower.com.au and decarbonisation@horizonpower.com.au project email addresses have been utilised by community and stakeholders to register for project updates, ask questions and provide feedback.

Aboriginal and Torres Strait Islander stakeholder engagement has been occurring in two streams. Broad town-by-town community engagement planned through the Community Engagement and Communications Plan and regionally through dedicated Customer and Community staff to engage with residents.

The Traditional Owner Relationships & Reconciliation (TORR) team have provided back-up support where needed. The TORR team reviewed and adapted communication materials for Traditional Owners and Aboriginal community engagement.

The TORR team continue to coordinate the engagement with Traditional Owners (TO's) through the Kimberley Land Council and Native Title claim determinates. This engagement has occurred separate to community engagement due to determination timelines,

governance models and annual calendar of meeting dates. There are two claimant groups with interest in Native Title across the Derby townsite.

4.3 Stakeholder consultation outcomes

The outcomes of the stakeholder consultation undertaken to date for the Proposal is provided in Table 4-2.

Table 4-2 Stakeholder consultation register

Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Response
Resident & Horizon Power customer	19 September 2023	Community Information Session	Query as to where EV Charger locations for Derby will be located, need to communicate this to the community	Information provided to stakeholder.
	19 September 2023	Community Information Session	Stakeholder informed Horizon Power of aa potential land parcel	Project team follow-up on land parcel
	19 September 2023	Community Information Session	Query around geothermal as an option for the project.	Exploration licences can take several years, capital investment is very high, Government Trading Enterprises do not have capital to fund this new technology
	19 September 2023	Community Information Session	Query around tidal and hydrogen as project options	Horizon Power is interested in potential trials of emerging generation technologies (such as wave or tidal), but our expectation for the foreseeable future is that these technologies will not be commercially competitive with solar and onshore wind. FAQ's - https://www.horizonpower.com.au/your-community/getting-future-ready/kimberley-future-energy-system/
	19 September 2023	Community Information Session	Query around potential locations for the development.	Project stage was too early to identify exact examples.
	11 May 2024	Email correspondence	Stakeholder expressed concern regarding ability to install solar power at private residence.	Horizon Power constrained customer rooftop solar installs prior to Q2 2024 because the network could not manage the energy flow back into the grid and maintain grid stability. Distributed Energy Resources Management System has since enabled Smart Connect Solar and there are now zero-refusals.

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Response
	29 May 2024	Email correspondence	Query about tidal power and potential for other renewable energy sources as an alternative to the current power station.	Horizon Power are interested in potential trials of emerging generation technologies (such as wave or tidal), but our expectation for the foreseeable future is that these technologies will not be commercially competitive with solar and onshore wind.
Shire of Derby/West Kimberley	19 September 2023	Community Information Session	Query around fire risks for the project. Indicative support for various land parcels. Ancillary thermals are included in the 'Renewables' zoning for the local planning scheme.	Horizon Power has noted this comment.
EDL Energy	19 September 2023	Community Information Session	Query around the cost of overhauling power assets to maintain reliability.	Further follow-up undertaken by project assets team.
Hon Robbin Chapel & Chappel Research	11 May 2024	Letter and email	<p>Several queries regarding:</p> <ul style="list-style-type: none"> • The location of proposed sites and whether they were presented to the Shire of Derby-West Kimberley. • Alternate locations considered by Horizon Power. • Horizon Power's knowledge of the Shire of Derby-West Kimberley's zoning conditions (TPS 5 and 7, and draft TPS 9) and land systems (i.e. the Wanganut Land System) prior to site selection. Horizon Power's knowledge of the prevailing wind-blown salt 	<p>The project team have been looking at multiple sites in Derby and are currently working on due diligence to ascertain their viability.</p> <p>We will compare environmental survey results supplied with the field survey report undertaken by external environmental consultants.</p> <p>Confirmed that a current Power Purchase Agreement timeline with EDL is a key driver for the project.</p> <p>Acknowledged and thanked for additional information.</p>

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Response
			<p>laden dust on chosen and alternate sites.</p> <ul style="list-style-type: none"> Request for a map of Derby showing transmission lines above 110 kV and lower voltage lines such as 66 kV and 33 kV. The KV line required to transmit power from the Renewable Energy Facility to current distribution hub at the existing LNG 14 MW Derby power station. The 2004 LNG contract with Horizon Power, a state-owned corporation in Western Australia, Santos (45%) and Apache Northwest Pty Ltd (55% and Operator) supplying EDL LNG (WA) Pty Ltd, a subsidiary of Energy Developments Limited (EDL). Details regarding details of the survey sites, timing of the survey and qualifications of the staff that undertook the survey. Availability of the survey data. 	
Exurban	27 May 2024	Email correspondence	Query around whether Horizon Power is aware of relevant land approval processes and new scheme.	Affirmative response provided.
Derby Landcare Group	6 February 2024	Email correspondence	Query around whether Horizon Power would consider placing wind and tidal turbines in King Sound. Concern	This project does not consider offshore wind. Horizon Power are interested in trials of emerging generation technologies (such as wave

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Response
			indicated about the impact wind turbines would have on migratory birds.	or tidal), but our expectation for the foreseeable future is that these technologies will not be commercially competitive with solar and onshore wind.
Kimberley Stakeholders	29 August 2024	Presentation and brochure	The project was a key message communicated by Horizon Power as presenters at the 2024 Kimberley Economic Forum in Kununurra.	For noting and contact details for more information.
Shire of Derby/West Kimberley Derby Landcare Group Robin Chapple and Chappel Research	11 April 2025	Email	Notified the group that the Proposal will be referred under the <i>Environmental Protection Act 1986</i> (EP Act) and EPBC Act.	Project information provided.
Kimberley Stakeholders	29 May 2025	Presentation and brochure	The project was a key message communicated by Horizon Power as presenters at the 2025 Kimberley Economic Forum in Broome.	For noting and contact details for more information.
Commissioner of Shire of Derby/West Kimberley	6 June 2025	Email	Notified the group that the Proposal will be referred under the EP Act and EPBC Act.	Taken on notice.
Environs Kimberley Derby Landcare	5 June 2025	Email correspondence	Provision of the Biological Survey undertaken for the Proposal by GHD (2024).	N/A.

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Response
Shire of Broome Shire of Derby West Kimberley				
Traditional Owners	3 November 2023	Meeting	Meeting with Warrwa to give a general update on Proposal and noted that Heritage Protection Agreement will be established.	Project information provided.
	29 September 2023	Meeting	Meeting with Borrooloola Moorool Moorool to give a general update on Proposal and noted that Heritage Protection Agreement will be established.	Project information provided.
	Borrooloola Moorool Moorool: throughout April and May 2025. Madanaa Nada Aboriginal Corporation: throughout April, May and June 2025	Email correspondence Video and phone calls	Consultation with the Heritage Advisor and lawyers at Borrooloola Moorool Moorool and Madanaa Nada Aboriginal Corporation as part of preparing the heritage protection agreement.	Project information provided.
	17 April 2025	Email correspondence	General update to Boorroola Moorool Moorool Claim Group via Arma Legal about the Proposal and notified the group that the Proposal will be referred under the EP Act and EPBC Act.	Project information provided.

5 Object and principles of the EP Act

Section 4A of the EP Act establishes the objectives and principles of the Act in accordance with the EPA’s Statement of Environmental Principles, Factors and Objectives (EPA, 2023a). This section describes how each of the five principles of the EP Act have been applied to the Proposal (Table 5-1).

Table 5-1 Object and principles of the EP Act

Principle	Consideration
<p>1. The precautionary principle</p> <p>Where there are threats of serious irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</p> <p>In the application of the precautionary principle, decisions should be guided by:</p> <ul style="list-style-type: none"> careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and an assessment of the risk-weighted consequences of various options. 	<p>Horizon Power has used existing environmental data and commissioned field studies within and adjacent to the DE to assess the environmental values and potential impacts of the Proposal, including:</p> <ul style="list-style-type: none"> Flora and vegetation Terrestrial fauna. <p>Horizon Power will commission Aboriginal cultural heritage surveys of the DE to confirm Aboriginal cultural heritage values. These will be carried out with the support of relevant Traditional Owners.</p> <p>Potential impacts have been identified and described under each preliminary key environmental factor. Information gathered during baseline studies has informed the environmental impact assessment and has reduced uncertainty surrounding predicted impacts.</p> <p>Horizon Power has consulted with key stakeholders (in particular the Traditional Owners) early in the Proposal design to select a location and develop a design and footprint with the smallest environmental impact. Ongoing consultation with key stakeholders is planned as the Proposal enters the detailed design phase.</p> <p>Horizon Power has planned and designed the Proposal to avoid, where possible, serious or irreversible damage to the environment. The design characteristics take engineering, environmental, social investigations and stakeholder consultation into account. This will continue to be considered as the detail design develops.</p> <p>Horizon Power has applied the EPA’s mitigation hierarchy when developing mitigation measures for the Proposal. As far as practicable, Horizon Power intends to avoid direct impact to significant environmental and Aboriginal cultural heritage values within the DE, by delineating avoidance areas where disturbance is prohibited without approval by Horizon Power’s Manager Sustainability. Clearing of native vegetation will be minimised and avoided where possible.</p>

Principle	Consideration
<p>2. The principle of intergenerational equity</p> <p>The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.</p>	<p>The Proposal will preserve the health, diversity and productivity of the environment by minimising disturbance of remnant native vegetation and fauna habitat through use of existing disturbed areas and flexible Proposal design. The Proposal seeks to avoid Aboriginal cultural heritage sites, maintaining heritage for the benefit of future generations.</p> <p>The Proposal will reduce annual emissions from the supply of electrical power by up to 12,060 tonnes of CO₂e per annum compared to the existing Derby power station. If the FES were to operate for 20 years, this would equate to a reduction of approximately 220,000 tonnes of CO₂e. The Proposal will ensure security of energy supply to Derby after the expiry of the PPA. The Proposal is targeting higher renewables and a reduction in emissions.</p>
<p>3. The principle of the conservation of biological diversity and ecological integrity</p> <p>Conservation of biological diversity and ecological integration should be a fundamental consideration.</p>	<p>Baseline studies have identified and confirmed the range and condition of the environment within and surrounding the Proposal. There are no threatened or priority ecological communities or conservation significant flora species within the DE.</p> <p>Horizon Power has sought to preserve remnant biodiversity where possible by minimising clearing of native vegetation through use of existing disturbed areas and flexible Proposal design.</p>
<p>4. Principles relating to improved valuation, pricing, and incentive mechanisms</p> <p>Environmental factors should be included in the valuation of assets and services.</p> <p>The polluter pays principle – those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</p> <p>The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste.</p> <p>Environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, which benefit and/or minimise costs to develop their own solutions and responses to environmental problems.</p>	<p>Horizon Power acknowledges the need for improved valuation, pricing and incentive mechanisms and endeavours to pursue these principles when appropriate. For example, environmental factors have been considered in the planning and design of the Proposal, and there has been (and will continue to be) a strong focus on avoiding significant environmental and heritage values, and minimising clearing of native vegetation.</p> <p>Impacts on flora, vegetation, terrestrial fauna and social surrounds have been assessed and mitigation measures proposed giving regard to the EPA’s mitigation hierarchy.</p> <p>Horizon Power accepts that the cost of the Proposal must include measures to mitigate environmental impacts. These requirements will be incorporated into the overall Proposal costs.</p>

Principle	Consideration
<p>5. The principle of waste minimisation</p> <p>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</p>	<p>The Proposal facilitates the reduction of GHG emissions in Derby. Management strategies will be implemented to ensure the generation of waste during the construction phase is minimised. All construction and maintenance activities will be carried out with a focus on waste minimisation.</p>
<p>Description of how the object of the EP Act has been considered</p> <p>The object of the EP Act is to protect the environment of the State, having regard to the EP Act principles. The Proposal's predicted outcomes have been considered in relation to the environmental principles and the EPA's environmental objectives for each key environmental factor.</p> <p>Mitigation of environmental impacts from this Proposal have been assessed through a hierarchy of avoid, minimise, rehabilitate and offset environmental impacts. This hierarchy is achieved primarily through changes in Proposal design to avoid and minimise impacts and development and implementation of management measures for construction and operation. Horizon Power considers the measures undertaken to reduce the Proposal's environmental and social impacts, will ensure that the object of the EP Act has been considered satisfactorily.</p>	

6 Environmental factors and objectives

Environmental factors are those parts of the environment that may be impacted by a Proposal (EPA, 2023a). The EPA has 14 environmental factors, organised into five themes (Sea, Land, Water, Air and People) as detailed in Table 6-1, which allow for a systematic approach to organising environmental information for the purpose of impact assessment. Each of the 14 environmental factors has an associated objective which is used to determine whether the potential environmental impacts of a Proposal or scheme may be significant. The EPA environmental factors and objectives, and their relevance to the proposed changes, are summarised in Table 6-1.

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Table 6-1 WA EPA Environmental Factors and their relevance to the Proposal

Theme	Factor	Objective	Relevance to Proposal	Addressed in Referral	Key Environmental Factor?
Sea	Benthic Communities and Habitats	To protect benthic communities and habitats so that biological diversity and ecological integrity are maintained.	The DE is located approximately 4.3 km from the coastline at the closest point, however, the Proposal will be confined to the DE and is not expected to have any impacts on sensitive coastal or marine environments.	No	No
	Coastal Processes	To maintain the geophysical processes that shape coastal morphology so that the environmental values of the coast are protected.		No	No
	Marine Environmental Quality	To maintain the quality of water, sediment and biota so that environmental values are protected.		No	No
	Marine Fauna	To protect marine fauna so that biological diversity and ecological integrity are maintained.		No	No
Land	Flora and Vegetation	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.	The Proposal will require the clearing of up to 73.5 ha of native vegetation. This factor has been assessed in Section 6.1.	Yes	Yes
	Landforms	To maintain the variety and integrity of significant physical landforms so that environmental values are protected.	Distinctive, unique or important landforms are not present within the DE.	No	No
	Subterranean Fauna	To protect subterranean fauna so that biological diversity and ecological integrity are maintained.	No suitable habitat for subterranean fauna is known to occur within the DE. Excavation for the Proposal is estimated to a depth of up to: <ul style="list-style-type: none"> • 5 m for infrastructure footings • 2.5 m for internal electrical cabling and gas piping • 2 m for an underground network connection /2.5 m for poles for an overhead network connection • 3 m for geotechnical pits • 25 m for boreholes for soil and geotechnical investigations. 	No	No

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Theme	Factor	Objective	Relevance to Proposal	Addressed in Referral	Key Environmental Factor?
			<p>As the groundwater depth is variable in the surrounding area between <5m and 48 m (DWER, 2020), groundwater may be encountered during construction of the Proposal. If groundwater is encountered and dewatering is required, the risk of impacts from excessive drawdown related to the Proposal is low given the short-term nature of the construction period, and the negligible water requirements during the operational phase of the Proposal. Once dewatering activities have ceased groundwater is expected to recover to pre-impact level with no long-term effects on the environment.</p> <p>No significant impacts to subterranean fauna are expected for the Proposal.</p>		
	Terrestrial Environmental Quality	To maintain the quality of land and soils so that environmental values are protected.	<p>The vast majority of the DE (92.35%) is described as having an extremely low probability for occurrence of ASS. However, this classification has a confidence level 4, which means that this is a provisional classification inferred from surrogate data with no on-ground verification (Fitzpatrick et al., 2011). The DE is adjacent to contaminated sites (DWER, 2025).</p> <p>The Proposal has a potential to disturb ASS, land erosion and contamination of soil, however significant impacts are not considered likely, and this factor has been assessed in Section 6.4.</p>	Yes	No
	Terrestrial Fauna	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.	The Proposal may clear up to 73.5 ha of habitat for significant fauna species. This factor has been assessed in Section 6.1.6.	Yes	Yes

PROTECTED

Theme	Factor	Objective	Relevance to Proposal	Addressed in Referral	Key Environmental Factor?
Water	Inland Waters	To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.	The Proposal may include groundwater abstraction for dewatering during construction and construction of a bore to supply water for construction purposes. No permanent water bodies or drainage lines are located within the DE. The depth to groundwater in the area surrounding the DE is estimated to be between <5 m to 48 m below ground level (DWER, 2020). There are no wetlands within the DE. This factor has been assessed in Section 6.4.	Yes	No
	Air Quality	To maintain air quality and minimise emissions so that environmental values are protected.	Air quality impacts (i.e. dust) will be transient and of short duration (only during clearing and construction). Dust emissions will be addressed via standard management measures. Significant impacts to air quality are not considered likely and this factor has been assessed in Section 6.4.	Yes	No
Air	GHG Emissions	To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change	The Proposal is unlikely to exceed the 100,000 tonnes CO ₂ of Scope 1 or 2 greenhouse gas emissions per annum threshold defined in the Environmental Factor Guideline (EPA, 2024). Significant impacts in relation to GHG are not considered likely and this factor has been assessed in Section 6.4. The Proposal has the potential to reduce emissions by up to 12,060 tonnes CO ₂ e per annum compared with the existing Derby power station. If the FES were to operate for 20 years, this would equate to a reduction of approximately 220,000 tonnes of CO ₂ e.	Yes	No

PROTECTED

Theme	Factor	Objective	Relevance to Proposal	Addressed in Referral	Key Environmental Factor?
People	Social Surroundings	To protect social surroundings from significant harm.	The Proposal will have a permanent impact on visual amenity of the DE and surrounds, as well as temporary impacts on amenity during clearing and construction (i.e. dust, noise and vibrations). The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners. Horizon Power is committed to avoiding direct impacts to all known Aboriginal cultural heritage. This factor has been assessed in Section 6.3.	Yes	Yes
	Human Health	To protect human health from significant harm.	No human health impacts are expected. No radiation emissions will result from the Proposal. Significant impacts to human health are not expected as a result of the Proposal.	No	No

6.1 Environmental Factor - Flora and Vegetation

The EPA’s objective for flora and vegetation is ‘*To protect flora and vegetation so that biological diversity and ecological integrity are maintained*’ (EPA, 2016a).

6.1.1 Relevant policy and guidance

Table 6-2 provides consideration of how the relevant EPA policy and guidance, and additional State and Commonwealth guidance, have been applied to the assessment of impacts to flora and vegetation.

Table 6-2 Policy and guidance for environmental factor flora and vegetation

Relevant policy and guidance	Explain how the EPA policy and guidance has been considered
Environmental Factor Guideline Flora and Vegetation (EPA, 2016a)	The Proposal considers the mitigation hierarchy; direct and indirect impacts; implications of cumulative impacts; predicted residual impacts; feasibility of management approaches.
Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016b)	Surveys and assessments for the Proposal have been undertaken to a standard consistent with the guidance.
Environmental Guidance for Planning and Development, Guidance Statement No. 33 (EPA, 2008)	Naturally vegetated areas have been protected as much as practicable as the Proposal design has been developed.
Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations)	Native vegetation clearing to be approved under Part IV EP Act, rather than being exempt under the Regulations.
Priority Ecological Communities for Western Australia Version 35 (DBCA, 2023)	Surveys and assessments for the Proposal have identified Priority Ecological Communities consistent with the definitions.
Conservation codes for Western Australia Flora and Fauna (DBCA, 2019)	Surveys and assessments for the Proposal have identified significant flora and fauna consistent with the WA conservation codes.

6.1.2 Receiving environment

6.1.2.1 Surveys and studies

Horizon Power commissioned a detailed (single season) flora and vegetation survey to gain an understanding of the flora and vegetation values within and surrounding the DE. The survey was undertaken in accordance with relevant EPA guidance.

The vegetation and flora survey within the DE is outlined in Table 6-3 with the extent of survey coverage (655.7 ha) shown on Figure 2-3. Five sites and the network connection route options were surveyed in Derby, referred to as the Survey Area. The DE was selected to avoid environmental constraints identified in the biological survey where possible, however there was little variation between sites, with similar environmental values identified across all locations.

The DE has been aligned with cadastral boundaries, which has resulted in small areas along the edges of the DE that have not been surveyed, totalling approximately 6.6 ha. Of the 6.6 ha, 3.3 ha is located at Site A. The vegetation type and vegetation condition mapping has been extrapolated using aerial imagery and the existing GHD (2024) survey data.

Table 6-3 Summary of flora and vegetation surveys conducted within and surrounding the Proposal

Survey/Report	Details
Kimberly IRP: Biological Survey (GHD, 2024) IBSA-2024-0323	<p>Scope: Detailed (single season) flora and vegetation survey, including a desktop assessment and field survey. Five sites were surveyed in Derby, two relevant to the Proposal. This survey was undertaken in accordance with the EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016b).</p> <p>The survey mapped the vegetation types and condition and recorded the presence of Priority flora. Field survey methods involved a combination of high intensity quadrat sampling and traversing the Survey Area by foot. Quadrats were conducted within the Survey Area to describe the broad-scale vegetation and physical features. There were 15 quadrats and 2 relevés across the five Derby sites.</p> <p>Survey dates: 18 to 23 and 25 March 2024</p> <p>Survey Area: The GHD (2024) Survey Area in Derby covered 655.7 total ha.</p>

6.1.2.2 Regional biogeography

The Proposal is located within the Dampierland bioregion, and the Fitzroy Trough subregion (DL01) as described by IBRA. The Fitzroy Trough is the semi-arid northern edge of the Canning Basin, encompassing the middle and lower catchments of the Fitzroy River. It includes alluvial plains, sandplains, and eroded dune surfaces derived from the Canning Basin. Extensive coastal mudflats are associated with the Fitzroy delta, while remnants of Devonian limestone barrier reefs are preserved along its northern and eastern edges. The region features woodlands of Pindan, Boab (*Adansonia gregorii*), and Eucalyptus, with rainforest patches and hummock grasslands thriving on limestone (Graham, 2001).

Broadscale (1:250,000) pre-European vegetation mapping (Beard, 2013) indicates that the DE intersects two Vegetation Associations: 764 and 127 (Table 6-4 and Figure 6-1). Vegetation Association 127 is tidal mudflats and Vegetation Association 764 is characterised as pindan with low trees: *Acacia* thicket with scattered low trees over spinifex *Acacia eriopoda*, *Corymbia dichromophloia*, *Triodia pungens* and *T.bitextura*.

Vegetation Associations 764 and 127 are well retained above the Commonwealth and State Government targets of 30% of pre-European extent, which reflects the limited agricultural and urban development of the Dampierland Bioregion.

Table 6-4 Vegetation Associations within the DE

Vegetation Association	Scale	Pre-European extent (ha)	Current extent within local and regional scale (ha)	% Remaining within local and regional scale
Vegetation Association 764	State: WA	53,248.07	51,954.64	97.57
	IBRA Bioregion: Dampierland	53,248.07	51,954.64	97.57
	IBRA Subregion: Fitzroy Trough	53,248.07	51,954.64	97.57
	LGA: Shire of Derby-West Kimberley	53,248.07	51,954.64	97.57
Vegetation Association 127	State: WA	737,724.05	697,871.38	94.60
	IBRA Bioregion: Dampierland	165,317.62	162,996.35	98.60
	IBRA Subregion: Fitzroy Trough	131,508.77	129,808.64	98.71
	LGA: Shire of Derby-West Kimberley	172,426.38	164,456.92	95.38

The Proposal overlaps the following land systems (Figure 2-4):

- Wanganut System: Sandplains and linear dunes supporting pindan woodlands with acacias and bloodwoods and curly spinifex- ribbon grass, and broad low-lying swales supporting bloodwood-grey box woodlands with curly spinifex-ribbon grass.
- Carpentaria System: Bare coastal mudflats, minor sandy margins and seaward margins, little vegetation except for mangrove fringing thickets.

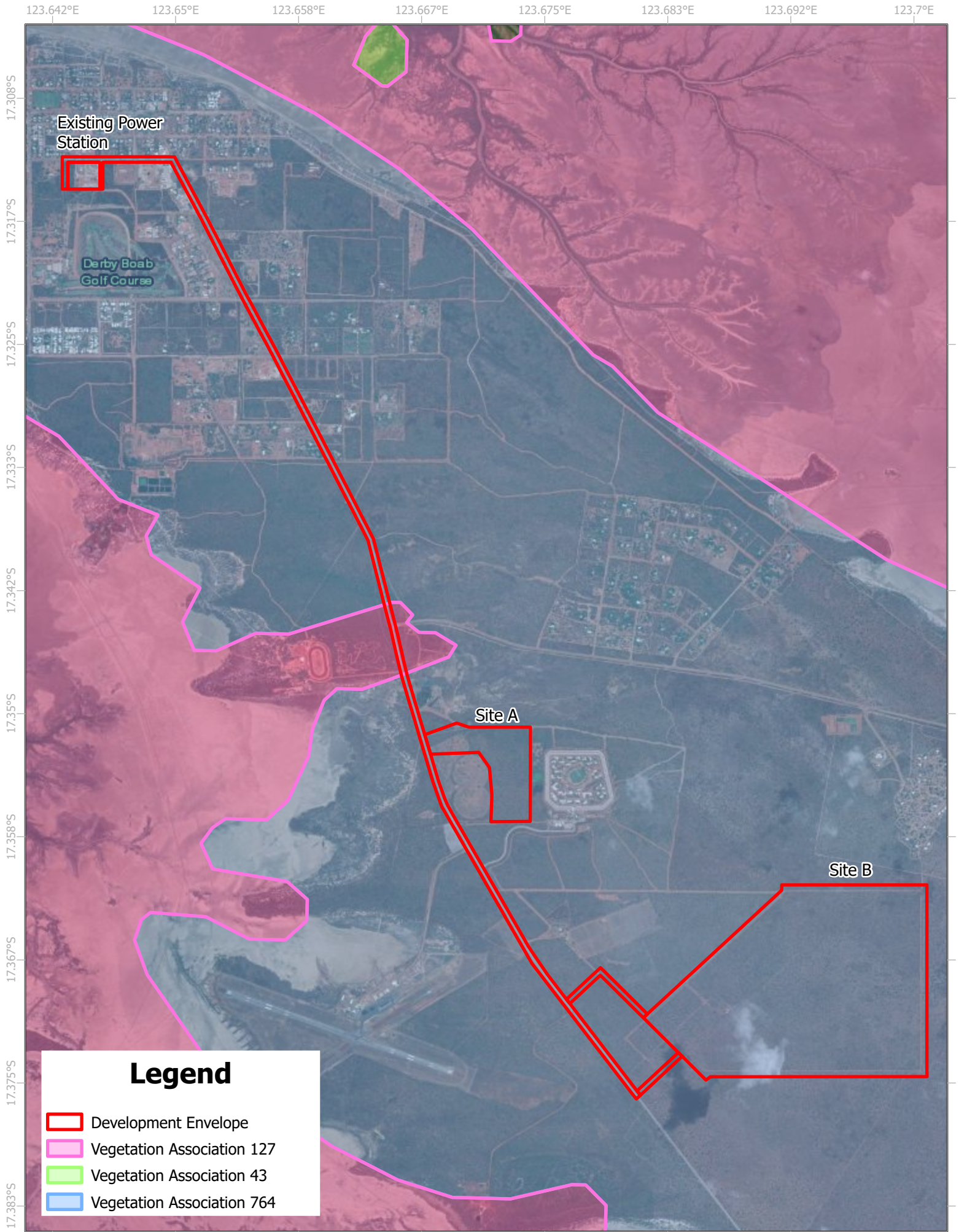


Figure 6-1 | Vegetation Associations within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



6.1.2.3 Vegetation

Types and condition

The 307.4 ha DE comprises native vegetation representing three vegetation types (GHD, 2024). Areas that are not considered native vegetation have been modified with significant changes to the vegetation structure and no longer represent an intact vegetation type. These include areas of scattered natives over weeds, landscaped areas and planted gardens, cleared road verge and drains with regrowth of native forbs and grasses or cleared land (GHD, 2024). Development of the Proposal requires permanent clearing of up to 73.5 ha of native vegetation within the DE. Of this total, 12.5 ha will be cleared in the network connection route, 1.01 ha within the existing power station and up to 60 ha will be cleared within Site A or Site B.

As the final design of the Proposal is not yet confirmed, this referral ensures a conservative approach. The impacts on flora and vegetation have been assessed based on a worst-case scenario. For this assessment, it is assumed that up to 60 ha will be cleared at either site. This would account for the entire area of Site A (29 ha) or up to 60 ha of Site B.

Table 6-5 provides a summary of the vegetation types within the DE and Figure 6-2 shows the distribution of the vegetation types.

The GHD (2024) survey also recorded vegetation condition across the DE. The vegetation condition ranges from Very Good to Completely Degraded with the majority of the vegetation in Very Good condition (GHD, 2024). Good or Degraded vegetation is associated with signs of disturbance through clearing for road and track maintenance, presence of weeds and/or clearing for historic gravel extraction (GHD, 2024). Table 6-6 provides a summary of the vegetation condition within the DE and Figure 6-3 shows the distribution of the vegetation conditions.

Table 6-5 Mapped vegetation types within the DE

Vegetation type	Vegetation description	Vegetation Extent within the DE					Clearing vegetation Extent within DE (ha)
		Site B (ha)	Site A (ha)	Existing Power Station (ha)	Network connection route (ha)	Total within DE (ha)	
VT02	Open woodland of <i>Corymbia dichromophloia</i> , <i>Adansonia gregorii</i> and <i>Lysiphyllum cunninghamii</i> over open shrubland (where more recently burnt) or tree form of <i>Acacia tumida</i> var. <i>kulparn</i> over open shrubland of <i>Alstonia linearis</i> , <i>Dodonaea hispidula</i> and <i>Brachychiton diversifolius</i> subsp. <i>diversifolius</i> over open tussock grassland of <i>Chrysopogon fallax</i> , <i>Eriachne obtusa</i> and <i>Aristida hygrometrica</i> over open forbland of <i>Trichodesma zeylanicum</i> var. <i>latisepaleum</i> , <i>Trianthema pilosum</i> and <i>Microstachys chamaelea</i> on light brown sandplain.	227.7	-	-	6.4	234.1	Up to 66.4
VT03	Open woodland of <i>Adansonia gregorii</i> , <i>Corymbia zygophylla</i> and <i>Corymbia opaca</i> over open woodland of <i>Lysiphyllum unninghamii</i> , <i>Hakea arborescens</i> and <i>Melaleuca cajuputi</i> subsp. <i>cajuputi</i> over shrubland of <i>Flueggea virosa</i> subsp. <i>melanthesoides</i> , <i>Terminalia canescens</i> and <i>Calytrix exstipulata</i> over mixed open forbland of <i>Jasminum molle</i> , <i>Drosera derbyensis</i> , <i>Ptilotus polystachyus</i> and <i>Waltheria indica</i> on light brown sandy loam seasonal drainage flats.	-	-	-	2.6	2.6	Up to 2.6

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Vegetation type	Vegetation description	Vegetation Extent within the DE					Clearing vegetation Extent within DE (ha)
		Site B (ha)	Site A (ha)	Existing Power Station (ha)	Network connection route (ha)	Total within DE (ha)	
VT04	Open woodland of <i>Adansonia gregorii</i> , <i>Corymbia dichromophloia</i> and <i>Corymbia zygophylla</i> over open woodland of <i>Lysiphyllum cunninghamii</i> , <i>Gyrocarpus americanus</i> subsp. <i>americanus</i> and <i>Hakea arborescens</i> over mixed shrubland of <i>Acacia monticola</i> , <i>Acacia tumida</i> var. <i>kulparn</i> , <i>Calytrix exstipulata</i> and <i>Flueggea irosa</i> subsp. <i>elanthesoides</i> over open hummock grassland of <i>Triodia caelestialis</i> over open tussock grassland of <i>Eriachne obtusa</i> and <i>Chrysopogon fallax</i> over mixed open forbland of <i>Solanum cunninghamii</i> , <i>Melhania oblongifolia</i> , <i>Waltheria indica</i> and <i>Trichodesma zeylanicum</i> var. <i>latisepaleum</i> on light brown sandy loam plains.	-	25.1	1.01	3.5	29.6	Up to 29.6
Planted native trees over weeds	Planted native <i>Corymbia/Eucalyptus</i> trees over weeds on maintained road verge		-	-	2.9	2.9	Up to 2.9
Scattered natives over weeds	Occasional native tree/shrubs over weed/native herbs dominated understorey on road verges.		2.6 ¹	-	0.7	3.3	Up to 3.3
Cleared	Areas devoid of native vegetation, such as tracks and historically cleared areas.	4.5	1.2	3.6	24.9	34.3	Up to 34.3
TOTAL		232.3	29.3	4.6	41	307.4	-

Table 6-6 Mapped vegetation condition within the DE

Vegetation Condition	Vegetation condition extent					Vegetation condition extent within DE (ha)
	Site B (ha)	Site A (ha)	Existing Power Station (ha)	Network connection route (ha)	Total within DE (ha)	
Very Good	210.1	20.1	-	3.6	233.8	63.6
Good	13.3	1.4	-	1.1	15.8	15.8
Degraded	4.2	3.6	1.01	7.7	15.5	16.5
Completely Degraded	0.15	2.7	-	3.7	6.5	6.5
TOTAL²	227.8	27.81	1.01	16.1	272.6	102.4

Significant ecological communities

The DBCA Threatened and Priority Ecological Communities database (DBCA, 2024b) and the Protected Matters Search Tool (PMST) (DCCEEW, 2024) did not identify the presence of any listed communities previously recorded within the DE. No State or Commonwealth listed Threatened Ecological Communities (TECs) or DBCA listed Priority Ecological Communities (PECs) were recorded within the DE (GHD, 2024).

Other significant vegetation

Within the DE, none of the vegetation types represent significant vegetation as categorised by the EPA (2016b) including vegetation with a restricted distribution, historical impacts from threatening processes, a role as a refuge or providing an important function required to maintain ecological integrity of a significant ecosystem. The recorded vegetation types are widespread outside the DE (GHD, 2024).

VT03 is considered to be riparian vegetation, since it contains seasonal drainage flats. The vegetation unit also contains trees of *Adansonia gregorii*, *Corymbia zygophylla*, *Corymbia opaca* and *Lysiphyllum cunninghamii*. There is 2.6 ha of riparian vegetation within the DE (as shown in Table 6-5 and Figure 6-4).

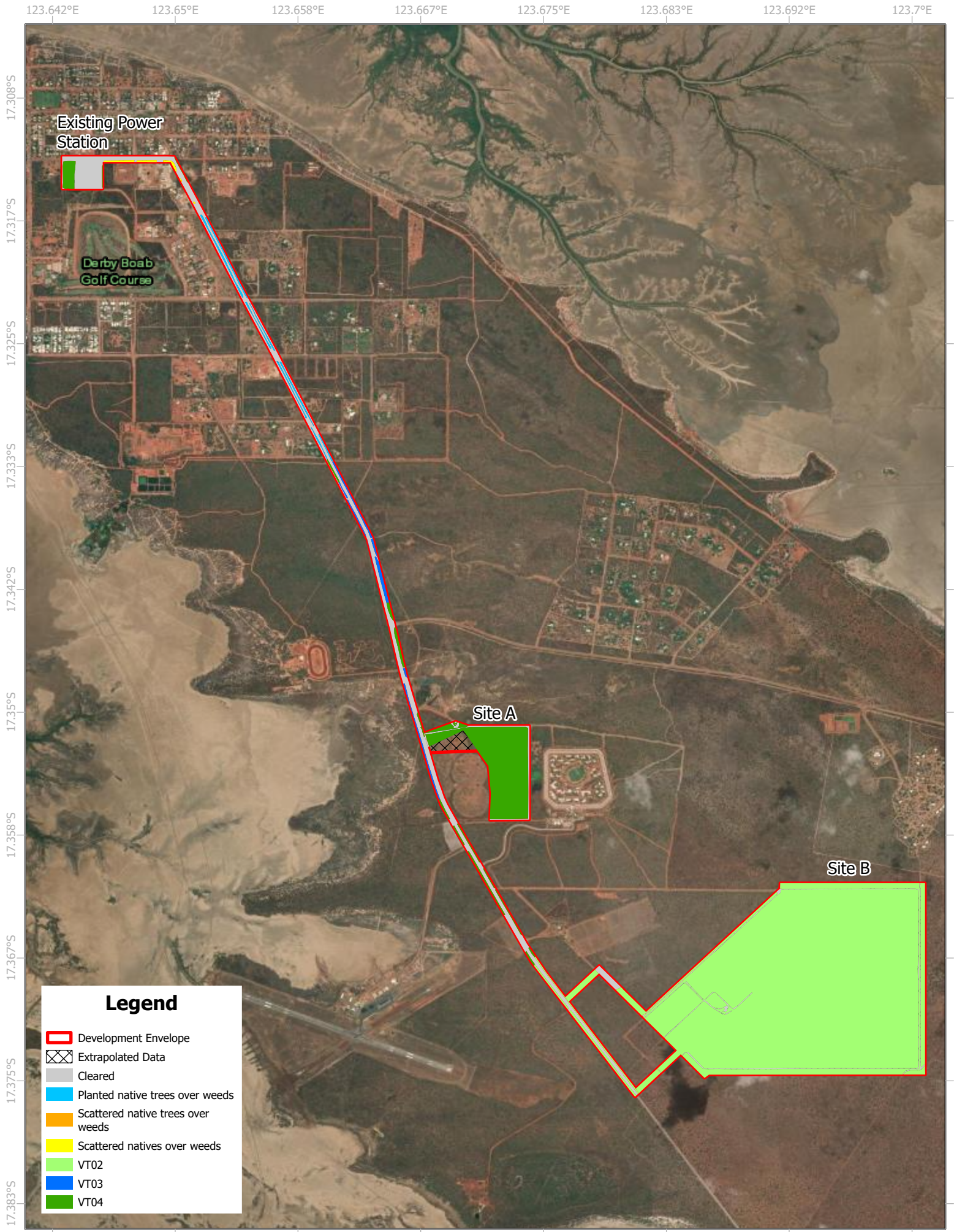


Figure 6-2 Vegetation Types within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



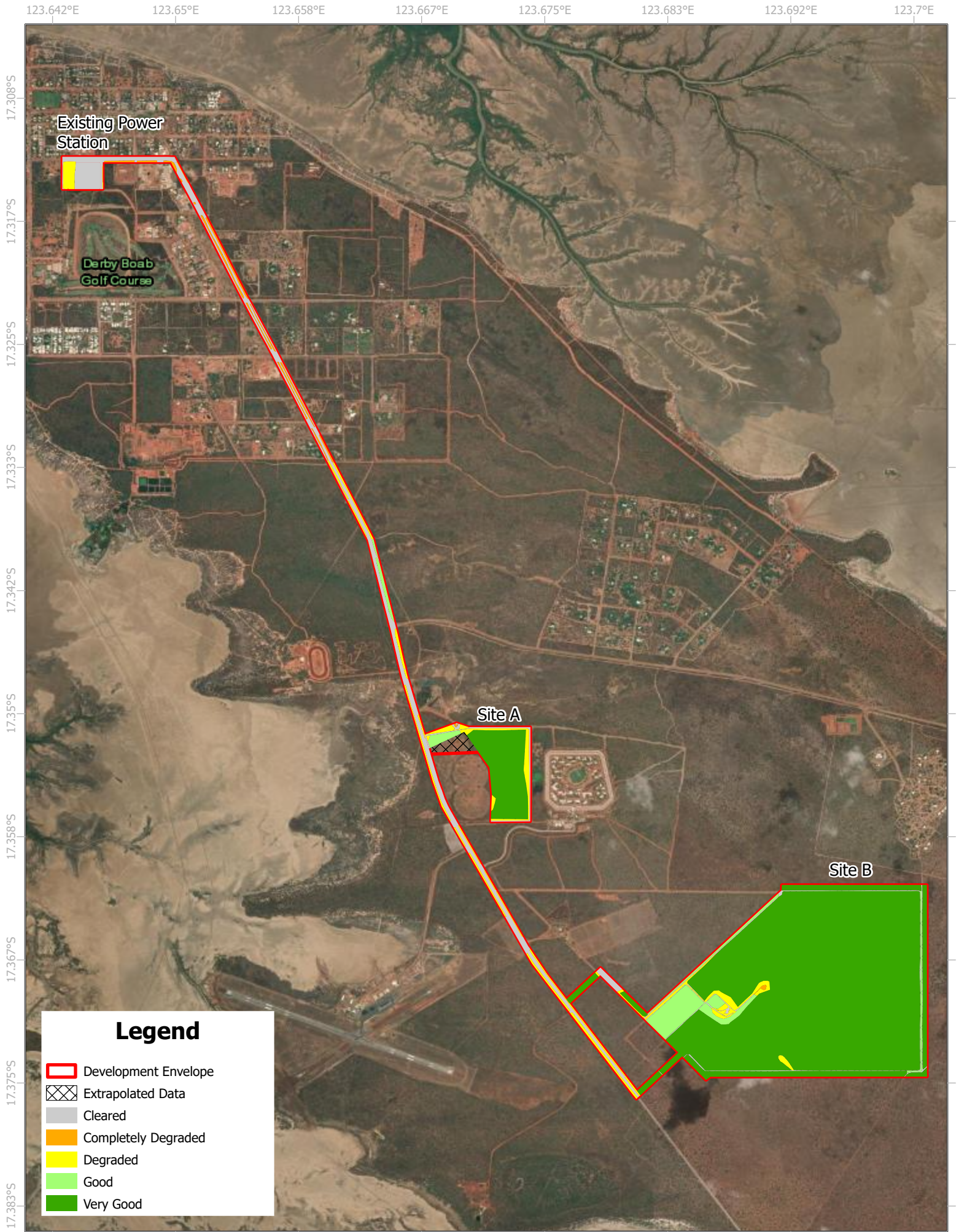


Figure 6-3 Vegetation Condition within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



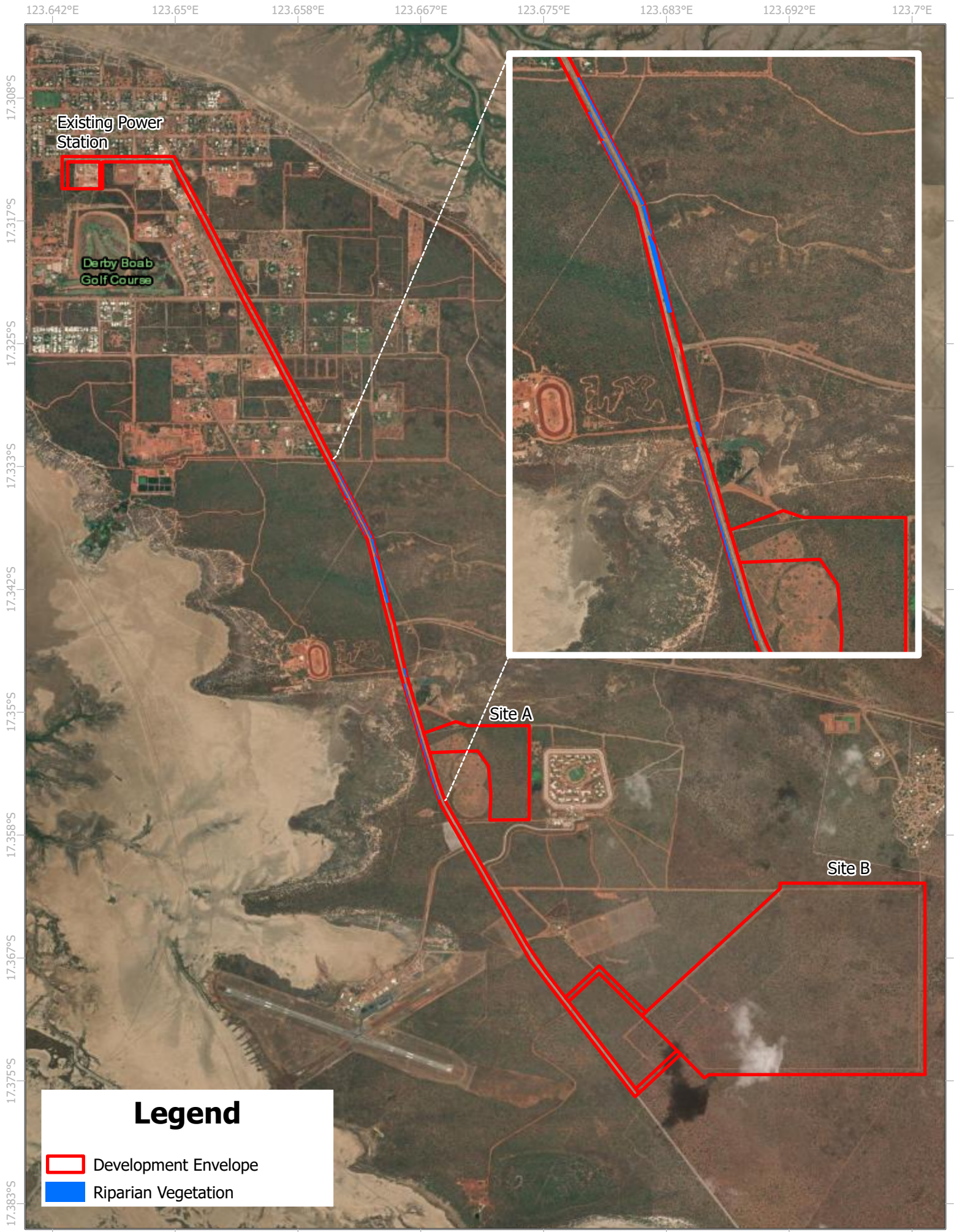


Figure 6-4 | Riparian Vegetation within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



6.1.2.4 Flora

Flora diversity

Across the wider Survey Area (defined in Section 6.1.2.1), a total of 136 vascular flora species from 39 families and 91 genera (including subspecies and variants) were recorded (GHD, 2024). The dominant plant families were Fabaceae, Poaceae and Malvaceae, with Coymbia, Acacia, Abutilon and Euploca the most frequently recorded genera. A total of 13 taxa were tentatively identified (ten to genus level, three to species level) due to insufficient material for identification (such as flowers/fruit). Of the flora species recorded, 93% were native taxa (GHD, 2024).

Introduced flora

Ten introduced flora taxa were recorded in the Survey Area (GHD, 2024):

- **Azadirachta indica*
- **Bidens bipinnata*
- **Calotropis gigantea*
- **Cenchrus ciliaris*
- **Cenchrus setiger*
- **Clitoria ternatea*
- **Distimake dissectus var. dissectus*
- **Jatropha gossypifolia*
- **Ocimum basilicum*
- **Stylosanthes hamata*

**Azadirachta indica* is listed as declared pest under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) and **Jatropha gossypifolia* is listed declared pests under BAM act and as a Weed of National Significance (WONS).

Significant flora

The EPBC Act PMST, NatureMap and DBCA Threatened and Priority flora databases identified the presence/potential presence of four significant flora taxa within a 20 km buffer of the Survey Area (GHD, 2024).

No EPBC Act or BC Act listed Threatened or Priority flora taxa were recorded within the DE during the GHD (2024) survey. One DBCA-listed Priority species, *Haemodorum capitatum* (P1), was recorded within the Survey Area (Figure 2-3), and therefore may occur within the DE.

***Haemodorum capitatum* (Priority 1)**

Haemodorum capitatum is restricted to pidan sands in the Dampier Botanical District. It was first collected in 1984 and recognise as a distinct species in 2013. The species is a geophyte¹, 60-90 cm tall, with inflorescences exceeding the leaves (Barret et al., 2015).

The total population of *Haemodorum capitatum* in Western Australia is unknown. The Atlas of Living Australia (ALA) database contains 14 recorded occurrences in the state, with eight

¹ Geophytes are plants typically with underground storage organs, where plants hold energy and water (Florida Museum, 2018)

of them from 2013 (the most recent records for this species). This coincides with the year it was officially recognized as a distinct species.

Previous records indicate occurrences at Cape Leveque, Coulomb Point Nature Reserve, Bobieding, and 37 km north of Gingerah.

A total of 100 individuals in 5 occurrences were recorded in the biological survey, approximately 84 m from the DE (network connection route). This area was subjected to a recent fire however, one flowering individual allowed the confirmation of the species (GHD, 2024).



Plate 6-1 *Haemodorum capitatum* (P1) (GHD, 2024)

Range extensions

Two species recorded within the Survey Area represent range extensions from the species current known range (GHD, 2024).

The new record of *Haemodorum capitatum* within the Survey Area is the first collection from Derby region and represents a range extension for the species, given it is approximately 100 km northeast of the closest current known distribution (Gingerah) (GHD, 2024).

Gyrocarpus americanus subsp. *americanus* also represents a range extension of the species. These records are located southwest, approximately 160 km, from the nearest record (GHD, 2024).

Additional local trees

GHD (2024) undertook an additional local tree survey in the Survey Area and recorded 963 individuals from the following species:

- 556 *Adansonia gregorii* (Boab)
- 61 *Bauhinia cunninghamii* (Bean Tree)
- 34 *Corymbia dichromophloia* (Small-Fruited Bloodwood)
- One *Corymbia grandifolia* (Cabbage gum)
- 19 *Corymbia greeniana*
- 79 *Corymbia opaca* (Desert Bloodwood)
- 29 *Corymbia* sp. (indet)

- 33 *Corymbia zygophylla* (Broome Bloodwood)
- 97 *Eucalyptus miniata* (Woolybutt).

6.1.2.5 Conservation and Environmentally Sensitive Areas

There are no DBCA managed lands (DBCA, 2024a) or Environmentally Sensitive Areas (ESAs) within the DE. The closest ESA is 48 km northeast of the DE (DWER, 2021).

6.1.3 Potential impacts

6.1.3.1 Direct impacts

The Proposal will result in the loss of vegetation as a result of clearing required during construction. However, as the final design of the Proposal is not yet confirmed, this referral ensures a conservative approach. The impacts on flora and vegetation have been assessed based on a worst-case scenario. For this assessment, it is assumed that up to 60 ha will be cleared at either site within the DE. This would account for the entire area of Site A (29 ha) or up to 60 ha of Site B. Additional 12.5 ha of the network connection route and 1.01 ha of existing power station will also be cleared.

The conservation significant flora species and range extension species, *Haemodorum capitatum*, was not recorded within the DE, therefore, it will not be directly impacted. Individuals of range extension species *Gyrocarpus americanus subsp. americanus* may be impacted by the Proposal.

Operation of the Proposal will not directly impact flora and vegetation as maintenance activities will use existing roads or access tracks established during construction.

Direct impacts to vegetation and flora during construction of the Proposal includes:

- Native vegetation:
 - Clearing of up to 73.5 ha of native vegetation including:
 - Native vegetation mapped across Vegetation Associations 127 and 764
 - Native vegetation across three vegetation types
 - 'Very Good' to 'Good' vegetation condition
 - Clearing of up to 2.6 ha of riparian vegetation within VT03.
- Flora that represents a range extension:
 - Potential clearing of individuals of *Gyrocarpus americanus subsp. Americanus*

The trees recorded by GHD (2024) during the local tree survey within the DE are considered abundant; therefore, the Proposal is not expected to impact the species in a way that would affect their likelihood of survival.

6.1.3.2 Indirect impacts

Construction and operation of the Proposal may result in the following indirect impacts to vegetation:

- Introduction and/or the spread of weeds
- Alteration of fire regimes
- Alteration to hydrological flows
- Generation of dust
- Spills or leaks of chemicals, hydrocarbon and/or hazardous materials.

The closest record of the conservation significant species, *Haemodorum capitatum*, is approximately 84 m from the network connection route. Therefore, indirect impacts to this species are not expected.

6.1.3.3 Cumulative impacts

Impacts on flora and vegetation in proximity to the Proposal were identified through the collation of information from NVCPs and environmental referrals for other Proposals within the Fitzroy Trough subregion (Table 6-7). Proposals used to inform cumulative impacts on vegetation include the Napier Downs Irrigation Project and NVCPs (refer to Section 9 for an overview of the cumulative impact assessment methodology).

Table 6-7 Cumulative impacts to flora and vegetation from other Proposals

Aspect / Project	Derby Future Energy System Current Proposal	Napier Downs Irrigation Project	Native Vegetation Clearing Permits	Cumulative impact
Proponent	Horizon Power	Shire of Derby- West Kimberley	Multiple	N/A
Proposed Project commencement	2029	Not specified	N/A	N/A
Description	Construct a solar facility in Derby.	Develop a pivot irrigation project to supply fodder crops for pastoral use.	Approved NVCPs.	N/A
Location	Shire of Derby- West Kimberley. The solar and BESS facility will be located within Site A or Site B, approximately 2.5 km and 5 km south of Derby Town. A network connection route will follow Derby Highway, Wodehouse Street and Broome Street to electrically connect the solar and BESS facility to the existing power station on Broome Street in Derby. The network connection will either be an overhead or underground electrical transmission line and will be up to 8.9 km long. The new thermal power station will be installed adjacent to the existing power station on Broome Street in Derby.	Shire of Derby- West Kimberley Napier Downs Pastoral lease (LPL N049855), located in the West Kimberley region, 240 km east northeast of Broome, Western Australia.	Within the Fitzroy Trough subregion.	N/A

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Aspect / Project	Derby Future Energy System Current Proposal	Napier Downs Irrigation Project	Native Vegetation Clearing Permits	Cumulative impact
Flora that represents a range extension	Clearing of individuals of <i>Gyrocarpus americanus</i> subsp. <i>americanus</i>	N/A	N/A	No cumulative impacts to this flora that represent a range extension are expected.
Proposed native vegetation clearing	Up to 73.5 ha of native vegetation.	Up to 200 ha of native vegetation.	Up to 411.8 ha of native vegetation.	Combined removal of up to 685.3 ha native vegetation in varying condition (including 411.8 ha associated with approved NVCPs).
Vegetation Associations affected	Up to 61.0 ha of native vegetation associated with Vegetation Association 764. Up to 1.9 ha of native vegetation associated with Vegetation Association 127.	The Project does not overlap Vegetation Association 764. The Project does not overlap Vegetation Association 127.	Up to 404.8 ha of native vegetation associated with Vegetation Association 764. The Project does not overlap Vegetation Association 127.	Combined removal of up to 465.8 ha of native vegetation associated with Vegetation Association 764. No cumulative impacts on Vegetation Association 127 are expected.
Riparian vegetation affected	Up to 2.6 ha of riparian vegetation.	N/A	N/A	No cumulative impacts on riparian vegetation are expected.

6.1.4 Mitigation

6.1.4.1 Construction

The Proposal has been designed to avoid and/or mitigate impacts to flora and vegetation where possible. During the design phase, particular focus has been, and will be, placed on reducing the amount of clearing required for construction.

Impacts to vegetation will be minimised and reduced through the following mitigation measures:

- The network connection route follows an existing cleared corridor along Derby Highway, Wodehouse Street, Broome Street, reducing the amount of clearing required for access tracks and network connection.
- Clearing impacts will be further reduced through the detailed design process, including the positioning of solar and BESS facility infrastructure, network connection infrastructure and thermal power station to minimise impacts to vegetation and flora.
- Network connection infrastructure will avoid riparian vegetation where possible.
- Implementation of the management measures in the EMP (Appendix A) to minimise risks to vegetation from the introduction and/or spread of weeds, alteration of fire regimes, alteration of hydrological flows, generation of dust, spills or leaks of chemical, hydrocarbon or other hazardous materials, and to provide monitoring during construction.

6.1.4.2 Operation

Operational activities associated with the Proposal include operation of the solar and BESS facility, network connection and thermal power station, along with maintenance inspections and repairs. Operation of the Proposal will utilise existing roads and access tracks. The following management measures will be implemented during operation of the Proposal to minimise impacts to flora and vegetation:

- Maintenance and repair activities will be restricted to existing cleared areas where possible.
- Access to infrastructure will be through existing access tracks.

6.1.5 Assessment and significance of residual impact

6.1.5.1 Direct impacts

6.1.5.1.1 Loss of flora that represent a range extension

Implementation of the Proposal may potentially impact *Gyrocarpus americanus* subsp. *americanus*.

A search of Dandjoo biodiversity data platform (DBCA, 2025) indicated that there are 10 recorded locations of *Gyrocarpus americanus* subsp. *americanus* in the Kimberley region.

ALA (2025) has 13 records of this subspecies within Kimberley, dated between 1973-2007, with the closest being within 110 km north of the DE.

Based on the data available on Dandjoo biodiversity and ALA data platforms, further surveys in the Kimberley would likely identify additional locations of these subspecies. The absence of records since 2007, despite the species being previously recorded in the area, may suggest that the subspecies remains present but is underreported or has not been recently surveyed, potentially occurring in greater abundance than currently documented.

Given that this species is widespread from Queensland to Western Australia, the potential clearing of these species for the Proposal is not likely to result in the species becoming listed as Threatened or Priority and would not impact biological diversity and ecological integrity of the region.

6.1.5.1.2 Loss of native vegetation

Vegetation Associations

The proposed clearing will not reduce the current extent of Vegetation Association 127 or 764 to less than 95.38% of its pre-European extent at a local scale (Shire of Derby-West Kimberley) and 97.46% at a regional scale (Dampierland Bioregion) (Table 6-8). Therefore, the reduction in the extent of Vegetation Associations 127 and 764 as a result of the Proposal is not considered significant at any scale.

Table 6-8 Impacts to Vegetation Association 127 and 764 from the Proposal

Vegetation Association	Scale	Pre-European extent (ha)	Current extent (ha)	% of pre-European extent Remaining	Current extent after clearing for the Proposal	% of pre-European extent remaining after clearing for the Proposal
Vegetation Association 127	State: WA	737,724.05	697,871.38	94.60	697,867.250	94.60%
	IBRA Bioregion: Dampierland	165,317.62	162,996.35	98.60	162,992.220	98.59%
	IBRA Subregion: Fitzroy Trough	131,508.77	129,808.64	98.71	129,804.510	98.70%
	LGA: Shire of Derby-West Kimberley	172,426.38	164,456.92	95.38	164,452.790	95.38%
Vegetation Association 764	State: WA	53,248.07	51,954.64	97.57	51,893.630	97.46%
	IBRA Bioregion: Dampierland	53,248.07	51,954.64	97.57	51,893.630	97.46%
	IBRA Subregion: Fitzroy Trough	53,248.07	51,954.64	97.57	51,893.630	97.46%
	LGA: Shire of Derby-West Kimberley	53,248.07	51,954.64	97.57	51,893.630	97.46%

Vegetation types

The vegetation present within the DE is not considered locally restricted and is well represented in similar condition locally. The majority of the vegetation within the DE is within VT02 (234.1 ha).

Assessment of the local scale impacts has been determined by using the Department of Primary Industries and Regional Development (DPIRD) Native Vegetation Extent data (DPIRD-005) (DPIRD, 2023) for a 20 km buffer surrounding the Proposal. Within a 20 km buffer of the Proposal, there is approximately 119,045.50 ha of native vegetation. The Proposal will require permanent clearing of up to 73.5 ha of native vegetation, representing three vegetation types in Completely Degraded to Very Good condition. The clearing would result in an overall 0.06% reduction in the extent of native vegetation within a 20 km radius. Therefore, the proposed vegetation clearing is not considered significant within a local and regional context.

Significant vegetation

Overall, the Proposal will result in the permanent clearing of up to 73.5 ha of native vegetation, representing three vegetation types (Figure 6-2). One vegetation type, VT03 within the DE (totalling 2.6 ha) represents riparian vegetation. Of this, 1.7 ha is in Degraded condition and 0.9 ha is in Good condition (Figure 6-4). The clearing of up to 2.6 ha of riparian vegetation is conservative (worst case to allow for currently unknown final footprint). Horizon Power will locate infrastructure in already cleared areas where possible for the network connection route, therefore limiting clearing of riparian vegetation. The clearing of riparian vegetation required for the Proposal is not considered to be significant.

6.1.5.2 Indirect impacts

6.1.5.2.1 Introduction and/or the spread of weeds

The DE contains significant vegetation and is adjacent to Priority flora species that are vulnerable to weed invasion.

Clearing required for the Proposal and increased movement of vehicles, including earth moving machinery may result in the establishment of new populations of weed species.

**Azadirachta indica* is a Declared Pest under the BAM Act and was recorded within all the Survey Area and **Jatropha gossypifolia* is a Declared Pest and WONS and was not recorded within the DE (GHD, 2024). While only two Declared Pest occurs within the DE, an additional eight introduced flora species were recorded within the Survey Area. There is the potential for weed numbers to increase by the spread of windblown seeds from existing nearby populations, the spread of weed seeds from the movement of soil during earthworks, or weed seeds entering the DE through contaminated vehicles, earthmoving equipment or construction materials.

Weed impacts may be cumulative in response to other impacts to native vegetation, such that they may exacerbate the decline or change in native vegetation composition or disrupt ecological processes.

Vehicle hygiene, weed control and ground disturbance procedures will be implemented for the Proposal. The mitigation also includes measures to manage the presence of **Jatropha*

gossypifolia, which is a Category C3 (Management/ Exempt) under the BAM Act. Overall, the mitigation measures include, but are not limited to, ensuring that vehicle access is restricted to designated access roads, and the implementation of a weed monitoring program to minimise the spread of existing weed populations. The implementation of these weed hygiene measures will be conducted in line with the EMP (Appendix A). The management measures included within the EMP are expected to reduce the introduction of weeds into new areas, and therefore, the introduction and/or spread of weeds resulting from the Proposal is not expected to be significant.

6.1.5.2.2 Alteration of fire regimes

A change in fire regimes is often associated with increased human activity, leading to degradation of natural ecosystems. Fire is a major determining factor in affecting species composition. It can cause disturbance of vegetation condition but can also be required for regeneration of some species.

Given the size of the Proposal and its location adjacent to existing infrastructure and roads, the Proposal is not expected to alter existing fire regimes in the local area. While there is an increased risk of fire during the construction phase, appropriate management measures will be implemented through the EMP (Appendix A) to minimise this risk. This will include identifying potential ignition sources and/or activities with the potential to lead to fire, and preventative measures. Weed management and the construction of firebreaks will reduce the risk of fires (if caused by the Proposal) spreading to nearby vegetation. Fire is considered manageable, and implementation of the Proposal is unlikely to significantly impact existing fire regimes.

6.1.5.2.3 Alteration to hydrological flows

Seasonal drainage flats (VT03) are riparian vegetation which may be partially reliant on the sandplains and drainage lines. Disruption to hydrological flows has potential to reduce the seasonal drainage which will impact this vegetation.

Due to the lack of drainage lines in the DE and the lack of substantial alteration to drainage patterns (as assessed in Section 6.4), the Proposal is not expected to reduce environmental flows in the DE. Additional management measures to reduce impacts to hydrological flows resulting from the Proposal are included within the EMP (Appendix A).

Overall construction and operational impacts to riparian vegetation (VT03) from the alteration of hydrological flows is not expected.

6.1.5.2.4 Generation of dust

Fugitive dust may be generated from vehicle movements, clearing and construction activities. Significant dust deposition over an extended period would have the potential to smother and kill Priority flora and native vegetation identified within or in surrounding areas of the DE, as well as lead to an increase in occurrence of plant pests and diseases. The majority of dust is expected to be generated during the construction phase. Operation of the Proposal will be restricted to cleared land and is not expected to produce significant dust emissions. Implementation of the EMP will ensure that potential dust sources are managed appropriately. Therefore, the Proposal will not cause significant impacts to flora

and vegetation from dust emissions given the transient and localised nature of dust generation mostly limited to the construction phase.

6.1.5.2.5 Spills or leaks of chemicals, hydrocarbon and/or hazardous materials

Spills or leaks of chemicals, hydrocarbons and/or hazardous materials have the potential to impact surrounding vegetation communities.

Common industrial substances will be used during construction and operation of the Proposal, including.

- Diesel - construction machinery and vehicles, stored in bulk tanks or IBCs.
- Natural Gas – for generators, stored in bulk specialised double-walled tanks.
- Lubricating oils and hydraulic fluids - construction machinery and vehicles and thermal generators, stored in drums or small tanks, includes engine oil and gear box oil.
- Coolants and antifreeze - for generators, inverters/BESS, usually glycol-based, stored in sealed containers.
- Fire suppression agents - for BESS units (typically pre-installed), clean agent gases or aerosol systems, not typically handled on-site but stored in sealed units within BESS units.
- Cleaning agents and degreasers - low volumes, stored in original packaging.
- Battery electrolytes - not handled on-site, sealed within containerised BESS systems.
- Weed treatment.

There is the potential for waste to be generated during construction, however, this waste will be disposed of at an appropriately licenced landfill facility. Management measures that will be implemented during construction to minimise impacts resulting from spills or leaks of chemicals, hydrocarbon and/or hazardous materials are outlined within the EMP prepared for the Proposal (Appendix A).

Overall, construction impacts to surrounding vegetation resulting from the spills or leaks of chemicals, hydrocarbon and/or hazardous materials are expected to be incidental and/or localised and not expected to result in significant impacts to flora and vegetation.

6.1.5.3 Summary of significant residual impacts

Direct and indirect impacts to flora and vegetation associated with the Proposal are not expected to be significant. These impacts will be mitigated and managed through Horizon Power's mitigation and management measures, and the implementation of the EMP (Appendix A).

6.1.6 Environmental outcomes

The Proposal is not expected to result in significant residual impacts to flora and vegetation.

The Proposal requires clearing of up to 73.5 ha of native vegetation, including up to 2.6 ha of riparian vegetation. The Proposal will not require the removal of Conservation Significant Flora Species but may clear individuals of *Gyrocarpus americanus* subsp. *americanus*, which are flora species that represent a range extension.

Horizon Power considers that with the implementation of the avoidance and minimisation measures proposed, the potential direct and indirect impacts to flora and vegetation will be

sufficiently mitigated such that the Proposal will meet the EPA’s objective for flora and vegetation.

Table 6-9 provides a summary of the environmental outcomes of the Proposal relating to flora and vegetation. The clearing extent and impacts to flora and vegetation will be reduced further during the design phase, where possible.

Table 6-9 Environmental outcomes for flora and vegetation

Factor	Flora and vegetation environmental outcomes
Native vegetation	Permanent clearing of no more than 73.5 ha of native vegetation.
Vegetation Associations	Permanent clearing of no more than 1.9 ha of vegetation within Vegetation Association 127. Permanent clearing of no more than 61.0 ha of vegetation within Vegetation Association 764.
Significant vegetation	Clearing of no more than 2.6 ha of riparian vegetation.
Significant flora	No direct impacts to significant flora species.
Flora that represents a range extension	No clearing of flora that represents a range extension to an extent that the species become listed as Threatened or Priority species. No impact on biological diversity and ecological integrity of the species within the region.
Weeds	No significant introduction or spread of weeds to areas within and adjacent to the Proposal.
Fire	No significant alteration to fire regimes as a result of the Proposal.
Hydrology	No significant impacts to vegetation due to alteration to hydrology as a result of the Proposal.
Chemicals, hydrocarbons and hazardous materials	No significant impacts to vegetation due to chemicals, hydrocarbons and/or hazardous materials spills.

6.2 Environmental Factor – Terrestrial Fauna

The EPA’s objective for terrestrial fauna is ‘*To protect terrestrial fauna so that biological diversity and ecological integrity are maintained*’ (EPA 2016c).

6.2.1 Relevant policy and guidance

Table 6-10 below provides consideration of how the relevant EPA policy and guidance, and additional State and Commonwealth guidance, has been applied to the assessment of impacts to terrestrial fauna.

Table 6-10 Policy and guidance for environmental factor terrestrial fauna

Relevant policy and guidance	Explain how the EPA policy and guidance has been considered
Environmental Factor Guideline: Terrestrial Fauna (EPA, 2016c).	The Proposal considers the mitigation hierarchy; direct and indirect impacts; implications of cumulative impacts; predicted residual impacts; feasibility of management approaches.
Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020a).	Surveys and assessments for the Proposal have been undertaken to a standard consistent with the guidance.
Conservation codes for Western Australia Flora and Fauna (DBCAs 2019)	Surveys and assessments for the Proposal have identified significant flora and fauna consistent with the WA conservation codes.
Relevant Commonwealth Recovery Plans, Conservation Advice and/or Threat Abatement Plans	The conservation/ recovery objectives outlined in the Recovery Plans, Conservation Advice and/or Threat Abatement Plans have been assessed.

6.2.2 Receiving environment

6.2.2.1 Surveys and studies

Horizon Power commissioned a Targeted and Basic fauna survey to gain an understanding of the terrestrial fauna values within and surrounding the DE. The survey was undertaken in accordance with relevant EPA guidance.

The fauna survey within the DE is outlined in Table 6-11 with the extent of survey coverage shown on Figure 2-2. Five sites and the network connection route options were surveyed in Derby, referred to as the Survey Area (the same Survey Area as defined in the Flora and Vegetation section (Section 6.1.2.1). The Survey Area was 655.7 ha in total and was utilised to aid in site selection.

The DE has been aligned with cadastral boundaries, which has resulted in small areas along the edges of the DE that have not been surveyed, totalling approximately 6.6 ha. Of the 6.6 ha, 3.3 ha is located at Site A. The fauna habitat mapping has been extrapolated using aerial imagery and the existing GHD (2024) survey data.

Table 6-11 Summary of fauna surveys conducted within and surrounding the Proposal

Survey/Report	Details
<p>Kimberly IRP: Biological Survey (GHD, 2024)</p>	<p>Scope: Targeted and Basic fauna survey, including a desktop assessment and field survey. Five sites were surveyed in Derby, with Sites I and P being relevant to the Proposal. This survey was undertaken in accordance with EPA Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020a).</p> <p>The survey areas were traversed by foot to identify and describe dominant fauna habitat types present, and their condition, and to assess habitat for significant fauna. Targeted assessments specific for the Bilby (<i>Macrotis lagotis</i>), Northern Brushtail Possum (<i>Trichosurus vulpecula arnhemensis</i>), Northern Blue tongue Skink (<i>Tiliqua scincoides</i>) and the Northern Quoll (<i>Dasyurus hallucatus</i>) were undertaken in the Survey Area. The Basic assessment also identified and recorded all fauna occurring in the area at the time of the survey.</p> <p>Remote motion sensitive cameras were deployed in areas of suitable habitat to target fauna of conservation significance including Bilby and Northern Brushtail Possum. SM4[®] and Anabat Swift bat call detectors were set for general bat activity and to target the Northern Coastal free-tailed bat (<i>Ozimops cobourgianus</i>).</p> <p>Survey dates: 18 to 23 March and 25 March 2024.</p> <p>Survey Area: The GHD (2024) Survey Area in Derby covered 655.7 total ha.</p>

6.2.2.2 Fauna habitat

Three fauna habitat types have been mapped across 307.4 ha of the DE, of which up to 73.5 ha is proposed to be cleared (GHD, 2024). A summary of fauna habitat types present within the DE are detailed in Table 6-12 and shown on Figure 6-5. Degraded and cleared areas cover 34.7 ha of the DE and are considered to be of minimal value to fauna.

Fauna habitats within the DE have high habitat value in the context of the surrounding environment. Overall, the habitats contain a diversity of fauna, and all provide habitat for significant fauna species that are present or likely to be present in the local area.

Table 6-12 Fauna habitats recorded within the DE

Fauna habitat types	Fauna habitat value	Extent within the DE (ha)				Clearing fauna habitat extent within the DE (ha)	
		Site B (ha)	Site A (ha)	Existing Power Station (ha)	Network connection route (ha)	Total extent within the DE (ha)	Total clearing extent within the DE (ha)
<p>Mixed tall closed woodland sandplain</p> <p>Open woodland of <i>Adansonia gregorii</i>, <i>Corymbia dichromophloia</i> and <i>Corymbia zygophylla</i> over open woodland of <i>Lysiphyllum cunninghamii</i>, <i>Gyrocarpus americanus subsp. americanus</i> and <i>Hakea arborescens</i> on light brown sandy loam plains.</p> <p>The mixed tall closed woodland sandplain habitat type supports all significant fauna known or likely to occur in the DE. The condition of this habitat type ranges from very good to degraded.</p>	<p>Habitat Value: High</p> <ul style="list-style-type: none"> Northern Coastal Free-tailed Bat (critical habitat) Gouldian Finch (critical habitat) Fork-tailed Swift (supporting habitat) Oriental Cuckoo (supporting habitat) Grey Falcon (supporting habitat) Northern Blue-tongue Skink (critical habitat) Peregrine Falcon (supporting habitat) Barn Swallow (supporting habitat) 	-	25.1	1.01	3.5	29.6	Up to 29.6
<p>Mixed tall open shrubland sandplain</p>	<p>Habitat value: High</p>	-	-	-	2.6	2.6	Up to 2.6

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<p>Open woodland of <i>Adansonia gregorii</i>, <i>Corymbia zygophylla</i> and <i>Corymbia opaca</i> over open woodland of <i>Lysiphyllum cunninghamii</i>, <i>Hakea aborescens</i> and <i>Melaleuca cajuputi</i> subsp. <i>Cajuputi</i> on light brown sandy loam seasonal drainage flats.</p>	<ul style="list-style-type: none"> Northern Coastal Free-tailed Bat (critical habitat) Northern Blue-tongue Skink (critical habitat) Gouldian Finch (critical habitat) Fork-tailed Swift (supporting habitat) Oriental Cuckoo (supporting habitat) 						
<p>Open Eucalypt woodland Open woodland of <i>Corymbia dichromophloia</i>, <i>Adansonia gregorii</i>, and <i>Lysiphyllum cunninghamii</i> over open shrubland (where more recently burnt) or tree form of <i>Acacia tumida</i> var. <i>kulpam</i> on light brown sandplain.</p>	<p>Habitat Value: High</p> <ul style="list-style-type: none"> Northern Coastal Free-tailed Bat (critical habitat) Gouldian Finch (critical habitat) Fork-tailed Swift (supporting habitat) Oriental Cuckoo (supporting habitat) Grey Falcon (supporting habitat) Northern Blue-tongue Skink (critical habitat) Peregrine Falcon (supporting habitat) 	227.7	-	-	6.4	234.1	Up to 66.4
<p>Scattered native trees</p>	<p>Habitat Value: Low</p>	-	2.6	-	3.6	6.2	Up to 6.2

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Scattered native trees over weeds and native herbs on road verges. This habitat type is present along the network connection route portion of the DE.	There is no significant fauna supported by this habitat type within the DE.						
Cleared	4.6	1.6	3.6	24.9	34.7	-	
Total	232.3	29.3	4.61	41.0	307.2	-	

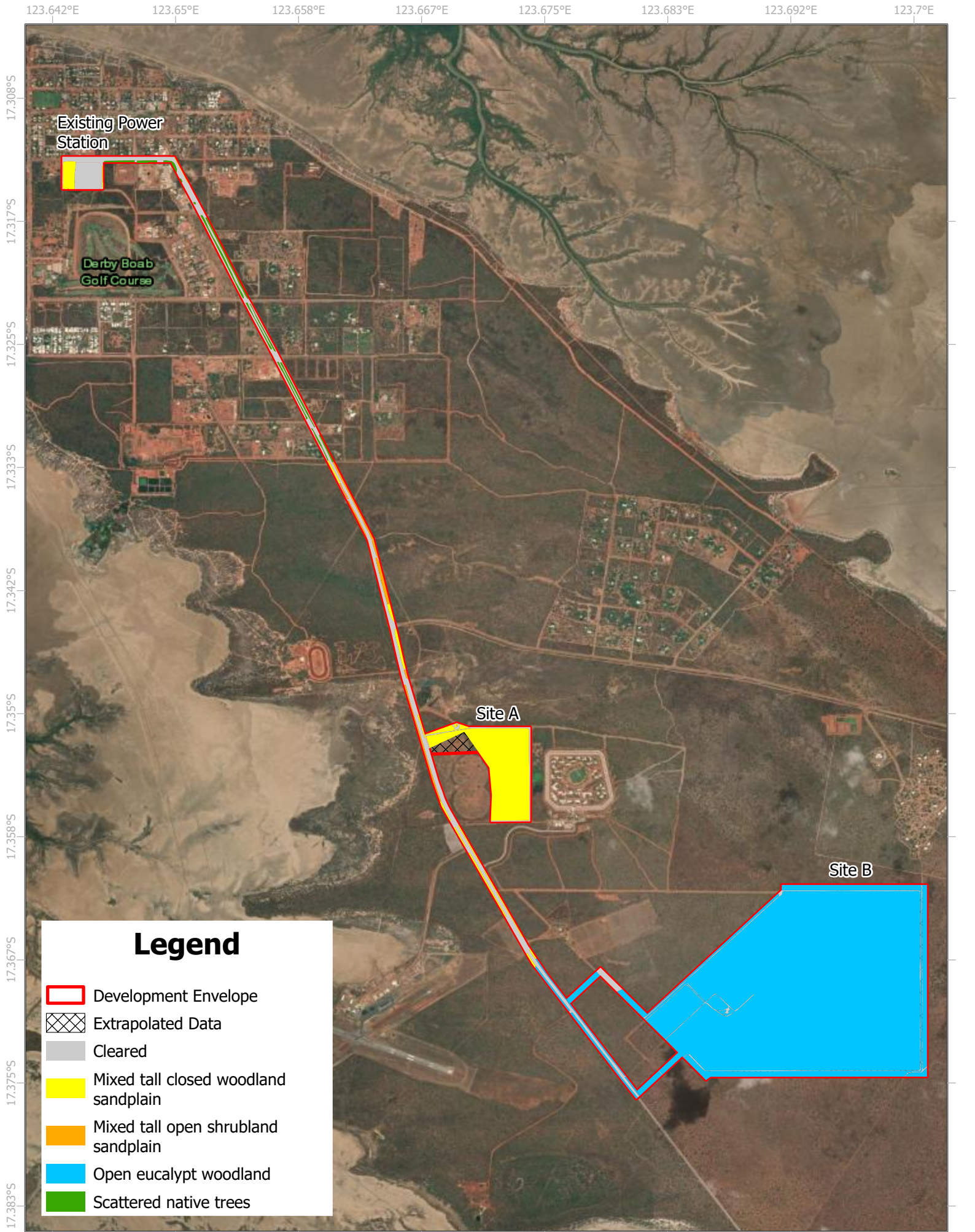


Figure 6-5 Fauna Habitat within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



6.2.2.2.1 Habitat trees

In the total Survey Area, GHD (2024) recorded 19 habitat trees with hollows suitable for nesting/breeding/roosting for the Northern Brushtail Possum, Northern Coastal Free-tailed Bat and Gouldian Finch. Of these, 12 were in the DE at Site A and B. Avoidance areas with a 20 m buffer were established around the eight habitat trees with hollows at Site B. Therefore, up to four identified habitat trees with hollows at Site A may be cleared for the Proposal. The counts of these trees within the Survey Area and DE are shown in Table 6-13.

Table 6-13 Counts of suitable habitat trees within the Survey Area and DE

Habitat tree count in Survey Area	Habitat tree count in the DE	Habitat trees count to be cleared
19	12	4

The habitat trees were in the open Eucalypt woodland and mixed tall, closed woodland sandplain habitat types at Site B and Site A, respectively. Figure 2-2 shows the location of the identified habitat trees with hollows within the Survey Area and DE.

6.2.2.2.2 Habitat linkages

The fauna habitats within the DE are part of a contiguous, largely intact area of remnant vegetation present in Derby. Land within the Derby township has been subject to clearing, but this clearing is minimal and much of the remnant vegetation intact in the local area. Overall, the habitats within the DE are largely contiguous through the local area.

6.2.2.3 Fauna

6.2.2.3.1 Fauna diversity

Across the wider Survey Area (defined in Section 6.2.2.1), a total of 90 fauna species, consisting of 61 birds, 14 reptiles, 2 amphibians and 13 mammals were recorded (GHD, 2024). Of these species recorded, four are introduced species, which included the Black Rat (*Rattus rattus*), the Cat (*Felis catus*), Dog (*Canis familiaris*) and Cane Toad (*Rhinella marina*).

6.2.2.3.2 Conservation Significant fauna

Based on the database searches (NatureMap, DBCA database and PMST), GHD (2024) identified 77 significant terrestrial vertebrate taxa as likely to occur or known to be present within 20 km of the Survey Area. These species included:

- 60 bird species - 42 Migratory, 2 Critically Endangered, 8 Endangered, 7 vulnerable and 1 Other Specially Protected Species.
- 4 freshwater fish species – 3 Vulnerable and 1 Priority 1.
- 8 mammal species – 1 Endangered, 5 Vulnerable, 1 Priority one and 1 Priority two.
- 4 reptile species – 2 Critically Endangered, 1 Endangered and 1 Migratory.
- 1 amphibian species Priority 3.

The GHD (2024) survey recorded four conservation significant fauna species within the DE or in close vicinity to the DE (Fork-tailed Swift, Oriental Cuckoo, Northern Blue-tongue Skink and the Northern Coastal Free-tailed Bat), with an additional 6 species considered likely to occur. The species that are known to occur or are likely to occur in the DE are described in Table 6-14. The conservation significant species that were identified in the GHD (2024)

desktop survey, but were deemed unlikely or highly unlikely to occur in the DE are provided in Appendix B. The likelihood of occurrence definitions are also provided in Appendix B.

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Table 6-14 Conservation significant fauna species that are known to occur or are considered likely to occur within the DE

Fauna species	EPBC Act status	BC Act/DBCA status	Likelihood of occurrence	Suitable habitat within the DE
Fork-tailed Swift (<i>Apus pacificus</i>)	Migratory	Migratory	<p>Known to occur</p> <p>The Fork-tailed Swift was recorded at one location during the GHD (2024) survey, within the existing power station.</p> <p>All three habitat types found within the DE represent suitable foraging habitat for the species. Since the species is predominantly aerial, the Fork-tailed Swift is likely to occur aerially over the DE on at least an occasional or seasonal basis.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> Mixed tall open shrubland sandplain – foraging (2.6 ha within the DE, all of which may be cleared) Mixed tall closed woodland sandplain – foraging (29.6 ha within the DE, all of which may be cleared) Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared)
Oriental Cuckoo (<i>Cuculus opatus</i>)	Migratory	Migratory	<p>Known to occur</p> <p>The Oriental Cuckoo was recorded during the GHD (2024) survey, approximately 900 m east of the DE.</p> <p>All three habitat types found in the DE provide suitable foraging habitat for the species. The Oriental Cuckoo is likely to occur in the DE at least on an occasional basis.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> Mixed tall open shrubland sandplain– foraging (2.6 ha within the DE, all of which may be cleared) Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared) Mixed tall closed woodland sandplain – foraging (29.6 ha, all of which may be cleared)
Gouldian Finch (<i>Chleobia gouldiae</i>)	Endangered	Priority 4	<p>Likely to occur</p> <p>The Gouldian Finch was not recorded during GHD (2024) survey however, two habitat types within the DE provide critical foraging, nesting/breeding habitat for the species.</p> <p>There were 19 habitat trees with suitable nesting hollows for the Gouldian Finch recorded in the wider Survey Area. Twelve of these trees are within</p>	<p>Critical Habitat:</p> <ul style="list-style-type: none"> Mixed tall open shrubland sandplain– foraging (2.6 ha within the DE, all of which may be cleared) Open Eucalypt woodland – foraging, nesting/ breeding (234.1 ha within the DE, up to 66.4 ha may be cleared) Mixed tall closed woodland sandplain – foraging, nesting/breeding (29.6 ha within the DE, all of which may be cleared)

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Fauna species	EPBC Act status	BC Act/DBCA status	Likelihood of occurrence	Suitable habitat within the DE
			<p>the DE, and up to four of them may be cleared for the Proposal.</p> <p>Additionally, there are local records for this species. Therefore, the species is likely to visit the DE on a frequent or seasonal basis.</p>	
Grey Falcon (<i>Falco hypoleucos</i>)	Vulnerable	Vulnerable	<p>Likely to occur</p> <p>The Grey Falcon was not recorded during the GHD (2024) survey however suitable foraging habitat is available in the open Eucalypt and mixed tall closed woodland sandplain habitats within the DE. Local and regional occurrences have been recorded.</p> <p>Therefore, the species is likely to visit the DE on at least an occasional basis.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (29.6 ha within the DE, all of which may be cleared) • Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared)
Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>)	Critically Endangered	Priority 4	<p>Known to occur</p> <p>The Northern Blue-tongue Skink was recorded in Site B within the DE during the GHD (2024) survey, an additional three records were recorded within the Survey Area (outside of the DE). The mixed closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland habitat types provide potential foraging, breeding, shelter and/or dispersal habitat for the species. The Northern Blue-tongue Skink is highly likely to occur throughout the DE.</p> <p>All three habitat types present within the DE provide critical habitat for the Northern Blue-tongue Skink.</p>	<p>Critical habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain - foraging, breeding, shelter and/or dispersal (29.6 ha within the DE, all of which may be cleared) • Open Eucalypt woodland - foraging, breeding, shelter and/or dispersal (234.1 ha within the DE, 66.4 ha may be cleared) • Mixed tall open shrubland sandplain - foraging, breeding, shelter and/or dispersal (2.6 ha within the DE, all of which may be cleared)

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Fauna species	EPBC Act status	BC Act/DBCA status	Likelihood of occurrence	Suitable habitat within the DE
Peregrine Falcon (<i>Falco peregrinus</i>)		Other Specially Protected	<p>Likely to occur</p> <p>The Peregrine Falcon was not recorded during the GHD (2024) survey, however, suitable foraging habitat for the species is available in the open Eucalypt and mixed tall closed woodland sandplain habitat types within the DE. Therefore, likely to visit the DE on at least an occasional basis.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> • Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared) • Mixed tall closed woodland sandplain – foraging (29.6 ha within the DE, all of which may be cleared)
Barn Swallow (<i>Hirundo rustica</i>)	Migratory	Migratory	<p>Likely to occur</p> <p>The species occurs locally, and suitable habitat occurs within the DE. The mixed tall closed woodland sandplain and open eucalypt woodland habitats provide supporting foraging habitat for the species. It is likely to be present on at least an occasional basis during the non-breeding season.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (29.6 ha within the DE, all of which may be cleared) • Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared)
Yellow Wagtail (<i>Motacilla flava</i>)	Migratory	Migratory	<p>Likely to occur</p> <p>The species occurs locally and within the wider region based on database records. While the Yellow Wagtail was not recorded during the GHD (2024) survey, the mixed tall closed woodland sandplain and open Eucalypt woodland habitats provide supporting foraging habitat for the Yellow Wagtail. The species is expected to occur within the DE on at least an occasional basis.</p>	<p>Supporting Habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (29.6 ha within the DE, all of which may be cleared) • Open Eucalypt woodland – foraging (234.1 ha within the DE, up to 66.4 ha may be cleared)
Northern Coastal Free-tailed Bat (<i>Ozimops cobourgianus</i>)		Priority 1	<p>Known to occur</p> <p>The Northern Coastal Free-tailed Bat was recorded at five locations during the GHD (2024) survey via call recordings. Of these five records, two are located within the DE in Sites I and P. The remaining three records are located approximately 480 m, 670</p>	<p>Critical Habitat:</p> <ul style="list-style-type: none"> • Mixed tall open shrubland sandplain – foraging, breeding, roosting and/or dispersal (2.6 ha within the DE, all of which may be cleared)

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Fauna species	EPBC Act status	BC Act/DBCA status	Likelihood of occurrence	Suitable habitat within the DE
			<p>m and 850 m from the DE. The species is likely to roost/breed in tree hollows within the DE.</p> <p>There were 19 habitat trees with suitable roosting/breeding hollows for the Northern Coastal Free-tailed Bat recorded in the wider Survey Area. Twelve of these trees are within the DE, and up to four of them may be cleared for the Proposal.</p>	<ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging, breeding, roosting and/or dispersal (29.6 ha within the DE, all of which may be cleared) • Open Eucalypt woodland – foraging, breeding, roosting and/ or dispersal (234.1 ha within the DE, up to 66.4 ha may be cleared)
<p>Northern Brushtail Possum (<i>Trichosurus vulpecula arnhemensis</i>)</p>	<p>Vulnerable</p>	<p>Vulnerable</p>	<p>Likely to occur</p> <p>The Northern Brushtail Possum was not recorded during the GHD (2024) survey. However, the mixed tall closed woodland sandplain habitat provides critical foraging, breeding, shelter and/or dispersal habitat for the species. The Northern Brushtail Possum is likely to occur occasionally within the DE.</p> <p>There were 19 habitat trees with suitable breeding hollows for the Northern Brushtail Possum recorded in the wider Survey Area. Twelve of these trees are within the DE, and up to four of them may be cleared for the Proposal.</p>	<p>Critical habitat:</p> <ul style="list-style-type: none"> • Open Eucalypt woodland - foraging, breeding, shelter and/or dispersal (234.1 ha within the DE, up to 66.4 ha may be cleared) • Mixed tall closed woodland sandplain – foraging, breeding, shelter and/or dispersal (29.6 ha within the DE, all of which may be cleared)

Mammals

Northern Brushtail Possum

The Northern Brushtail Possum is a nocturnal and semi-arboreal marsupial that predominantly inhabits tall Eucalypt open forests with large hollow-bearing trees that provide shelter for the species (TSSC, 2021). The species typically occurs in higher abundance within areas with higher shrub density, however it is not strictly dependent on shrub abundance and has been found in rugged desert uplands as well as adapting to rural and urban habitats (TSSC, 2021). The species is listed as Vulnerable under the BC Act and EPBC Act.

There are 4 records of the Northern Brushtail Possum on the DBCA databases within the Fitzroy Trough subregion. The species was not recorded during the GHD (2024) survey.

As detailed in Section 6.2.2.2.1, there are habitat trees with hollows that are suitable for nesting for the Northern Brushtail Possum. The following habitat types within the DE are suitable for the Northern Brushtail Possum:

- Open Eucalypt woodland may be used for foraging, breeding, shelter and/or dispersal
- Mixed tall closed woodland sandplain may be used for foraging, breeding, shelter and/or dispersal

Critical habitat for this species is not defined (TSSC, 2021). As the DE contains 12 recorded habitat trees with suitable hollows for nesting within the open Eucalypt woodland and mixed tall closed woodland sandplain habitat types, these are considered critical habitats for the species. The extent of critical habitat for the species and proposed clearing within the DE is provided in Table 6-12 and Table 6-13.

Northern Coastal Free-tailed Bat

Ecology of this species is poorly known, but they are usually associated with mangroves and coastal woodlands where they roost in tree hollows (GHD, 2024). This species is listed as Priority 1 by DBCA.

There is one record of the Northern Coastal Free-tailed Bat on the DBCA database within the Fitzroy Trough subregion.

Northern Coastal Free-tailed Bat calls were recorded on bat-call device during the GHD (2024) survey at 18 locations within the Survey Area within all three habitats present (Figure 2-2). The species was recorded on two occasions within the DE during the GHD (2024) survey in the open Eucalypt woodland and mixed tall closed woodland sandplain (GHD, 2024). Therefore, this species is known to occur in the DE.

As detailed in Section 6.2.2.2.1, there are habitat trees with hollows that are suitable for roosting for the Northern Coastal Free-tailed Bat. Critical habitat for this species has not been defined, however, all three habitat types within the DE are considered critical habitat for the Northern Coastal Free-tailed Bat for foraging, breeding, roosting and dispersal. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12 and Table 6-13.

Reptiles

Northern Blue-tongue Skink

Northern Blue-tongue Skink occurs across northern Australia (DCCEEW, 2023). They move widely across the savannah landscape but spend most of their time in small, fragmented patches of habitat that offer cooler moister conditions. Individuals spend long periods within small and distinctive habitat patches, interspersed with longer directional relocations from one patch to the next. The patches provide relatively shaded, cool, and damp conditions, with higher grass and more leaf-litter cover. The location of these patches in the landscape is probably determined by drainage patterns, soil moisture-holding ability, and stochastic recruitment of shade trees (Shine, 2017; Price-Rees et al., 2013). This species is listed as Priority 4 by DBCA.

There are no records of the Northern Blue-tongue Skink on the DBCA database within the Fitzroy Trough subregion. A targeted survey effort was undertaken by GHD (2024) for this species. There was one opportunistic sighting of the species approximately 1 km east of the DE within the Survey Area. There were an additional three records from the targeted search, of which one was within the DE at Site B, and the remaining two were approximately 0.15 km west and 0.9 km east of the DE (Figure 2-2).

Therefore, the Northern Blue-tongue Skink is known to occur in the DE. The conservation advice for the species (DCCEEW, 2023) defines habitat critical to the survival of the species as:

Areas of dense vegetation that provide cool and moist conditions within otherwise hot, dry, and flammable landscapes that are within the historical distribution of the northern blue-tongue skink are habitat critical to the survival of this species.

Examples of habitat critical to the survival of the Northern Blue-tongue Skink include, but are not limited to:

- *Rainforests and vine thickets.*
- *Riparian forests.*
- *Well-vegetated creeks, gorges, and drainage lines.*
- *Well-vegetated swamps, soaks, and springs.*
- *Dense thickets within floodplains, grasslands, shrublands, savannas and woodlands.*
- *Shady thickets in rocky ranges and gorges.*
- *Well-watered and well-vegetated gardens.*

Non-vegetated areas that provide shelter from thermal extremes, fire, and predators are also habitat critical to the survival of the Northern Blue-tongue Skink. These include areas with deep rocky crevices and underground burrows.

Therefore, the mixed tall closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland provide potential foraging, breeding, shelter and/or dispersal habitat for the species and are considered critical habitat. Up to 73.5 ha of critical habitat may be cleared for the Proposal. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

Migratory Birds

Fork-tailed Swift

The Fork-tailed Swift is widespread in coastal and sub coastal areas and are found in a variety of habitats, from inland open plains to wooded areas. The species does not breed in Australia and is almost exclusively aerial (DoE, 2025a). The Fork-tailed Swift is listed as Migratory under the BC Act and EPBC Act.

There are 10 records of the Fork-tailed Swift on the DBCA database within the Fitzroy Trough subregion.

The Fork-tailed swift was recorded on one location flying low above the DE, above the existing power station (GHD, 2024). The species likely occurs aerially over the habitat during the seasonal non-breeding period, rarely landing. However, this species may potentially land across all habitats within the DE (mixed tall closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland) to forage. Critical habitat is not defined for the species; therefore, this is considered supporting habitat. Up to 73.5 ha of supporting habitat may be cleared for the Proposal (as per Table 6-12).

Barn Swallow

The Barn Swallow is listed as Migratory under the BC Act and EPBC Act. The species is recorded in open country in coastal lowlands, often found near water, towns and cities. The species inhabits, freshwater wetlands, paperbark Melaleuca woodland, mesophyll shrub thickets and tussock grassland (DoE, 2025c). Barn Swallows do not breed in Australia.

There are 14 records of the Barn Swallow on the DBCA database within the Fitzroy Trough subregion.

The Barn Swallow was not recorded during the GHD (2024) survey, however, suitable habitat is present within the DE and this species is known to occur locally. The Barn Swallow is likely to occur within the DE on an occasional basis.

The mixed tall closed woodland sandplain and open Eucalypt woodland habitats are considered suitable supporting foraging habitat within the DE for the Barn Swallow. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

Yellow Wagtail

The Yellow Wagtail is listed as Migratory in the BC Act and EPBC Act. The species predominantly inhabits open areas with low vegetation, especially short grass. The species is often recorded near water or in damp areas such as muddy or grassy edges of wetlands, including lakes, swamps and lagoons (Birdlife, 2023a).

There are no records of the Yellow Wagtail on the DBCA database within the Fitzroy Trough subregion.

The Yellow Wagtail was not recorded during the field survey (GHD, 2024), however it is considered likely to occur within the DE, based on database records that the species occurs locally and within the wider region. The mixed tall closed woodland sandplain and open Eucalypt woodland habitats are likely to provide supporting foraging habitat for the Yellow Wagtail. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

Oriental Cuckoo

The Oriental Cuckoo is listed as Migratory under the BC Act and EPBC Act. Within Australia this species inhabits the canopy or shrub layer of monsoon rainforest, vine thickets, wet sclerophyll forest or open casuarina, Acacia or Eucalyptus forest or woodland (Birdlife Australia, 2023b).

There are 4 records of the Oriental Cuckoo on the DBCA database within the Fitzroy Trough subregion.

The Oriental Cuckoo was recorded from one location during the GHD (2024) survey, approximately 900 m from the DE within mixed tall, closed woodland sandplain habitat type.

The mixed tall woodland sandplain, mixed tall open shrubland sandplain and Open Eucalypt woodland habitats all provide suitable supporting foraging habitat for the Oriental Cuckoo. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

Other Bird Species

Gouldian Finch

The Gouldian Finch is listed as Endangered under the EPBC Act and Priority 4 by DBCA. The Gouldian Finch is primarily found in open woodlands that are dominated by Eucalyptus trees and support a ground cover of Sorghum and other grasses (Boekel, 1980). The critical components of suitable core habitat for the Gouldian Finch appear to be the presence of favoured annual and perennial grasses (especially Sorghum), a nearby source of surface water and, in the breeding season, unburnt hollow-bearing Eucalyptus trees (especially *E. tintinnans*, *E. brevifolia* and *E. leucophloia*) (Higgins et al. 2006).

The National Recovery Plan for the Gouldian Finch defines habitat critical to the survival of the Gouldian Finch as (TSSC, 2016):

- *Known breeding habitat characterised by rocky hills with hollow-bearing smooth-barked gums within two to four kilometres of small waterholes or springs that persist throughout the dry season*
- *Dry season feeding habitat is dominated by annual spear grasses or native sorghum, and in the wet season birds shift to feeding from scattered patches of cockatoo grass, golden beard grass or spinifex-dominated communities*
- *Other important wet season grasses include giant spear grass, white grass, ricegrass and kangaroo grass.*

There are 76 records of the Gouldian Finch on the DBCA database within the Fitzroy Trough database. The Gouldian Finch was not recorded during the GHD (2024) survey, however suitable foraging habitat is present within the DE and the species is known to occur locally and may forage within DE on seed of grasses when seasonally available. The species is likely to only use the DE seasonally. Therefore, the Gouldian Finch is likely to occur in the DE.

As detailed in Section 6.2.2.2.1, there are habitat trees with hollows that are suitable for nesting/breeding for the Gouldian Finch. The following habitat types within the DE are suitable for the Gouldian Finch:

- Open Eucalypt woodland may be used for foraging, nesting/breeding
- Mixed tall closed woodland sandplain may be used for foraging, nesting/breeding
- Mixed tall open shrubland sandplain may be used for foraging

These three habitat types are all considered critical habitat due to their potential foraging, nesting and breeding values. The extent of critical habitat for the species and proposed clearing within the DE is provided in Table 6-12 and Table 6-13.

Grey Falcon

The Grey Falcon is listed as Vulnerable under the EPBC Act and BC Act. The Grey Falcon is an Australian endemic, usually confined to the arid inland. It inhabits Triodia grassland, Acacia shrubland, and lightly timbered arid woodland (Morcombe, 2004).

There are 9 records of the Grey Falcon on the DBCA database within the Fitzroy Trough database.

The Grey Falcon was not recorded during the GHD (2024) survey, however there is suitable habitat within the DE and there are records of the species within region, although they are not commonly observed.

The mixed tall woodland sandplain and open Eucalypt habitats represent suitable foraging habitat for the Grey Falcon. These habitats are considered supporting habitat for the species. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

Peregrine Falcon

The Peregrine Falcon has a wide range across Australia, inhabiting a wide variety of habitats from woodlands to open grasslands and coastal cliffs (Morcombe, 2004). The species is listed as Other Specially Protected under the BC Act.

There are 34 records of the Peregrine Falcon on the DBCA database from within the Fitzroy Trough subregion.

The Peregrine Falcon was not recorded during the GHD (2024) survey, however there is suitable habitat within the DE and the species is known to occur locally. The mixed tall closed woodland sandplain and open Eucalypt woodland habitats provide supporting foraging habitat for the species. Therefore, the Peregrine Falcon is likely to occur within the DE. The extent of these habitat types and proposed clearing within the DE is provided in Table 6-12.

6.2.2.3.3 Short-range endemic fauna

Short-range endemic species likely to occur in the Kimberley are land and freshwater snails (EPA, 2016e). The habitats likely to contain short-range endemic species include vine thickets, boulder piles, isolated hills and other landforms, vegetated gullies and freshwater habitats (EPA, 2016e). These habitats are not present within the DE and therefore short-range endemic fauna are not expected to be relevant to the Proposal and are not discussed further.

6.2.3 Potential impacts

6.2.3.1 Direct impacts

Construction of the Proposal will result in the direct loss of fauna habitat, including habitat suitable for significant fauna species, through clearing. Operation of the Proposal will not directly impact terrestrial fauna as maintenance activities will utilise the existing roads and access tracks, hence impacts to fauna habitats will be short-term.

Direct impacts to terrestrial fauna during construction of the Proposal includes:

- Clearing of up to 29.6 ha of mixed tall closed woodland sandplain, which provides habitat for:
 - Northern Coastal Free-tailed Bat (critical habitat)
 - Fork-tailed Swift (supporting habitat)
 - Oriental Cuckoo (supporting habitat)
 - Gouldian Finch (critical habitat)
 - Grey Falcon (supporting habitat)
 - Northern Blue-tongue Skink (critical habitat)
 - Peregrine Falcon (supporting habitat)
 - Barn Swallow (supporting habitat)
 - Yellow Wagtail (supporting habitat)
 - Northern Brushtail Possum (critical habitat)
- Clearing of up to 2.6 ha of mixed tall open shrubland sandplain, which provides habitat for:
 - Northern Coastal Free-tailed Bat (critical habitat)
 - Northern Blue-tongue Skink (critical habitat)
 - Fork-tailed Swift (supporting habitat)

- Oriental Cuckoo (supporting habitat)
- Gouldian Finch (critical habitat)
- Clearing of up to 66.4 ha of open Eucalypt woodland, which provides habitat for:
 - Northern Coastal Free-tailed Bat (critical habitat)
 - Fork-tailed Swift (supporting habitat)
 - Oriental Cuckoo (supporting habitat)
 - Gouldian Finch (critical habitat)
 - Grey Falcon (supporting habitat)
 - Northern Blue-tongue Skink (critical habitat)
 - Peregrine Falcon (supporting habitat)
 - Barn Swallow (supporting habitat)
 - Yellow Wagtail (supporting habitat)
 - Northern Brushtail Possum (critical habitat)
- Clearing of up to four recorded hollow containing trees, which could provide suitable important nesting/roosting/breeding habitat to the Northern Brushtail Possum, Northern Coastal Free-tailed Bat and the Gouldian Finch.
- Fauna injury/death from vehicle strike, clearing activities or direct collision with infrastructure (particularly with solar and BESS facility infrastructure for bird and bat species).

6.2.3.2 Indirect impacts

Construction and operation of the Proposal may result in the following indirect impacts to terrestrial fauna:

- Fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, and increased generation of dust during construction.

6.2.3.3 Cumulative impacts

Impacts to aspects of fauna in proximity to the Proposal were identified through the collation of information from NVCPs and environmental referrals for other Proposals within the Fitzroy subregion (Table 6-15). Proposals used to inform cumulative impacts to terrestrial fauna include the Napier Downs Irrigation Project and NVCPs (refer to Section 9 for an overview of the cumulative impact assessment methodology).

Table 6-15 Cumulative impacts to terrestrial fauna from other Proposals

Aspect/ Project	Derby Future Energy System Current Proposal	Napier Downs Irrigation Project	Native Vegetation Clearing Permits	Cumulative impact
Proponent	Horizon Power	Napier Corporation Pty Ltd	N/A	N/A
Proposed Project commencement	2029	Not specified	N/A	N/A
Description	Construct a solar facility in Derby.	Develop a pivot irrigation project to supply fodder crops for pastoral use.	Approved NVCPs.	N/A
Location	Derby, Kimberley region WA.	West Kimberly region, 240 km east northeast of Broome, Western Australia.	Within the Fitzroy Subregion of the Dampierland region	N/A
Proposed fauna habitat clearing	73.5 ha of fauna habitat in varying condition.	200 ha of fauna habitat in varying condition.	411.8 ha* of fauna habitat in varying condition.	685.3 ha of fauna habitat in varying condition.

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<p>Significant fauna species and habitats affected</p>	<ul style="list-style-type: none"> • Clearing of up to 70.9 ha of Barn Swallow habitat • Clearing of up to 73.5 ha of Fork-tailed Swift habitat • Clearing of up to 73.5 ha of Gouldian Finch habitat • Clearing of up to 70.9 ha of Grey Falcon habitat • Clearing of up to 73.5 ha of Northern Blue-tongue Skink habitat • Clearing of up to 70.9 ha of Northern Brushtail Possum habitat • Clearing of up to 73.5 ha of Northern Coastal Free-tailed Bat habitat • Clearing of up to 73.5 ha of Oriental Cuckoo habitat • Clearing of up to 70.9 ha of Peregrine Falcon habitat • Clearing of up to 70.9 ha of Yellow Wagtail habitat 	<p>This Proposal does not affect any significant fauna species in common with the Proposal.</p>	<ul style="list-style-type: none"> • Clearing of up to 4.1 ha of Barn Swallow habitat • Clearing of up to 4.1 ha of Fork-tailed Swift habitat • Clearing of up to 4.1 ha of Gouldian Finch habitat • Clearing of up to 7.1 ha of Grey Falcon habitat • Clearing of up to 7.1 ha of Peregrine Falcon habitat 	<ul style="list-style-type: none"> • Clearing of up to 75 ha of Barn Swallow habitat • Clearing of up to 77.6 ha of Fork-tailed Swift habitat • Clearing of up to 77.6 ha of Gouldian Finch habitat • Clearing of up to 78 ha of Grey Falcon habitat • Clearing of up to 78 ha of Peregrine Falcon habitat • Cumulative impacts are not expected for the remaining fauna species.
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*The clearing number (411.8 ha) is attributed to NCVPs within the Fitzroy subregion.

6.2.4 Mitigation

6.2.4.1 Construction

The Proposal has been designed to avoid and/or mitigate impacts to terrestrial fauna where possible. During the design phase, particular focus has been, and will be, placed on reducing the amount of fauna habitat clearing required for construction. Operation of the Proposal will utilise existing roads and access tracks.

Avoidance measures considered and incorporated into Proposal planning to date includes the presence of a licenced fauna specialist prior to commencement of clearing activities to supervise avoidance, dispersal and relocation of any fauna.

Impacts to terrestrial fauna will be minimised and reduced through the following mitigation measures:

- Clearing impacts will be further reduced where possible through the detailed design process, including the positioning of solar and BESS facility infrastructure, network connection infrastructure and thermal power plant to minimise impacts to fauna habitat
- Dust, noise, vibration and light management measures will be implemented during construction
- Implementation of the management measures in the EMP (Appendix A) to minimise risks to terrestrial fauna, and to provide monitoring during construction
- A pre-clearance survey will be undertaken within the DE for the Northern Brushtail Possum and Northern Blue-tongue Skink, as detailed in the EMP (Appendix A)
- Habitat trees suitable for the Northern Brushtail Possum, Northern Coastal Free-tailed Bat and the Gouldian Finch will be avoided where possible during site selection and design.

6.2.4.2 Operation

Operational activities associated with the Proposal include operation of the solar and BESS facility, network connection route and thermal power station, along with maintenance inspections and repairs. Operation of the Proposal will utilise existing roads and access tracks. The following management measures will be implemented during operation of the Proposal to minimise impacts to terrestrial fauna:

- Maintenance and repair activities will be restricted to existing cleared areas where possible
- Access to infrastructure will be through existing access tracks.

6.2.5 Assessment and significance of residual impact

6.2.5.1 Direct impacts

6.2.5.1.1 Habitat loss

The Proposal will result in the loss of up to 73.5 ha of potential fauna habitat. The habitats present comprise a mixture of mixed tall closed woodland sandplain, open Eucalypt woodland and mixed tall open shrubland sandplain, and provides habitat for various conservation significant fauna species that have the potential to occur within the DE.

The design of the Proposal has, and will continue to be, refined to minimise the extent of fauna habitat clearing as much as possible. It is considered that the limited extent of clearing is unlikely to substantially impact fauna habitat.

The assessment of significant residual impacts as a result of clearing conservation significant fauna species habitat is provided in Table 6-16.

Table 6-16 Assessment of significant residual impacts as a result of clearing conservation significant fauna species habitat

Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Northern Brushtail Possum (<i>Trichosurus vulpecula arnhemensis</i>)	Vulnerable	Vulnerable	<p>Critical Habitat</p> <ul style="list-style-type: none"> Mixed tall closed woodland sandplain – foraging, breeding, shelter and/or dispersal (up to 29.6 ha) Open eucalypt woodland - foraging, breeding, shelter and/or dispersal (up to 66.4 ha) 	<p>There are four records of the Northern Brushtail Possum on the DBCA database within the Fitzroy Trough subregion. The Northern Brushtail Possum was not recorded during the GHD (2024) survey. This shows that the Northern Brushtail Possum occurs within the region and likely occurs occasionally in the DE.</p> <p>There are four recorded habitat trees with hollows suitable for nesting for the Northern Brushtail Possum that will be cleared for the Proposal. Up to 29.6 ha of mixed tall closed woodland sandplain habitat, and 66.4 ha of open eucalypt woodland habitat within the DE will be cleared for the Proposal, which is considered critical habitat for the Northern Brushtail Possum for foraging, breeding, shelter and/or dispersal.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, critical habitat for the Northern Brushtail Possum primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4). The Proposal has been designed to minimise impacts to potential Northern Brushtail Possum habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Northern Brushtail Possum critical habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region. The clearing of four identified habitat trees with suitable hollows for nesting is not likely to impact the breeding cycle of the species due to the presence of other suitable habitat for the species to disperse to, including trees with hollows for breeding.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Northern Coastal Free-tailed Bat (<i>Ozimops cobourgianus</i>)	-	Priority 1	<p>Critical habitat</p> <ul style="list-style-type: none"> Mixed tall closed woodland sandplain - foraging, breeding, roosting and/or dispersal (up to 29.6 ha) Mixed tall open shrubland sandplain - foraging, breeding, roosting and/or dispersal (up to 2.6 ha) Open eucalypt woodland - foraging, breeding, roosting and/or dispersal (up to 66.4 ha) 	<p>There is one record of the Northern Coastal Free-tailed Bat on the DBCA database within the Fitzroy Trough subregion. The Northern Coastal Free-tailed Bat was recorded during the GHD (2024) survey from five locations within the survey area, two of which are within the DE. This shows that the Northern Coastal Free-tailed Bat occurs occasionally in the DE.</p> <p>There are four trees with suitable hollows for roosting that will be cleared for the Proposal. Up to 73.5 ha of critical habitat for the Northern Coastal Free-tailed Bat will be cleared for the Proposal in the form of mixed tall closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland. These habitat types provide potential foraging, breeding and/or dispersal habitat for the Northern Coastal Free-tailed Bat.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, critical habitat for the Northern Coastal Free-tailed Bat primarily occurs within Vegetation Association 764 in the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4). The Proposal has been designed to minimise impacts to potential Northern Coastal Free-tailed Bat habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Northern Coastal Free-tailed Bat habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region. The clearing of four identified habitat trees with suitable hollows for nesting is not likely to impact the breeding cycle of the species due to the presence of other suitable habitat for the species to disperse to, including trees with hollows for breeding.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Fork-tailed Swift (<i>Apus pacificus</i>)	Migratory	Migratory	<p>Supporting habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (29.6 ha) • Mixed tall open shrubland sandplain (2.6 ha) • Open eucalypt woodland – foraging (66.4 ha) 	<p>There are 10 records of the Fork-tailed Swift on the DBCA database within the Fitzroy Trough subregion. The Fork-tailed Swift was recorded once within the DE in proximity to the existing power station during the GHD (2024) field surveys. This shows that the Fork-tailed Swift is known to occur in the DE.</p> <p>Up to 73.5 ha of supporting habitat for the Fork-tailed Swift will be cleared for the Proposal in the form of mixed tall closed woodland sandplain, missed tall open shrubland sandplain and open Eucalypt woodland. These habitat types provide potential foraging habitat for the Fork-tailed Swift.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets supporting habitat for the Fork-tailed Swift primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4). The Proposal has been designed to minimise impacts to potential Fork-tailed Swift habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Fork-tailed Swift habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
<p>Gouldian Finch (<i>Chleobia gouldiae</i>)</p>	<p>Endangered</p>	<p>Priority 4</p>	<p>Critical habitat:</p> <ul style="list-style-type: none"> • Mixed tall open shrubland sandplain – foraging (up to 2.6 ha) • Open Eucalypt woodland – foraging, nesting/breeding (up to 66.4 ha) • Mixed tall closed woodland sandplain – foraging, nesting/breeding (up to 29.6 ha) 	<p>There are 76 records of the Gouldian Finch on DBCA data records within the Fitzroy Trough subregion. The Gouldian Finch was not recorded in the Survey Area during the GHD (2024) survey. This shows that the Gouldian Finch is common in the DE.</p> <p>There are four trees with suitable hollows for nesting/breeding that will be cleared for the Proposal. Up to 2.6 ha of mixed tall open shrubland sandplain, 29.61 ha of mixed tall closed woodland sandplain and up to 66.4 ha of open Eucalypt woodland habitat will be cleared for the Proposal, which is considered critical habitat for the Gouldian Finch due to its potential foraging and nesting/breeding values.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, critical habitat for the Gouldian Finch primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4). The Proposal has been designed to minimise impacts to potential Gouldian Finch habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Gouldian Finch habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region. The clearing of four identified habitat trees with suitable hollows for nesting is not likely to impact the breeding cycle of the species due to the presence of other suitable habitat for the species to disperse to, including trees with hollows for nesting/breeding.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Yellow Wagtail (<i>Motacilla flava</i>)	Migratory	Migratory	<p>Supporting habitat:</p> <ul style="list-style-type: none"> Mixed tall closed woodland sandplain – foraging (up to 29.6 ha) Open Eucalypt woodland – foraging (up to 66.4 ha) 	<p>There are no records of the Yellow Wagtail on the DBCA database within the Fitzroy subregion. The Yellow Wagtail was not recorded during the GHD (2024) surveys however suitable foraging habitat is present within the DE. This shows that the Yellow Wagtail is not abundant in the region, however, due to the abundance of potential supporting foraging habitat the species is likely to occur in the DE.</p> <p>Up to 70.9 ha of potential supporting habitat for the Yellow Wagtail will be cleared for the Proposal in the form of mixed tall closed woodland sandplain and open Eucalypt woodland. These habitat types provide potential foraging habitat for the Yellow Wagtail.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Yellow Wagtail primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Yellow Wagtail habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Yellow Wagtail habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
<p>Oriental Cuckoo (<i>Cuculus opatus</i>)</p>	<p>Migratory</p>	<p>Migratory</p>	<p>Supporting habitat:</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (up to 29.6 ha) • Mixed tall open shrubland sandplain – foraging (up to 2.6 ha) • Open Eucalypt woodland – foraging (up to 66.4 ha) 	<p>There are 4 records of the Oriental Cuckoo on the DBCA database within the Fitzroy Tough subregion. The Oriental Cuckoo was recorded once during the GHD (2024) survey, less than 1 km from the DE. This shows that the Oriental Cuckoo occurs occasionally in the DE.</p> <p>Up to 73.5 ha of potential supporting habitat for the Oriental Cuckoo will be cleared for the Proposal in the form of mixed tall closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland. These habitat types provide potential foraging habitat for the Oriental Cuckoo.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Oriental Cuckoo primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Oriental Cuckoo habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Oriental Cuckoo habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Grey Falcon (<i>Falco hypoleucos</i>)	Vulnerable	Vulnerable	<p>Supporting habitat:</p> <ul style="list-style-type: none"> Mixed tall closed woodland sandplain- foraging (up to 29.6 ha) Open Eucalypt woodland – foraging (up to 66.4 ha) 	<p>There are 9 records of the Grey Falcon on DBCA data records within the Fitzroy Trough subregion. The Grey Falcon was not recorded in the Survey Area during the GHD (2024) survey. This shows that the Grey Falcon is likely to occur occasionally within the region.</p> <p>Up to 70.9 ha of potential supporting habitat for the Grey Falcon will be cleared for the Proposal. This is in the form of mixed tall closed woodland sandplain and open Eucalypt woodland, which have potential foraging values for the species.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Grey Falcon primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Grey Falcon habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Grey Falcon habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Northern Blue-tongue Skink (<i>Tiliqua scincoides</i>)	Critically Endangered	Priority 4	<p>Critical habitat</p> <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain - foraging, breeding, shelter and/or dispersal (up to 29.6 ha) • Mixed tall open shrubland sandplain - foraging, breeding, shelter and/or dispersal (up to 2.6 ha) • Open Eucalypt woodland - foraging, breeding, shelter and/or dispersal (up to 66.4 ha) 	<p>There are no records of the Northern Blue-tongue Skink on the DBCA database within the Fitzroy Trough subregion. A targeted survey effort was undertaken by GHD (2024) for this species. There was one opportunistic sighting of the species approximately 1 km east of the DE within the Survey Area. There were an additional three records from the targeted search, of which one was within the DE at Site B, and the remaining two were approximately 0.15 km west and 0.9 km east of the DE (Figure 2-2). This shows that the Northern Blue-tongue Skink is known to occur in the DE.</p> <p>Up to 73.5 ha of critical habitat for the Northern Blue-tongue Skink will be cleared for the Proposal in the form of mixed tall closed woodland sandplain, mixed tall open shrubland sandplain and open Eucalypt woodland. These habitat types provide potential foraging, breeding, shelter and/or dispersal habitat for the Northern Blue-tongue Skink.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Northern Blue-tongue Skink primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Northern Blue-tongue Skink habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Northern Blue-tongue Skink habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region. There will be no clearing during the Northern Blue-tongue Skink birthing season (December to January) to ensure impacts to the breeding cycle of the species are minimised.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Peregrine Falcon (<i>Falco peregrinus</i>)	-	Other Specially Protected	Supporting habitat: <ul style="list-style-type: none"> Mixed tall closed woodland sandplain – foraging (up to 29.6 ha) Open Eucalypt woodland – foraging (up to 66.4 ha) 	<p>There are 34 records of the Peregrine Falcon on DBCA data records within the Fitzroy Trough subregion. The Peregrine Falcon was not recorded during the GHD (2024) survey, however, there is suitable foraging habitat available within the DE. This shows that the Peregrine Falcon is likely to occur occasionally within the region.</p> <p>Up to 70.9 ha of potential supporting habitat for the Peregrine Falcon will be cleared for the Proposal. This is in the form of mixed tall closed woodland sandplain habitat and open Eucalypt woodland, which have potential foraging values.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Peregrine Falcon primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Peregrine Falcon habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Peregrine Falcon habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

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Fauna species	EPBC Act status	BC Act status	Habitat to be cleared for the Proposal	Assessment of significance
Barn Swallow <i>(Hirundo rustica)</i>	Migratory	Migratory	Supporting habitat: <ul style="list-style-type: none"> • Mixed tall closed woodland sandplain – foraging (up to 29.6 ha) • Open Eucalypt woodland - foraging (up to 66.4 ha) 	<p>There are 14 records of the Barn Swallow on DBCA data records within the Fitzroy Trough subregion. The Barn Swallow was not recorded in the Survey Area during the GHD (2024) survey. This shows that the Barn Swallow occurs occasionally within the region.</p> <p>Up to 70.9 ha of potential supporting habitat for the Barn Swallow will be cleared for the Proposal. This is in the form of mixed tall closed woodland sandplain habitat and open Eucalypt woodland which has potential foraging value.</p> <p>Based on aerial imagery and the Native Vegetation Extent (spatial dataset DPIRD-005, DPIRD, 2023) and Pre-European Vegetation (spatial dataset DPIRD-006, DPIRD, 2019) datasets, supporting habitat for the Barn Swallow primarily occurs within Vegetation Association 764 within the DE. VA 764 is well represented within the region, clearing within the DE will not reduce VA 764 to less than 97% of the pre-European extent at any scale (Table 6-4).</p> <p>The Proposal has been designed to minimise impacts to potential Barn Swallow habitat as far as possible. As the design develops, impacts to the species will be further reduced and avoided where possible. Clearing of potential Barn Swallow habitat is not expected to result in a significant residual impact to the species at a local or regional scale, given the relative abundance of habitat available in the region.</p>

6.2.5.2 Indirect impacts

6.2.5.2.1 Fauna injury/death from vehicle strike/clearing activities or direct collision with infrastructure

Construction of the Proposal and associated infrastructure will result in an increase in vehicle movements to and from the DE. Maintenance inspections of the Proposal during operation may also increase vehicle movements, however vehicles will be restricted to the cleared access tracks. Construction activities will be undertaken in accordance with measures identified in the EMP (Appendix A), including pre-clearance fauna inspection and relocation, driving to conditions to prevent the likelihood of fauna road deaths, and minimising driving at dusk and dawn. These measures will reduce the risk of fauna injury/death from vehicle strike during construction and operational activities. It is unlikely that any isolated deaths of individuals will affect the conservation status and distribution of any fauna species.

There may be risks associated with the construction of solar and BESS facility infrastructure on birds and bats, as these species may be drawn to perceived false waterbodies, prey opportunities or shaded areas, this attraction could increase the risk of collision with solar facility infrastructure. The presence of waterbirds within the DE is expected to be low, given that there are no waterbodies in the DE and the closest significant wetland is approximately 50 km away. Recent research has explored the potential “lake effect” hypothesis, suggesting that utility scale solar facilities may inadvertently attract birds by mimicking reflective water surfaces, altering flight patterns and potentially leading to fatalities. However, findings remain inconclusive and further research is required to establish or dismiss this hypothesis (California Energy Commission, 2024). Based on current knowledge, isolated fatalities resulting from interactions with the facility are unlikely to impact the conservation status or distribution of any fauna species.

If an overhead network connection is required for the Proposal, the presence of the network connection could potentially result in fatalities of Migratory birds due to collision with the infrastructure. The Fork-tailed Swift, Barn Swallow, Oriental Cuckoo and Yellow Wagtail may forage within the DE, which is considered to be supporting habitat for these species, as described in Section 6.2.2.3.2. The risk of fatality to Migratory birds from collision with the network connection is considered to be low. While often flying at night during migration, migratory birds are primarily diurnal species; most active during daylight hours and typically resting or engaging in less active behaviours at night. As a result, the combination of bird’s natural behaviour patterns (Kruger & Garthe, 2001), the lack of attraction to transmission lines, and their ability to navigate safely during the night greatly minimises the risk of fatal collisions with these structures. The network connection would be located adjacent to existing infrastructure and roads with the majority within the Derby township. Therefore, the Proposal is not expected to result significant impacts to Migratory birds as a result of collision with the network connection infrastructure.

6.2.5.2.2 Fauna activity disturbance from temporary increase in noise/vibration/light attraction of feral animals, alteration of fire regimes, and increased generation of dust during construction

During construction, there will be noise, vibration and light emissions due to vehicles movements, as well as from operation of equipment and machinery associated with construction activity. Noise, vibration and light associated with construction of the Proposal have the potential to result in short-term disturbance to fauna on a local scale, however, impacts during construction will be managed in accordance with the EMP (Appendix A). It is unlikely that maintenance inspections during operation of the Proposal will increase the potential for noise, vibration and light, given the presence of existing roads in close proximity to the DE. Therefore, the Proposal is unlikely to result in significant impacts on terrestrial fauna from noise, vibration and light.

The construction of the Proposal is unlikely to pose an impact to fauna from attraction of feral animals as construction will be temporary and feral animals will be managed in accordance with the EMP (Appendix A). Therefore, the Proposal is unlikely to result in significant impacts on terrestrial fauna from attraction of feral animals.

As detailed in Section 6.1.5.2.2, given the size of the Proposal and its location adjacent to existing infrastructure and roads, the Proposal is not considered likely to alter existing fire regimes in the local area. While there is an increased risk of fire during the construction phase, appropriate management measures will be implemented through the EMP (Appendix A) to minimise this risk. This will include identifying potential ignition sources and/or activities with the potential to lead to fire, and preventative measures. Weed management and the construction of firebreaks will reduce the risk of fires (if caused by the Proposal) spreading to nearby vegetation. Therefore, the Proposal is unlikely to result in significant impacts on terrestrial fauna from altered fire regimes.

Fugitive dust may be generated from vehicle movements, clearing and construction activities, having a temporary and localised impact on air quality, which may indirectly impact fauna by causing heart and respiratory problems. The majority of dust is expected to be generated during the construction phase as operation of the Proposal will be restricted to cleared land and is not expected to produce significant dust emissions. Implementation of the EMP will ensure that potential dust sources are managed appropriately. Therefore, the Proposal will not cause significant impacts to fauna from dust emissions given the transient and localised nature of dust generation mostly limited to the construction phase.

6.2.5.3 Summary of significant residual impacts

Direct and indirect impacts to terrestrial fauna associated with the Proposal are not expected to be significant. These impacts can be managed through Horizon Power's mitigation and management measures, and the implementation of the EMP (Appendix A).

6.2.6 Environmental outcomes

The Proposal is not expected to result in significant residual impacts to terrestrial fauna.

The Proposal requires the permanent clearing of up to 73.5 ha of potential fauna habitat which includes three habitat types. The Proposal will require the removal of habitat that potentially provides foraging, breeding, roosting, shelter and dispersal value to conservation

significant fauna species, however this impact is not expected to be significant. Further refinement of the design of the Proposal will seek to minimise impacts to fauna habitats including potential habitat trees.

Horizon Power considers that the potential direct and indirect impacts to terrestrial fauna (with implementation of the avoidance and minimisation measures proposed) will meet the EPA’s objective for terrestrial fauna.

Table 6-17 provides a summary of the environmental outcomes of the Proposal relating to terrestrial fauna. The clearing extent and impacts to fauna and fauna habitats will be reduced further during the design phase, where possible.

Table 6-17 Environmental outcomes for terrestrial fauna

Factor	Terrestrial Fauna environmental outcomes
Fauna habitat	<p>Permanent clearing of up to 73.5 ha of fauna habitat, consisting of three habitat types providing potentially suitable habitat for ten significant fauna species:</p> <ul style="list-style-type: none"> • Clearing of up to 29.61 ha of mixed tall closed woodland sandplain, which provides habitat for: <ul style="list-style-type: none"> ○ Northern Coastal Free-tailed Bat (critical habitat) ○ Fork-tailed Swift (supporting habitat) ○ Oriental Cuckoo (supporting habitat) ○ Gouldian Finch (critical habitat) ○ Grey Falcon (supporting habitat) ○ Northern Blue-tongue Skink (critical habitat) ○ Peregrine Falcon (supporting habitat) ○ Barn Swallow (supporting habitat) ○ Yellow Wagtail (supporting habitat) ○ Northern Brushtail Possum (critical habitat) • Clearing of up to 2.6 ha of mixed tall open shrubland sandplain, which provides habitat for: <ul style="list-style-type: none"> ○ Northern Coastal Free-tailed Bat (critical habitat) ○ Fork-tailed Swift (supporting habitat) ○ Oriental Cuckoo (supporting habitat) ○ Northern Blue-tongue Skink (critical habitat) ○ Gouldian Finch (critical habitat) • Clearing of up to 66.4 ha of open Eucalypt woodland, which provides habitat for: <ul style="list-style-type: none"> ○ Northern Coastal Free-tailed Bat (critical habitat) ○ Fork-tailed Swift (supporting habitat) ○ Oriental Cuckoo (supporting habitat) ○ Gouldian Finch (critical habitat)

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Factor	Terrestrial Fauna environmental outcomes
	<ul style="list-style-type: none">○ Grey Falcon (supporting habitat)○ Northern Blue-tongue Skink (critical habitat)○ Peregrine Falcon (supporting habitat)○ Barn Swallow (supporting habitat)○ Yellow Wagtail (supporting habitat)○ Northern Brushtail Possum (critical habitat)
Fauna injury/mortality	Direct and indirect impacts to terrestrial fauna will be avoided where possible and otherwise minimised.
Disturbance to fauna	No significant disturbance to fauna as a result of noise and/or vibration arising from the Proposal

6.3 Environmental Factor – Social Surroundings

The EPA’s objective for social surroundings is ‘*To protect social surroundings from significant harm*’ (EPA, 2023b).

6.3.1 Relevant policy and guidance

Table 6-18 below provides consideration of how the relevant EPA policy and guidance, and additional State and Commonwealth guidance, has been applied to the assessment of impacts to social surroundings.

The EP Act defines social surroundings as the ‘*aesthetic, cultural, economic and other social surroundings to the extent to which they directly affect or are affected by physical or biological surroundings*’

Table 6-18 Policy and guidance

Policy and guidance	Explain how the EPA policy and guidance has been considered
Environmental Factor Guideline – Social Surroundings (EPA, 2023b)	The Proposal considers the mitigation hierarchy; direct and indirect impacts; implications of cumulative impacts; predicted residual impacts; feasibility of management approaches.
Technical Guidance: Environmental Impact Assessment of Social Surroundings – Aboriginal cultural heritage (EPA, 2023c)	The Proposal provides sufficient information regarding Aboriginal cultural heritage to ensure the EPA can formally assess the Proposal.
Aboriginal Heritage Due Diligence Guidelines (Version 3.0) (Department of Aboriginal Affairs and Department of the Premier and Cabinet, 2013)	The Proposal will be designed to avoid impacts to known heritage sites. The assessment applies the precautionary approach to assess the risk to Aboriginal cultural heritage.
The Western Australian Planning Commission State Planning Policy No. 2 – Environment and Natural Resource Policy for Western Australia (WAPC, 2003)	The Proposal has, and will, consider sustainability during implementation and construction.

6.3.2 Receiving environment

6.3.2.1 Surveys and studies

Horizon Power will commission Aboriginal cultural heritage surveys of the DE to confirm Aboriginal cultural heritage values. These will be carried out with the support of relevant Traditional Owners.

6.3.2.2 Economic and social surroundings

The Proposal lies within the Shire of Derby – West Kimberley, with the northern portion of the DE associated with the network connection route and existing power station being located in Derby township. Derby has a population of approximately 3,222 people (ABS, 2021a). Approximately 200 m from the Site B (northern end of the DE), is the Mowanjum Community, which has a population of approximately 226 people from 55 families (ABS, 2021b).

The largest sector of the economy in Shire of Derby – West Kimberley is construction, followed by agriculture, forestry and fishing, retail trade and retail activities (ABS, 2024).

The DE is located on Road Reserves, Crown Land and Reserve (Type 3 R) (Landgate, 2025a).

6.3.2.3 Amenity

6.3.2.3.1 Visual amenity

The solar and BESS facility will be located within Site B or Site A. Site A is in the northern portion of the DE, approximately 200 m from Mowanjum Community. Site B is located near the West Kimberley Regional Prison and is approximately 1.4 km from the Derby Airport.

The Proposal will include a network connection which may include the establishment of an overhead network connection (rather than an underground) which will be visible from Derby Highway and residential areas within Derby. Additional construction for the new thermal power station, within the existing power station. The existing power station is located on Broome Street in Derby.

6.3.2.3.2 Noise, dust, vibration

Construction of the Proposal will generate noise, dust and vibration of short-term duration within the DE. The Muwanjum community is located approximately 200 m from the Site B and the West Kimberley Regional Prison is approximately 150 m from Site A, additionally the network connection route and the new power station will be constructed adjacent to existing power station, roads and a residential area.

6.3.2.4 Cultural heritage

6.3.2.4.1 World, Commonwealth and National Heritage Places

There are no World Heritage Properties or Commonwealth Heritage Places within the DE. The West Kimberley National Heritage Place is located approximately 4 km west of the existing power station and network connection route section of the DE. All activities will be confined to the DE, therefore there will be no impacts to this National Heritage Place as a result of the Proposal and it is not discussed further.

6.3.2.4.2 Native Title

There is no Native Title or Indigenous Land Use Agreement within the DE (NNTT, 2025; Landgate, 2025b).

6.3.2.4.3 Aboriginal cultural heritage features

A search of the Aboriginal Cultural Heritage Inquiry System (ACHIS) indicates that one Lodged site intersects the DE and the buffers of two Registered sites intersect the DE (Table 6-19; Figure 6-6). Horizon Power will commission an Aboriginal cultural heritage survey within the DE to validate the locations of these sites and ensure all known Aboriginal cultural heritage intersecting the DE can be avoided.

Maradja (ID12392) occurs within the existing power station and proposed network connection route. The Kunumudj (ID12393) is located within the Site A and the Mowanjum mission (ID14617) is within the southern end of the network connection route and Site B.

Table 6-19 Registered or Lodged Heritage Sites overlapping the DE

Name	ID	Status	Place Type	Location
MARADJA	12392	Registered	Ritual / Ceremonial	Existing power station and adjacent network connection route.
KUNUMUDJ	12393	Registered	Ritual / Ceremonial; Creation / Dreaming Narrative	Site A
MOWANJUM MISSION	14617	Lodged	Artefacts / Scatter; Repository / Storage Place	Site B and adjacent network connection route.

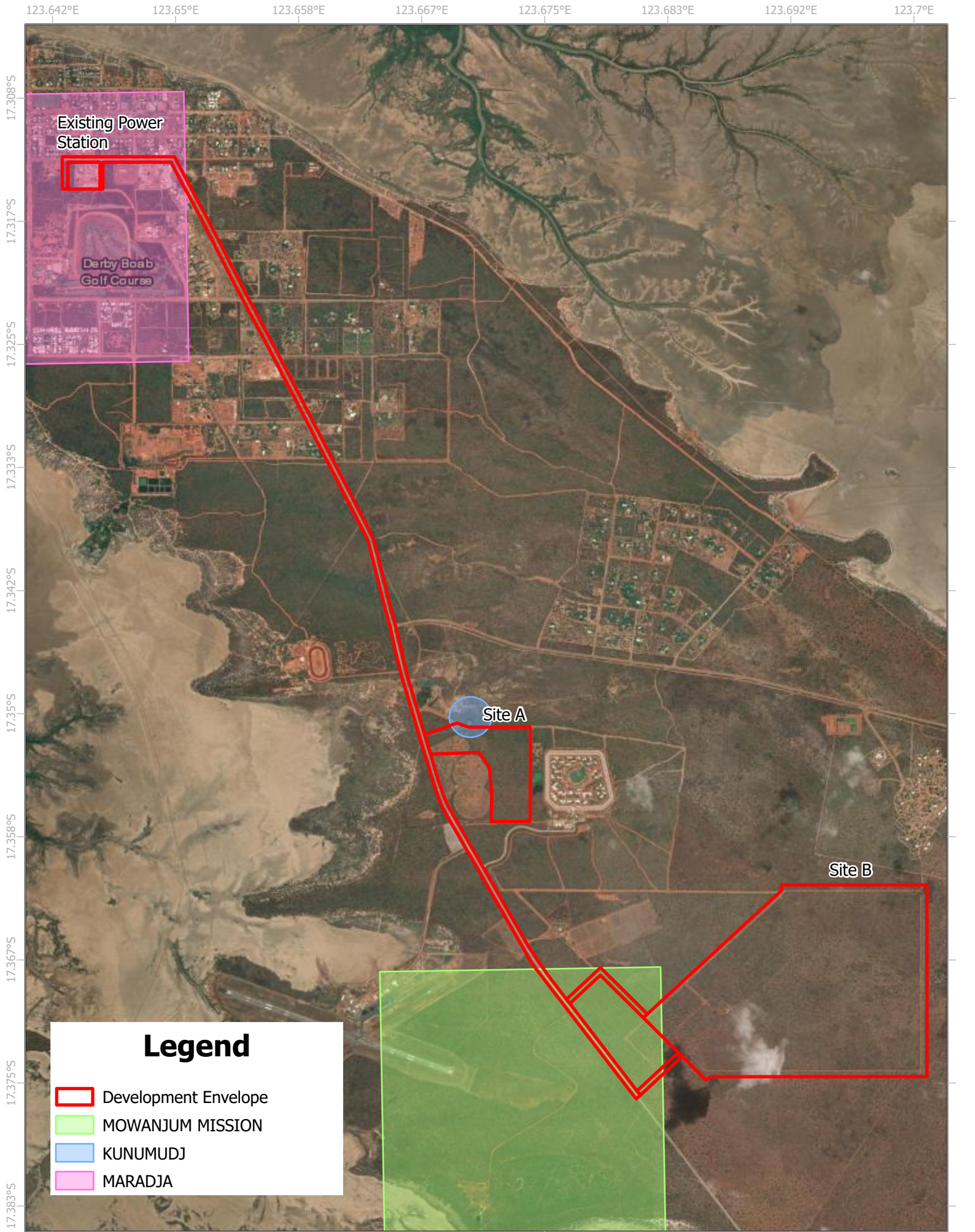


Figure 6-6 Aboriginal Cultural Heritage within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



6.3.2.4.4 European heritage

A search of the Heritage Council WA inHerit database confirms two State Heritage sites occur within the DE: Frosty Pool and Holman House (DPLH, 2025a), which are also municipal inventory (DPLA, 2025b) and are located in the network connection route of the DE (Figure 6-7).

- The Frostys Pool (Place No.7207) was constructed in 1944. Its significance is due to the social history of armed forces in the north of WA during World War II. This heritage place is located near Derby Hwy.
- The Holman House (Place No. 09741) was constructed in 1915 to house the resident medical officer in Derby. The house is a good example of a typical house constructed in the region in the early 1900s. Only a small portion, within the land boundary, overlaps the DE.

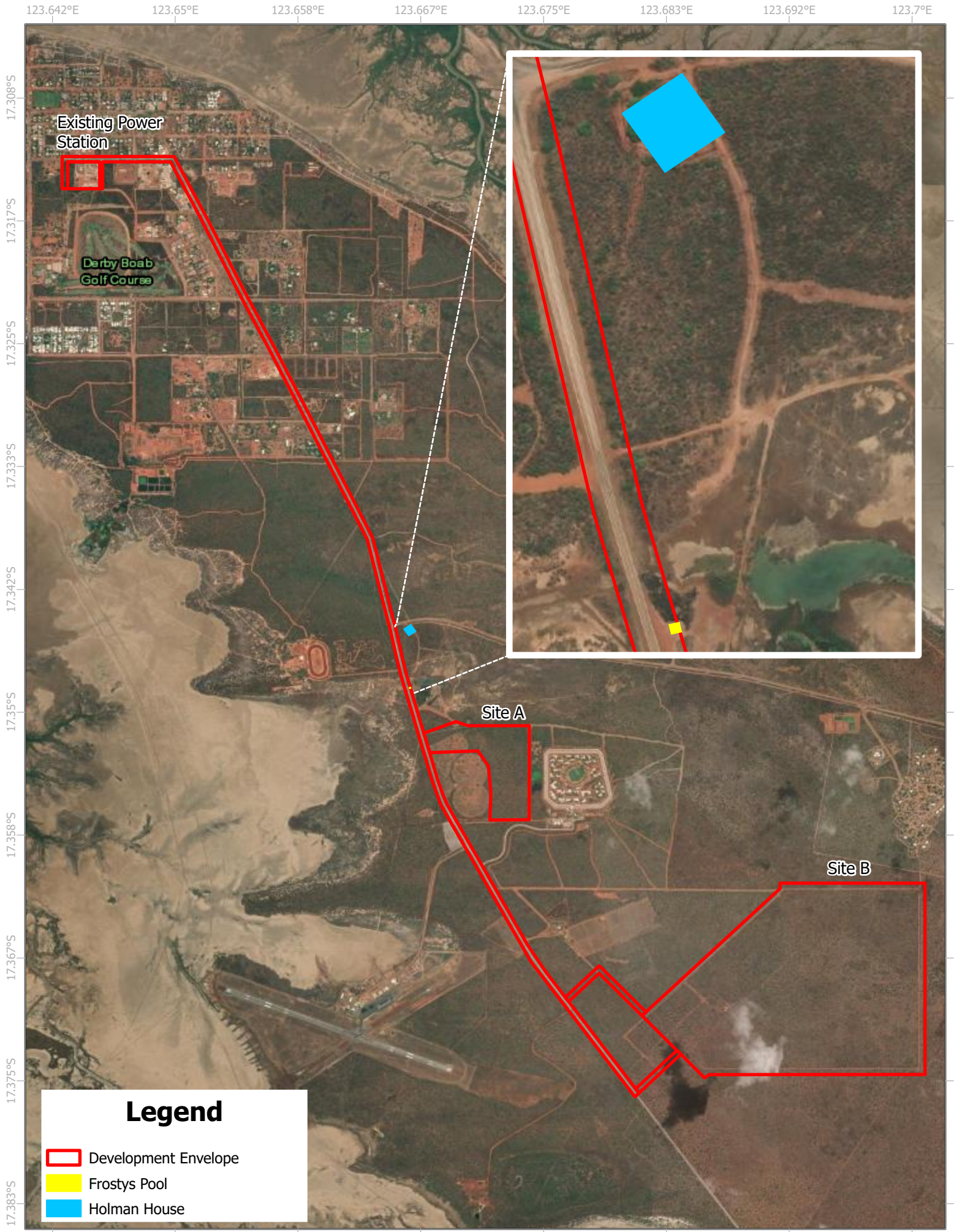
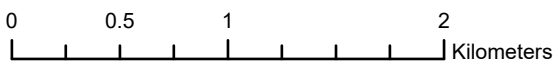


Figure 6-7 | European Heritage within the Development Envelope



6.3.2.5 Nature reserves

There are no DBCA managed lands (DBCA, 2024a) or Environmentally Sensitive Areas (ESAs) within the DE. The closest ESA is 48 km northeast of the DE (DWER, 2021).

6.3.3 Potential impacts

6.3.3.1 Amenity

6.3.3.1.1 Direct impacts

The solar facility and BESS will be located within Site B or Site A. Site B is situated in the northern portion of the DE, approximately 200 m from Mowanjum Community and approximately 400 meters from the nearest parcel of land associated with the Proposal, with the farthest parcel located approximately 1,000 meters away. Site A is located near the West Kimberley Regional Prison, along Derby Highway, and is approximately 1.4 km from the Derby Airport. Therefore, the Proposal has the potential to impact visual amenity.

The Proposal will include a network connection route which may include the establishment of an overhead network connection (rather than an underground) which will be visible from Derby Highway and residential areas within Derby. The existing power station will be located adjacent to the existing power station on Broome Street in Derby. The network connection route has been positioned to follow existing roads to minimise the extent of visual amenity impacts. The new power station will be located adjacent to the existing power station on Broome Street.

6.3.3.1.2 Indirect impacts

The Proposal has the potential to indirectly impact amenity of areas surrounding the DE through dust, noise and vibration emissions generated during construction.

6.3.3.1.3 Cumulative impacts

As the Proposals are in line with existing infrastructure in the region, the Proposal is not expected to provide any additional impacts to visual amenity.

6.3.3.2 *Aboriginal cultural heritage*

6.3.3.2.1 Direct impacts

The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners. Horizon Power is committed to avoiding direct impacts to all known Aboriginal cultural heritage (Maradja, ID12392; Kunumudj, ID 12393 and Mowanjum Mission, ID 14617).

6.3.3.2.2 Indirect impacts

The Proposal has the potential to indirectly impact Aboriginal cultural heritage and values of the DE and surrounding areas through:

- Dust generation during construction has the potential to settle on Aboriginal cultural heritage within or adjacent to the DE
- Vibrations during construction has the potential to cause physical damage to Aboriginal cultural heritage within or adjacent to the DE
- Accidental fires during construction or operations, has the potential to cause physical damage to Aboriginal cultural heritage within or adjacent to the DE.

6.3.3.2.3 Cumulative impacts

Cumulative impacts to Aboriginal cultural heritage, as it relates to registered sites and places are not anticipated given:

- Horizon Power is committed to avoiding direct impacts to known Aboriginal cultural heritage sites and places within the DE during construction and operations
- Potential indirect impacts to known Aboriginal cultural heritage sites and places (i.e. vibrations, dust generation and accidental fires during construction) would only occur for a short duration and only in the construction phase and is therefore not expected to have an adverse impact
- The potential for impact to unexpected finds (previously unrecorded Aboriginal cultural heritage sites and places) during construction can be adequately mitigated through the measures detailed in Section 6.3.4.

6.3.3.3 *European heritage*

6.3.3.3.1 Direct impacts

Two state heritage sites 'Frosty Pool' (Place Number: 7207) and 'Holman House' (Place Number: 09741) occur within the DE. Horizon Power is committed to avoid direct impacts to European heritage sites during the design phase.

6.3.3.3.2 Indirect impacts

The Proposal has the potential to indirectly impact European heritage within the DE and surrounding areas through:

- Dust generation during construction has the potential to settle on European heritage sites within or adjacent to the DE, as well as impacting amenity of the DE and surrounds.

- Vibrations during construction has the potential to cause physical damage to European heritage sites within or adjacent to the DE, as well as impacting amenity of the DE and surrounds.
- Accidental fires during construction, has the potential to cause physical damage to European heritage sites within or adjacent to the DE, as well as impacting amenity of the DE and surrounds.

6.3.3.3.3 Cumulative impacts

Cumulative impacts to European heritage are not anticipated given:

- No direct impacts to European heritage sites and places will occur.
- Potential indirect impacts to European heritage sites and places (i.e. vibrations, dust generation and accidental fires during construction) would only occur for a short duration and only in the construction phase and is therefore not expected to have an adverse impact.

6.3.4 Mitigation

6.3.4.1 Amenity

Measures to mitigate impacts to visual amenity include:

- Alignment of network connection route with existing roads.
- Use of existing disturbed areas to minimise clearing.
- Locating the thermal power station adjacent to the existing power station at Broome Street.
- Likely construction of solar panel and associated infrastructure within the land parcel farthest from the Mowanjum Community.

Measures to mitigate impacts to amenity from dust, noise, vibrations and fire risk include:

- Dust, noise, vibrations and fire risk will be managed in accordance with the Proposal EMP (Appendix A). EMP mitigation measures will include (but are not limited to):
 - Construction works will be undertaken in accordance with the Environmental Protection (Noise) Regulations 1997
 - Dust suppression controls (i.e. use of water carts) to be implemented.

6.3.4.2 Aboriginal cultural heritage

Key measures to avoid impacts to Aboriginal heritage include:

- Execution of a Heritage Protection Agreement with relevant Aboriginal traditional owner group(s) to establish cultural heritage surveys and cultural heritage monitoring protocols.
- The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners.
- Prior to conducting ground disturbing activities, known Aboriginal cultural heritage sites will be delineated as avoidance areas within the DE. The avoidance area will be visibly demarcated to ensure a suitable buffer is maintained between them and construction activities (where permitted by and with assistance of Traditional Owners).

- Aboriginal cultural heritage monitors may be present during initial ground disturbing works as per Heritage Protection Agreement requirements.
- Dust, vibrations and fire risk will be managed in accordance with the Proposal EMP.
- Impact to all known Aboriginal cultural heritage sites will be avoided.
- Potential new finds (including human remains) uncovered during ground disturbing works are protected (i.e. cease work in the immediate area until assessed by Traditional Owners and a consultant archaeologist/anthropologist as appropriate and cleared by police if relating to human remains).

6.3.4.3 European heritage

Construction of the Proposal will not directly disturb the state heritage sites within the DE. Potential indirect impacts will be managed in accordance with the Proposal EMP (Appendix A). Therefore, no significant residual impacts to European cultural heritage are expected as a result of the Proposal.

6.3.5 Assessment and significance of residual impact

6.3.5.1 Amenity

Due to the nature of the Proposal the majority of impacts to amenity (i.e. dust, noise, vibrations) will occur only during the construction phase. Impacts will be of a short-term duration and can be adequately managed through an EMP (Appendix A).

The Proposal will however have a long-term impact on visual amenity from permanent infrastructure (network connection route, solar and BESS facility, associated infrastructure and the new thermal power station). The network connection route design is consistent with existing infrastructure in the region, and the DE route has been selected to align with existing service corridors adjacent to existing roads and developed areas in order to limit environmental and social impacts (including impacts to visual amenity). The new power station will be next to the existing power station on Broome Street.

The solar and BESS facility will be located within Site B or Site A. Site B is situated in the northern portion of the DE, approximately 200 m from Mowanjum Community and approximately 400 m from the nearest parcel of land associated with the Proposal, with the farthest parcel located approximately 1 km away. Site A is located near the West Kimberley Regional Prison, along Derby Highway, and is approximately 1.4 km from the Derby Airport.

At Site B, the Proposal is likely to utilise the parcel of land located farthest from the Mowanjum Community (approximately 1 km). Given the area's flat terrain and the presence of Open Eucalypt Woodland with an average tree height of up to 15 m, compared to the 4 to 5 m height range of the solar panel system and associated infrastructure, the Proposal is unlikely to be visible from the community. Therefore, no significant impacts on visual amenity are anticipated.

Similarly, no significant impacts on visual amenity are expected at Site A, as the surrounding area does not contain residential housing and is only temporarily frequented by residents.

6.3.5.2 Aboriginal cultural heritage

The DE overlaps registered Aboriginal heritage sites (shown in Table 6-19). The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners. Horizon

Power is committed to avoiding direct impacts to all known Aboriginal cultural heritage. Prior to conducting ground disturbing activities, known Aboriginal cultural heritage sites will be delineated as avoidance areas within the DE. The avoidance area will be visibly demarcated to ensure a suitable buffer is maintained between avoidance area and construction activities (where permitted by and with assistance of Traditional Owners). This will ensure inadvertent impacts are prevented.

Any residual risk associated with ground disturbing works will be managed in accordance with heritage monitoring protocols of the Heritage Protection Agreement to be executed with the relevant traditional owner group(s).

No disturbance, damage, impact or removal of any Aboriginal Heritage sites is proposed as part of Proposal activities. If required, any disturbance to heritage features will be undertaken in accordance with the AH Act and any other applicable legislation, aligned with the Horizon power Aboriginal Cultural Heritage Management Policy and following consultation with the Traditional Owners. Therefore, significant residual impacts to Aboriginal cultural heritage are not expected as a result of the Proposal.

6.3.5.3 Summary of significant residual impacts

Based on the impacts identified and the mitigation proposed, the Proposal is not expected to have a significant residual impact on social surroundings.

6.3.6 Environmental outcomes

Table 6-20 provides a summary of the environmental outcomes for the Proposal relating to relevant factors identified for EPA factor social surroundings. The Proposal is expected to meet EPA's objective for social surroundings.

Table 6-20 Environmental outcomes for social surrounds

Factor	Outcomes
Aboriginal heritage	<p>No direct impacts to known Aboriginal cultural heritage sites within or adjacent to the DE.</p> <p>Works undertaken for the Proposal will comply with the AH Act.</p> <p>Indirect impacts to aboriginal heritage may occur as a result of dust and vibrations for a short duration (intermittent and only during the construction phase) with mitigation implemented in accordance with the EMP.</p>
European heritage	<p>No direct impacts to known European cultural heritage sites within or adjacent to the DE.</p>
Amenity – visual	<p>Long-term minor impacts on visual amenity. Horizon Power considers that with the implementation of the avoidance and minimization measures proposed (i.e., through Proposal design, and DE alignment with existing developed areas and situated as far as possible from the Mowanjum Community), impacts on visual amenities will be sufficiently mitigated.</p>
Amenity – noise, dust, vibrations	<p>Short-term minor impacts to amenity from noise, dust and vibrations are adequately managed through the EMP.</p>
Nature reserves	<p>No direct impact on nature reserves.</p>

6.4 Other environmental factors

The following additional environmental factors relevant to the Proposal have been identified and are discussed below:

- Terrestrial Environmental Quality
- Air Quality
- GHG Emissions.
- Inland Waters

Table 6-21 provides a summary of the impacts, mitigations and outcomes for these factors.

Table 6-21 Other environmental factors relevant to the Proposal

Factor	Policy and Guidance	Receiving Environment	Potential Impacts	Mitigation	Outcomes
Terrestrial Environmental Quality	Environmental Factor Guideline – Terrestrial Environmental Quality (EPA, 2016d)	<p>The DE is primarily located in areas classified as having an extremely low probability (low confidence) of Acid Sulphate Soils (ASS), intersecting areas with a high probability (low confidence) of ASS (Fitzpatrick, <i>et al.</i>, 2011).</p> <p>A search on the DWER Contaminated Sites Database (DWER, 2025) was conducted to identify the presence or absence of contaminated sites within the DE. The search identified that the existing power station portion of the DE overlaps:</p> <ul style="list-style-type: none"> Site number 793 classified as, “remediated for restricted use”: Hydrocarbons (such as from diesel or oil) are present in 	<p>Potential impacts to Terrestrial Environmental Quality from construction of the Proposal include:</p> <ul style="list-style-type: none"> Exposure of ASS by ground disturbing associated with construction solar and BESS facility infrastructure, network connection infrastructure and thermal power station If groundwater is encountered, short-term dewatering of potentially acidic groundwater could result Soil erosion from clearing, earthworks and vehicle/machinery movement Soil contamination from accidental release of chemicals and/or hydrocarbons (i.e. leaks, spills) particularly during the construction phase. Since minor quantities of chemicals and hydrocarbons will be handled and/or temporarily stored 	<p>The following measures will be implemented to mitigate impacts to Terrestrial Environmental Quality during construction:</p> <ul style="list-style-type: none"> Any water abstraction required for construction of the Proposal will be undertaken to minimize drawdown, and water allowed to infiltrate as close to the source as possible. If the groundwater is acidic, it would be treated and discharged in accordance with an ASS Management Plan. Implementation of EMP controls to minimise erosion and potential mobilization of unconsolidated sediments with stormwater runoff Implementation of EMP to prevent release of chemicals, hydrocarbons and waste, and prescribe corrective actions in the 	<p>The Proposal will not cause significant impacts to Terrestrial Environmental Quality given the flexibility to adjust Proposal design to minimise impacts, the short-term nature of construction activities, the limited quantities of contaminants handled on site, and the implementation of listed controls in accordance with the mitigation hierarchy.</p> <p>The release of potentially acidic groundwater is not anticipated, however, if dewatering of groundwater is required any potential short-term impacts can be adequately managed with the proposed controls.</p> <p>The contaminated sites that overlap the DE are on already cleared land use for road and residential purposes. Therefore, construction of the Proposal is not likely to disturb these sites, and no significant impact is expected.</p> <p>Therefore, the Proposal is expected to meet EPA’s objective.</p>

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Factor	Policy and Guidance	Receiving Environment	Potential Impacts	Mitigation	Outcomes
		<p>soil and groundwater at the site.</p> <p>There are three additional contaminated sites, located approximately 2 km from the DE.</p>	<p>through construction, impacts resulting in the event of accidental release are expected to be negligible</p> <ul style="list-style-type: none"> • Soil contamination from accidental release of waste • Disturbance to existing contaminated sites within DE. <p>Operational activities associated with the Proposal include operation of the solar and BESS facility, network connection route and thermal power station, along with maintenance inspections and repairs. Operation of the Proposal will be restricted to cleared land and is not expected to impact Terrestrial Environmental Quality.</p>	<p>event of accidental releases</p> <p>Works Approvals and Licensing will be acquired as detailed in Table 3-1 to prevent, control, abate, and mitigate pollution or environmental harm.</p>	
Air Quality	Environmental Factor Guideline – Air Quality (EPA, 2020)	The network connection route and existing power station intersects Derby town.	Fugitive dust may be generated from vehicle movements, clearing and construction activities, having a temporary and localised impact on air quality. The majority of dust is expected to be generated during the construction phase.	<p>The following measures will be implemented to mitigate air quality impacts from dust generated during operation of the Proposal:</p> <ul style="list-style-type: none"> • Implementation of the EMP will ensure that potential dust sources are managed 	<p>The Proposal will not cause significant impacts to air quality given the transient and localised nature of dust generation mostly limited to the construction phase.</p> <p>Implementation of the EMP is considered adequate to manage any potential impacts to air</p>

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Factor	Policy and Guidance	Receiving Environment	Potential Impacts	Mitigation	Outcomes
			Operational activities associated with the Proposal include operation of the solar and BESS facility, network connection route and thermal power station, along with maintenance inspections and repairs. Operation of the Proposal will be restricted to cleared land and is not expected to produce significant dust emissions.	appropriately and receptors (i.e. construction workforce) are adequately protected from short-term exposure.	quality from dust. Therefore, the Proposal is expected to meet EPA’s objective for Air Quality.
GHG Emissions	Environmental Factor Guideline – Greenhouse Gas Emissions (EPA, 2024)	The network connection route and existing power station intersects Derby town.	A detailed assessment of GHG emissions (scope 1, 2 and 3) generated during construction and operation of the Proposal was undertaken. The Proposal is unlikely to exceed the 100,000 tonnes CO ₂ of Scope 1 or 2 greenhouse gas emissions per annum threshold defined in the Environmental Factor Guideline (EPA, 2024).	The following measures will be implemented to mitigate GHG emissions: <ul style="list-style-type: none"> Local sourcing will be considered wherever possible. Vehicle selection will take into account fuel consumption efficiency, whilst allowing operational efficiency Ongoing maintenance of vehicles to ensure efficient fuel use Minimise clearing of vegetation where possible. 	The Proposal is unlikely to result in a significant residual impact on GHG emission factor and is not considered to require a GHG management plan given emissions are 19,887 t CO ₂ -e for construction and 6,349 t CO ₂ -e/yr for operation. These emissions are below the safeguard threshold (100,000 t CO ₂ -e/yr). By using renewable energy instead of diesel and gas-fired power, the Proposal will result in a positive environmental impact, reducing the reliance on fossil fuels which lowers environmental pollution and mitigates climate change impacts. The Proposal may

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Factor	Policy and Guidance	Receiving Environment	Potential Impacts	Mitigation	Outcomes
					<p>result in emissions reduction of up to 12,060 tonnes of CO₂e per annum compared to the operation of the existing Derby power station. If the FES were to operate for 20 years, this would equate to a reduction of approximately 220,000 tonnes of CO₂e.</p> <p>Therefore, the Proposal is expected to meet EPA's objective for GHG Emissions.</p>
Inland Waters	<ul style="list-style-type: none"> Environmental Factor Guideline: Inland Waters (EPA, 2018) Water Quality Protection Note no.6. Vegetation Buffers to Sensitive Water Receptors (DoW, 2006) Water Quality Protection Note no.25. Land use compatibility tables for 	<p>The DE is located within the Fitzroy River Basin (DWER, 2024).</p> <p>There are no significant or nationally important wetlands, rivers or watercourses identified within the DE (GHD, 2024). There are no Ramsar wetlands in close proximity to the DE, the closest important wetland is approximately 50 km north of the DE (Big Springs).</p> <p>The DE overlaps two Groundwater Areas proclaimed under the</p>	<ul style="list-style-type: none"> Changes to surface water flows and increased risk of land erosion and sedimentation in nearby waterways due to clearing of native vegetation within the DE. Exposure of ASS by ground disturbing activities (i.e. subsurface disturbance associated with construction of solar and BESS facility infrastructure, network connection infrastructure and thermal power station). Changes to groundwater infiltration from clearing 	<ul style="list-style-type: none"> Implementation of EMP to prevent chemical/hydrocarbon leaks and spills and prescribe corrective actions in the event of accidental release. Any water abstraction required for construction of the Proposal will be undertaken to minimize drawdown and allowed to infiltrate as close to the source as possible. If the groundwater is acidic, it would be treated and discharged in accordance with an ASS Management Plan. 	<p>The Proposal is unlikely to result in a significant residual impact on surface water or groundwater.</p> <p>Therefore, the Proposal is expected to meet EPA's objective for Inland Waters.</p>

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Factor	Policy and Guidance	Receiving Environment	Potential Impacts	Mitigation	Outcomes
	<p>public drinking water source areas (DoW, 2016)</p> <ul style="list-style-type: none"> • Water Quality Protection Note no.56. Tanks for fuel and chemical storage near sensitive water resources (DWER, 2018) • Water Quality Protection Note no.65. Toxic and hazardous substances (DoW, 2015) • Water Quality Protection Note no.84. Rehabilitation of disturbed land in public drinking water source areas (DoW, 2009) 	<p>RIWI Act: the Derby and Canning-Kimberley Groundwater Areas.</p> <p>The DE intersects the Derby Water reserves Public Drinking Water Source Area along a narrow area of the network connection route (DWER, 2025). The Derby Water Reserve also occurs adjacent to the network connection route.</p> <p>There are no permanent surface water bodies within the DE.</p> <p>The Fitzroy River and Tributaries surface water area occurs 17 km south of the DE.</p> <p>Refer to TEQ above for information regarding Acid Sulphate Soils.</p>	<p>of native vegetation within the DE</p> <ul style="list-style-type: none"> • Temporary drawdown of groundwater should dewatering be required to construct solar and BESS infrastructure, network connection infrastructure (network connection may be overhead or underground) and thermal power station. 	<ul style="list-style-type: none"> • Weather will be monitored to avoid construction during heavy rainfall to prevent runoff, erosion and mobilization of sediment. • If ASS or any other contaminants are encountered, additional investigations will be undertaken. An ASS Management Plan will be developed if required. <p>If required, groundwater abstraction and construction of a bores may require approval from DWER though Section 5C and 26D Licences under the RIWI Act. These licences will mitigate impacts to groundwater.</p>	

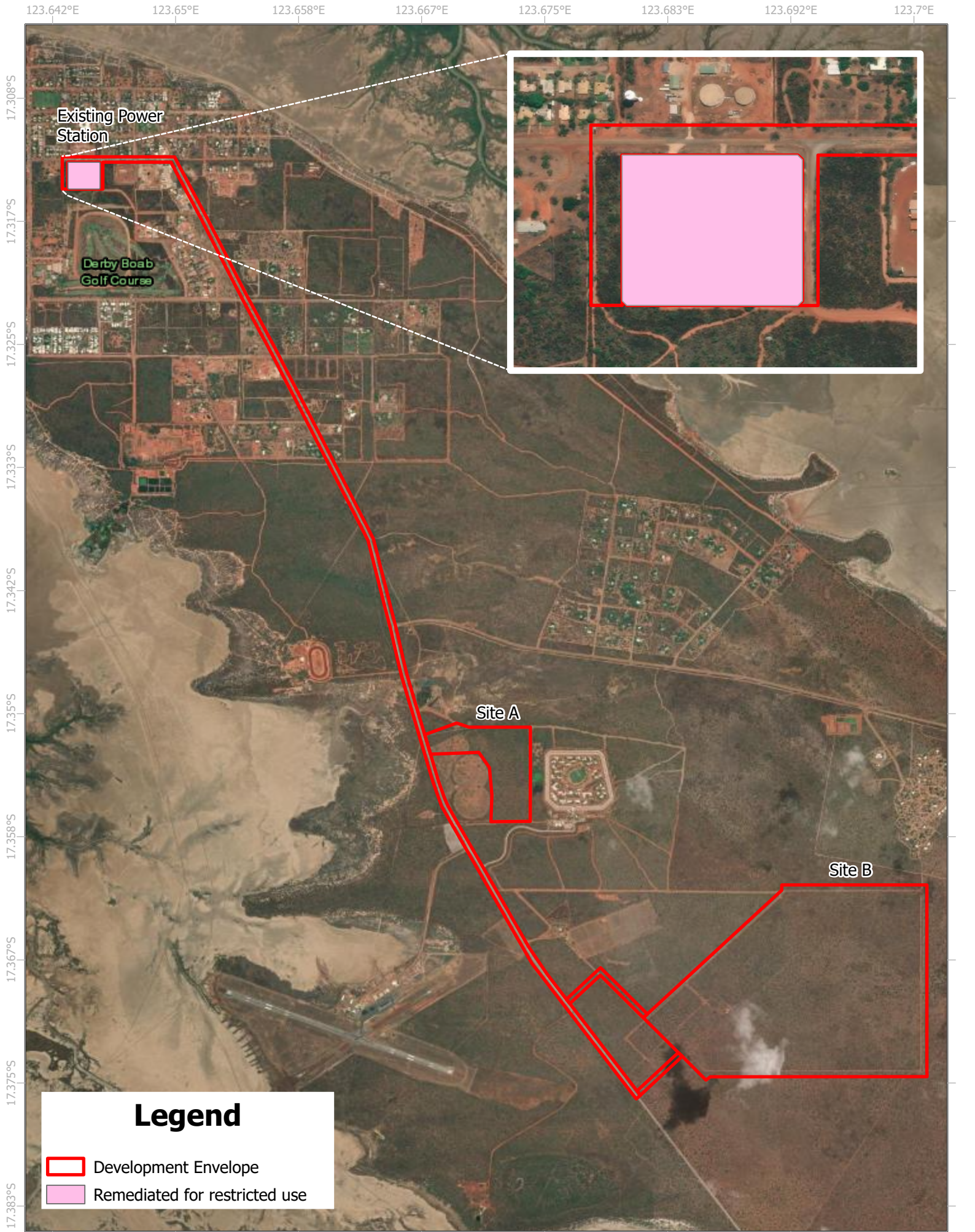


Figure 6-8 | Contaminated Sites within the Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



7 Offsets

The Proposal will not result in any significant residual impacts to environmental factors. An offset strategy is not proposed as management and mitigation measures developed are expected to adequately manage implementation of the Proposal.

8 Holistic impact assessment

The EIA process needs to consider the benefits and impacts of the Proposal in a holistic manner. Where the combination of two or more environmental factors has the potential to result in a significant impact, a holistic impact assessment should consider the interconnectedness of the assessed environmental factors through the application of the EPA's objectives for environmental factors.

The environmental surveys and studies undertaken for the Proposal have considered and assessed potential impacts at both a local and regional scale. The results of these surveys have informed the Proposal impact assessment and mitigation measures.

While the Proposal's predicted outcomes have been considered independently in relation to the environmental principles and the EPA's environmental objectives for each preliminary environmental factor, Horizon Power recognises the complex linkages between flora and vegetation, terrestrial fauna and social surroundings. These complex linkages and connections between parts of the environment have been portrayed in Figure 8-1 to inform the Proposal's holistic impact assessment.

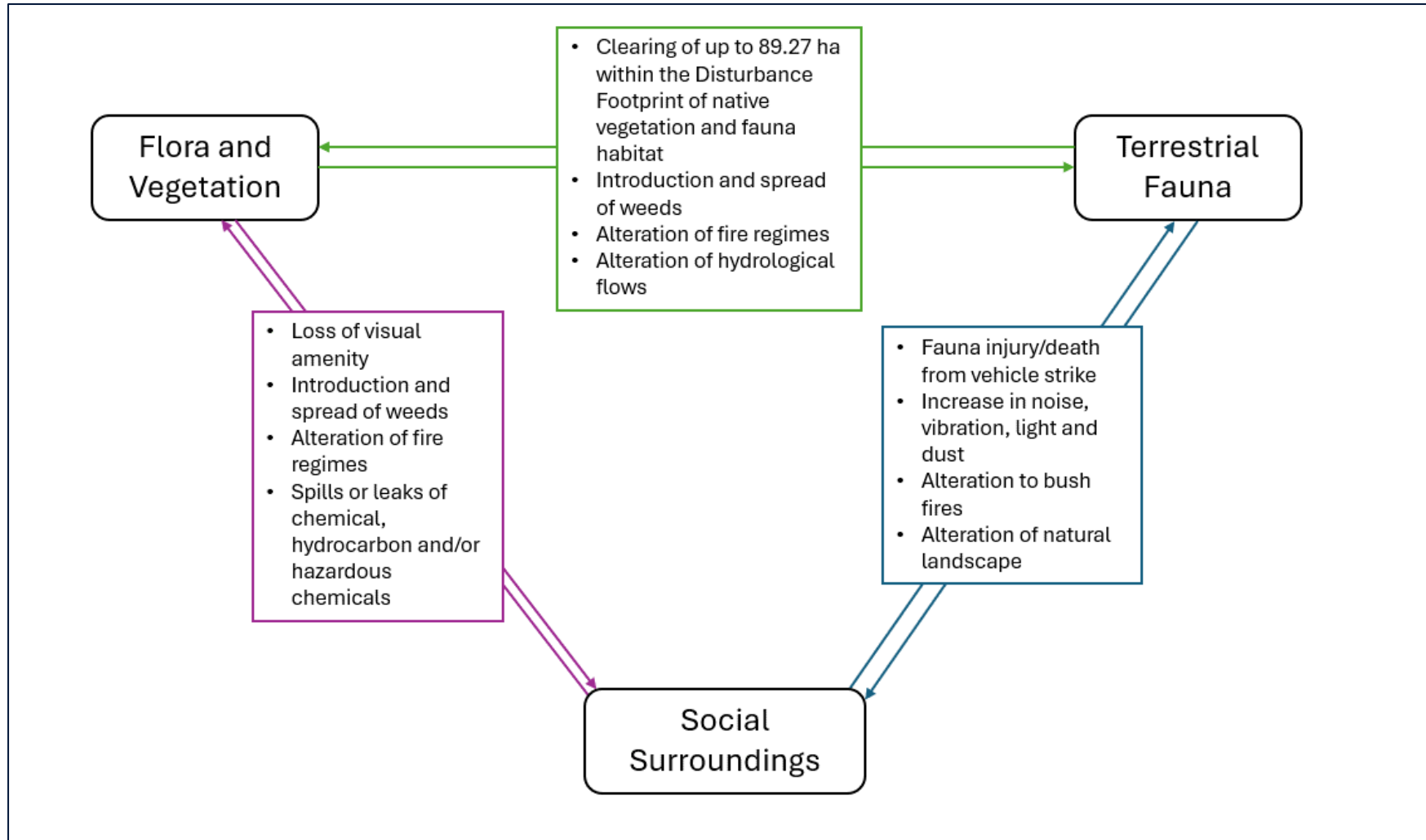


Figure 8-1 Intrinsic interactions between key environmental factors

8.1 Vegetation and flora

Potential impacts to terrestrial flora and vegetation will result primarily from permanent and temporary activities required to implement the Proposal. There are areas of vegetation and flora within the DE that have been historically impacted by the existing roads and surrounding land uses. However, the majority of the DE is in Very Good condition.

The Proposal will utilise existing cleared areas and roads where possible. The Proposal requires the removal of up to 73.5 ha of native vegetation. The clearing of native vegetation required for the Proposal includes up to 2.6 ha of riparian vegetation. No conservation significant flora species will be cleared; however, the Proposal may clear individuals of *Gyrocarpus americanus* subsp. *Americanus* which represents a range extension.

Through the clearing of native vegetation, the Proposal has the potential to impact on terrestrial fauna by removing and altering fauna habitats potentially suitable for significant fauna species, introducing or spreading weeds, alteration of fire regimes and alteration of hydrological flows.

Clearing of vegetation and alteration to the natural landscape (including the introduction and spread of weeds, alteration of fire regimes and spills or leaks of chemical, hydrocarbon and/or hazardous chemicals) has the potential to reduce visual amenity and impact social surroundings.

By applying the proposed mitigation and management measures detailed throughout the referral and within the EMP, Horizon Power considers that the impacts to the health and integrity of other environmental factors including terrestrial fauna, inland waters and social surroundings are likely to be consistent with the EPA's environmental factor objectives.

8.2 Terrestrial fauna

Similar to flora and vegetation impacts, potential impacts to terrestrial fauna will result primarily from permanent and temporary activities required to implement the Proposal. Fauna habitats within the DE are considered to be high value and are suitable for ten fauna species with the potential to occur within the DE.

The Proposal will utilise existing cleared areas and roads to minimise impacts to fauna habitats where possible. The Proposal will impact on terrestrial fauna through clearing of up to 73.5 ha of fauna habitat. Clearing of vegetation required for the Proposal has the potential to impact terrestrial fauna, through the removal of fauna habitat.

Removal of fauna habitat does not introduce any additional impacts to flora and vegetation as impacts from clearing native vegetation have already been assessed within the flora and vegetation factor.

Removal of fauna habitat has the potential to impact social surroundings through alteration of the natural landscape.

Having considered the historical and cumulative impacts to fauna habitats in the vicinity of the Proposal, Horizon Power does not expect any significant residual impacts to result from the Proposal. By applying the proposed mitigation and management measures detailed throughout the referral and within the EMP, Horizon Power considers that the impacts to the health and integrity of other environmental factors including flora and vegetation and

social surroundings are likely to be consistent with the EPA's environmental factor objectives.

8.3 Social surroundings

Implementation of the Proposal will not directly impact upon known Aboriginal cultural heritage.

Noise and vibration may be a nuisance during construction to nearby sensitive receivers, however these impacts will be of a short duration and temporary. Noise mitigation measures will be implemented for the construction of the Proposal, as outlined in the EMP (Appendix A). Operational noise is not expected to be significant.

The construction of the Proposal has the potential to cause fauna injury/death from vehicle strike, an increase in noise, vibration, light, dust and alteration to bush fires which may impact flora, vegetation, fauna and fauna habitat. This species might be culturally significant for traditional owners.

Impacts to social surroundings does not introduce any additional impacts to inland waters.

The Proposal will not cause significant impacts to social surroundings given the mitigation approaches and short term, minor nature of construction and operational activities. By applying the proposed mitigation and management measures detailed throughout the referral and within the EMP, Horizon Power considers that the impacts to the health and integrity of other environmental factors including flora and vegetation, terrestrial fauna and inland waters are likely to be consistent with the EPA's environmental factor objectives.

9 Cumulative environmental impact assessment

Cumulative effects to the environment result from multiple activities whose direct impacts may be relatively minor, but in combination with other activities can result in significant environmental and social effects. Cumulative impacts resulting from the Proposal for each preliminary key environmental factor are summarised in the following section.

The cumulative impact assessment presented considers the other projects as identified in Section 2.4.7, which are approved in the Fitzroy Trough subregion. Horizon Power is also aware of a number of Proposals and developments that are currently in the design and/or planning phase, and that are located in proximity to this Proposal. However, as these Proposals have not yet been approved or submitted for approval, they are considered to be speculative and conceptual in nature and as such they have not been considered within the cumulative impact assessment.

These developments included in the cumulative impact assessment are:

- Napier Downs Irrigation Project: located approximately 70 km northeast of the DE. The project was referred to the EPA under Section 38 of the EP Act in 2023. The referral was examined and the Proposal not to be assessed under Part IV of the EP Act.
- Three active NVCPs within the Fitzroy Trough Subregion. As detailed in Section 2.4.7.

9.1 Flora and vegetation

Cumulative impacts for environmental factor flora and vegetation, relevant to the Proposal, are listed in Table 9-1 and summarised as follows:

- Implementation of the current Proposal as well as other Proposals listed in Table 6-7 will result in the combined removal of up to 685.3 ha native vegetation in varying condition (including 411.8 ha associated with approved NVCPs). The vegetation types (and broad vegetation complexes) recorded within the Proposal DE are not restricted to the local area.
- Implementation of the current Proposal as well as other Proposals listed in Table 6-7 will result in the combined removal of up to 465.8 ha of native vegetation associated with Vegetation Association 764. The current Proposal will result in clearing of up to 1.9 ha associated with Vegetation Association 127, the other Proposals listed in Table 6-7 will not impact Vegetation Association 127. The current Proposal will result in the reduction of approximately 0.01% of the current mapped Vegetation Association 127 and 0.11% of the current mapped Vegetation Association 764 at a local scale (Shire of Derby – West Kimberley) and a regional scale (Dampierland IBRA bioregion).
- The current Proposal will directly impact riparian vegetation resulting in a loss of up to 2.6 ha. The other Proposals listed in Table 6-7 will not impact riparian vegetation, therefore no additional foreseeable impacts on riparian vegetation are anticipated.
- The current Proposal may clear flora that represents a range extension (*Gyrocarpus americanus* subsp. *Americanus*). The other Proposals listed in Table 6-7 will not impact flora that represent a range extension, therefore no additional foreseeable impacts on these species are anticipated.

Table 9-1 Flora and vegetation cumulative impacts relevant to Proposal

Aspect	Cumulative environmental impacts
Environmental factor – flora and vegetation	
Proposed vegetation clearing	Combined removal of up to 685.3 ha native vegetation in varying condition (including 411.8 ha associated with approved NVCPs).
Pre-European complexes affected	Combined removal of up to 465.8 ha of Vegetation Association 764.
Riparian vegetation	Up to 2.6 ha of riparian vegetation will be cleared for the Proposal, however there will be no cumulative impacts from the other developments.
Significant flora affected	No conservation significant flora species will be cleared for the Proposal; therefore, no cumulative impacts are expected.
Flora that represent a range extension	Clearing of individuals of <i>Gyrocarpus americanus</i> subsp. <i>Americanus</i> may occur as a result of the Proposal, however there will be no cumulative impacts from the other developments

9.2 Terrestrial fauna

Cumulative impacts for environmental factor terrestrial fauna, relevant to the Proposal, are listed in Table 9-2. Implementation of the current Proposal as well as other Proposals listed in Table 6-15 will together:

- Result in the loss of up to 685.3 ha of fauna habitat in varying condition. The fauna habitat types recorded within the DE are not restricted to the local area.
- Clear habitat for five conservation significant species that may be impacted by the Proposal.

Table 9-2 Terrestrial fauna cumulative impacts relevant to Proposal

Aspect	Cumulative environmental impacts
Environmental factor – terrestrial fauna	
Proposed fauna habitat clearing	Proposals combined clearing: Up to 685.3 ha of fauna habitat in varying condition.
Significant fauna species and habitats affected	<ul style="list-style-type: none"> • Clearing of up to 75 ha of Barn Swallow habitat • Clearing of up to 77.6 ha of Fork-tailed Swift habitat • Clearing of up to 77.6 ha of Gouldian Finch habitat • Clearing of up to 78 ha of Grey Falcon habitat • Clearing of up to 78 ha of Peregrine Falcon habitat • Cumulative impacts are not expected for the remaining fauna species.

9.3 Social surroundings

The Proposal, and other Proposals in the surrounding area, have the potential to result in cumulative impacts to visual amenity. However, since the Proposals align with existing infrastructure in the region, are likely to be located far from the Mowanjum Community and

is surrounding by open eucalypts woodland - providing natural coverage for the solar panels and associated infrastructure - the Proposal is not expected to provide any additional impacts to visual amenity.

Cumulative impacts to Aboriginal cultural heritage, as it relates to registered sites and places are not anticipated given:

- Horizon Power is committed to avoiding direct impacts to known Aboriginal cultural heritage sites and places within the DE during construction and operations.
- Potential indirect impacts to known Aboriginal cultural heritage sites and places (i.e. vibrations, dust generation and accidental fires during construction) would only occur for a short duration and only in the construction phase and is therefore not expected to have an adverse impact.
- The potential for impact to unexpected finds (previously unrecorded Aboriginal cultural heritage sites and places) during construction can be adequately mitigated through the measures detailed in Section 6.3.4.

Cumulative impacts to European heritage are not anticipated given:

- European Heritage sites will be avoided during the design phase of the Proposal.
- Potential indirect impacts to European heritage sites and places (i.e. vibrations, dust generation and accidental fires during construction) would only occur for a short duration and only in the construction phase and is therefore not expected to have an adverse impact.

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11 Appendices

Appendix A – Environmental Management Plan

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Derby Future Energy System Environmental Management Plan

June 2025



HORIZON
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Document Version Control

Version	Date	Description (reason for changes)	Authorised	Signature
0	05/06/2025	Submission	Daniel Kippin	

Environmental Protection Authority

Cover Page Table

Project Name	Derby Future Energy System
Proponent Name	Regional Power Corporation T/A Horizon Power
Ministerial Statement Number/s (if applicable)	Not applicable (yet to be assessed), will be added if applicable in later revisions.
Purpose of the EMP	The purpose of this Environmental Management Plan (EMP) is to support the referrals under the EP Act and EPBC Act and describe how the environmental impacts of the Project activities will be monitored, reported on and managed.
Key Environmental Factor(s) and Objective(s)	<ul style="list-style-type: none"> – Flora and vegetation: to minimise impacts to flora and vegetation required for construction and operation of the Project as far as practicable – Terrestrial fauna: to minimise fauna habitat loss, and direct and indirect impacts to fauna as far as practicable – Inland waters: to minimise impacts to surface water and groundwater hydrological regimes or water quality – Social surroundings: to minimise impacts to heritage values and visual amenity – Terrestrial environmental quality: to minimise impacts from Acid Sulphate Soils (ASS) and site contamination as far as practicable – Air quality: to minimise impacts to air quality, resulting from the generation of gaseous and dust emissions during construction – GHG emissions: to minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable.
Ministerial Statement Condition Clauses (if applicable)	Not applicable (yet to be assessed), will be added if applicable in later revisions.
Key Components or Legal Requirements of the Plan	This EMP has been prepared in accordance with the WA EPA's (State) <i>Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans</i> (EPA, 2024) and DCCEEW's (Commonwealth) <i>Environmental Management Plan Guidelines</i> (DCCEEW, 2024).
Proposed Construction and Operation Dates	The construction phase of the Project is estimated to take three years (subject to approvals) from 2027 – 2029. Operation will commence in 2029.
EMP Required Pre-Construction?	Yes

Department of Climate Change, Energy, the Environment and Water

Cover Page Table

EPBC Number	Not applicable (yet to be submitted)
Project Name	Derby Future Energy System
Proponent	Regional Power Corporation T/A Horizon Power
ACN or ABN	ABN 57 955 011 697
The Project	Horizon Power is proposing to construct a future energy system in Derby in the Kimberly region of WA (the Project).
Location of the Action	The solar and BESS facility will be located approximately 2.5 km south of Derby, with the network connection route following Derby Highway, Wodehouse Street and Broome

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Street to the existing substation on Broome Street in Derby. The new thermal power station would be installed adjacent to the existing power station on Broome Street in Derby.

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Commonwealth Declaration of accuracy

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed:



Full name (please print):

Daniel Kippin

Organisation (please print):

Horizon Power

Date: 05 / 06 / 2025

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Glossary

Acronym / Abbreviation	Definition
ACHIS	Aboriginal Cultural Heritage Inquiry System
ASS	Acid Sulfate Soil
CLD	Customer-led Decarbonisation
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DE	Development Envelope
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EMS	Environmental Management System
EP Act	<i>Environmental Protection Act 1986</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
GHG	Greenhouse Gas
GTE	Government Trading Enterprise
ha	hectares
JHA	Job Hazard Analysis
m	Metres
MNES	Matters of National Environmental Significance
PPA	Power Purchase Agreement
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i>
SDS	Safety Data Sheet
WA	Western Australian

1 Introduction

1.1 The Project

Regional Power Corporation, trading as (T/A) Horizon Power, is a Western Australia Government Trading Enterprise (GTE) and the state's regional and remote energy provider. Horizon Power operates under the *Electricity Corporations Act 2005* and is governed by a Board of Directors accountable to the Minister for Energy.

WA State Government has committed to reducing government emissions by 80% (below 2020) levels by 2030, and Horizon Power is supporting the Government achieve this. Many towns in the Kimberley are powered by high emission fossil fuels such as diesel and gas. In Derby, Horizon Power currently purchases power from an independent power producer. The power purchase agreement (PPA) is due to expire, providing Horizon Power with an opportunity to integrate grid-scale renewable electricity into the town supply.

Horizon Power is proposing to construct a Future Energy System (FES) in Derby in the Kimberley region of WA (the Project). The Project will ensure security of energy supply to Derby after the expiry of the PPA. As part of this future energy supply, Horizon Power is targeting higher renewables and a reduction in emissions as part of the decarbonisation strategy for the town.

The Derby FES project will nominally consist of a solar PV system (nominally up to 21 megawatts alternating current (MWAC)), battery energy storage systems (BESS) (nominally up to 10 megawatts MW/ 55 megawatt-hr (MWh)), a network connection route (up to 8.9 km) and a new thermal power station (nominally up to 8 megawatts (MW)).

1.1.1 Project Location

The solar and BESS facility is proposed to be located at either Site A or Site B. Site A is located approximately 2.5km south of Derby on Lot 31 on Deposited Plan 207640. Site B is located approximately 5 km south of Derby on Lots 5, 14 and 15 on Deposited Plan 230140.

The network connection route will follow Derby Highway, Wodehouse Street and Broome Street to connect the solar and BESS facility to a substation at the existing power station site on Broome Street in Derby. The network connection will either be an overhead or underground electrical transmission line and will be up to 8.9 km long.

The thermal power station will be installed adjacent to the existing power station on Broome Street in Derby on Lot 648 on Deposited Plan 209773.

A Development Envelope (DE) has been established which represents the boundary surrounding the Project within which all development will be contained. Construction and operation of the Project will require permanent clearing within the DE. Details of the DE and clearing area is provided in the EPA referral supporting document and the EPBC Act referral. The DE is shown on Figure 1-1. Horizon Power will remain flexible with the Project design.



Figure 1-1 | Project Location and Development Envelope



0 0.5 1 2 Kilometers

Scale: 1:35,000



All figures have the projection GDA2020

1.1.2 Activity Overview and Timelines

Along with the solar and BESS facility, thermal power station and network connection, the additional construction and operational requirements for the Project are detailed in Section 1.1.2.1, Section 1.1.2.2 and Section 1.1.2.3.

1.1.2.1 Pre-construction

Pre-construction activities will occur up to 12 months prior to construction and involve the following activities:

- Solar and BESS facility, network connection route and thermal power station site surveying and marking – surveying personnel utilising Global Positioning System equipment to mark project boundaries and exclusion zones.
- Solar and BESS facility soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig will conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 20 boreholes to a depth of 25 metres (m) and up to 15 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.
- Network connection route soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig to conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 20 boreholes to a depth of 25 m and up to 15 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.
- Thermal power station soil and geotechnical investigations – geotechnical engineering and crew utilising excavators and vehicle mounted drill rig to conduct borehole drilling, soil sampling, soil testing and compaction tests. Up to 10 boreholes to a depth of 25 m and up to 5 tests pits (5 m width by 5 m width) up to 3 m depth may be conducted to support the geotechnical investigations. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations require driving on vegetation to access test locations.

1.1.2.2 Construction

The construction phase is expected to commence in 2027 for a duration of up to 24 months.

Construction personnel will consist of a project workforce of up to 50 staff for the solar and BESS facility, up to 40 staff for the network connection route and up to 50 staff for the thermal power station. Construction works will consist of:

- Clearing of up to 73.5 hectares (ha) of vegetation, topsoil removal and stockpiling, grading and excavations.
- Weed control measures to manage the spread of invasive weeds.
- Supply of concrete will be either through the establishment of a temporary on-site concrete batch plant or concrete truck deliveries.
- Supply of water for construction purposes will be either trucked water or construction of a bore in accordance with regulations.
- Supply of civil materials for ground levelling and fill will be trucked in from local sources.
- During construction, temporary laydown areas, ablutions, kitchen, offices, crib room, first aid, water, and generators and other supporting facilities will be established onsite.
- Installation of the solar PV and BESS consisting of ground mounted solar panels, inverters, transformers, cabling, battery containers, power station and other ancillary infrastructure:
- Solar PV panels and frame will be nominally up to 4 m tall from ground level. The battery containers, power station and office building will nominally be up to 5 m tall.

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- Footings of the solar system will involve either installed piles or concrete blocks. The piles solution may involve up to 10,000 steel piles (250 mm diameter) installed to a nominal depth of up to 5 m.
- Excavation works for footings for the power station, battery system, office building and other ancillary infrastructure may involve excavation of up to 1,200 m³ of soil (footing depth typically up to 2 m deep).
- Excavation works for internal electrical cabling may involve excavation of up to 5 km of trenching and up to 1.5 m deep, resulting in excavation of up to 11,000 m³ of soil.
- Installation of a network connection route from the solar and BESS facility, following Derby Highway, Wodehouse Street and Broome Street to a substation at the existing power station in Derby. The network connection will either be an overhead or underground transmission line:
 - Underground – Trenching excavations of up to 8.9 km and up to 3 m wide and up to 2 m deep, total excavation of up to 60,000 m³ of soil.
 - Overhead – Electrical poles of up to 20 m height installed at spans of up to 200 m. Total of up to 50 poles installed along the 8.9 km connection route, and excavation for each pole up to 2.5 m deep, total excavations of up to 900m³ of soil.
- Installation of the thermal power station:
 - Excavation works for footings for the thermal power station may involve excavation of up to 1,000 m³ of soil (footing depth typically up to 2.5 m deep).
 - Excavation works for internal electrical cabling and gas piping may involve excavation of up to 1km of trenching and up to 2.5 m deep, resulting in excavation of up to 2,500 m³ of soil.
 - Installation of the power station including up to 10 engine generators, transformers, power station, cooling system, gas supply system, electrical and control cabling, gas pipelines and other auxiliary infrastructure. Engine generators, transformers and power station will be up to 5 m tall from ground level, while engine stacks may be up to 30 m tall.
- Construction of access tracks.

Typical heavy machinery and vehicles are proposed to be utilised onsite during the construction phase will include (not limited to):

- Bulldozer
- Excavator
- Grader
- Telehandler
- Trenching machines
- Horizontal directional driller
- Cable reel trailers
- Hydraulic pullers
- Water cart
- Loader
- Cranes
- Semi-trailer truck
- Light vehicles.

1.1.2.3 Operations

The operational phase is expected to commence in 2029, with operational personnel shifts conducted during daylight hours at the solar and BESS facility while the solar is producing energy. Operations personnel will consist of a local workforce of up to four personnel per shift for the solar and BESS facility. There will be no accommodation onsite, personnel will commute to site daily.

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Activities associated with the operational phase will include:

- Operation and maintenance of the solar and BESS facility, network connection, and thermal power station.
- Routine maintenance activities for the solar and BESS facility including visual inspections, solar panel cleaning (if required), solar panel replacement, electrical inspections and testing.
- Regular maintenance of the transmission line. Activities will depend on whether it is an overhead or underground transmission line:
 - Overhead transmission Line – visual inspections, thermal imaging, tower and pole maintenance, conductor and insulator cleaning, vegetation management and protection system testing.
 - Underground Transmission Line – visual inspections, thermal imaging and electrical testing.
- Routine maintenance activities for the thermal power station including visual inspections, minor and major services, electrical inspections and testing.
- Environmental management activities.

Machinery and vehicles used onsite during operational phase will include light vehicles, semi-trailer truck, cranes and telehandler.

1.2 Assessment Process and Condition Requirements

The Project is being referred to the Environmental Protection Authority to determine if assessment is required under Part IV of the *Environmental Protection Act 1986* (EP Act).

The Project is also being referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to potential impacts to habitats for listed Threatened and Migratory species.

As the Project is currently progressing through assessment under Part IV of the EP Act and under the EPBC Act, condition requirements are not applicable. If necessary, condition requirements will be added to this section of the EMP.

1.3 Document Purpose

The purpose of this Environmental Management Plan (EMP) is to support the referrals under the EP Act and EPBC Act and describe how the environmental impacts of the Project activities will be monitored, reported on and managed.

This document has been prepared in accordance with the WA Environmental Protection Authority (EPA) *'Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans'* (EPA, 2024) and the DCCEEW *'Environmental Management Plan Guidelines'* (DCCEEW, 2024). As this EMP will be attached to both the EP Act and EPBC Act referrals, the term the 'Project' is used and covers both the EP Act 'Proposal' and the EPBC Act 'Proposed Action'.

1.4 Rational and Approach

The objective of this EMP is to ensure that appropriate management measures will be in place during construction and operation of the Project to reduce potential impacts on the environment. This EMP adopts a management approach to achieve the environmental objectives for each key environmental factor and Matters of National Environmental Significance (MNES), based on consideration of:

- Survey and study findings
- Key assumptions and uncertainties
- Risks to environmental values, including EPA Environmental Factors and MNES
- Scientific information on the site and region

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- Changes in the environment
- External issues to the Project
- Timeframe for mitigation.

2 Existing Environment

2.1 Survey and Study Findings

A detailed (single season) flora and vegetation survey and a Targeted and Basic fauna survey was undertaken within the DE by GHD (2024) to gain an understanding of the flora and vegetation values within and surrounding the DE. The relevant survey and study findings of the Project are summarised in Table 2-1.

Table 2-1 Survey and Study Findings

Report Title	Survey/Study Description
Kimberley IRP: Biological Survey (GHD, 2024)	<p>Survey dates: 18 to 23 March and 25 March</p> <p>Survey Area: The GHD (2024) Survey Area in Derby covered 655.69 total ha.</p> <p>Scope:</p> <p><i>Flora and Vegetation</i></p> <p>Detailed (single season) flora and vegetation survey, including a desktop assessment and field survey. Five sites were surveyed in Derby, with Sites A and B being relevant to the Project. This survey was undertaken in accordance with the EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016).</p> <p>The survey mapped the vegetation types and condition and recorded the presence of Priority flora. Field survey methods involved a combination of high intensity quadrat sampling and traversing the Survey Area by foot. Quadrats were conducted within the Survey Area to describe the broad-scale vegetation and physical features. There were 15 quadrats and 2 relevés across the Five Derby sites.</p> <p><i>Fauna</i></p> <p>Targeted and Basic fauna survey, including a desktop assessment and field survey. Five sites were surveyed in Derby, with Sites A and B being relevant to the Project. This survey was undertaken in accordance with EPA Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020).</p> <p>The survey areas were traversed by foot to identify and describe dominant fauna habitat types present, and their condition, and to assess habitat for significant fauna. Targeted assessments specific for the Bilby, Northern Brushtail Possum, Northern Blue tongue Skink and the Northern Coastal Free-Tailed Bat were undertaken in the Survey Area. The Basic assessment also identified and recorded all fauna occurring in the area at the time of the survey.</p> <p>Remote motion sensitive cameras were deployed in areas of suitable habitat to target fauna of conservation significance including Bilby and Northern Brushtail Possum. SM4[®] and Anabat Swift bat call detectors were set for general bat activity and to target the Northern Coastal free-tailed bat (<i>Ozimops cobourgianus</i>).</p>

2.2 Relevant Environmental Factors and Matters of National Environmental Significance

The WA EPA has 14 environmental factors, organised into five themes. Each of the 14 environmental factors has an associated objective which is used to determine whether the potential environmental impacts of a Project may be significant. An impact assessment was undertaken in the EPA referral supporting documentation (Horizon Power, 2025) with the following environmental factors identified as Key Environmental Factors:

- Flora and vegetation
- Terrestrial fauna
- Social surroundings.

An additional three factors have been identified as ‘other environmental factors’ for the Project, including:

- Terrestrial environmental quality

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- Air quality
- Greenhouse gas (GHG) emissions
- Inland waters.

A detailed GHG assessment for the Project indicated that construction of the Project is unlikely to result in a significant increase in GHG emissions. The Project is unlikely to result in a significant residual impact on GHG emission factor and is not considered to require a GHG management plan given emissions are 19,887 tCO₂-e for construction and 6,349 tCO₂-e/year¹ for operation. Given the low emissions and other legislated mechanisms for reducing GHG emissions, this factor has not been included within this EMP.

The EPBC Act protects certain nationally significant (protected) animals, plants, habitats or places, referred to as MNES. An impact assessment was undertaken in the EPBC Act referral with the following MNES identified as potentially being impacted:

- Listed Threatened species and ecological communities
- Listed Migratory species (protected under international agreements).

The existing environment is summarised in Table 2-2.

¹ A greenhouse gas (GHG) assessment was undertaken for Derby as two one of Horizon Power's larger GHG emitting towns. This assessment includes project elements that are subject to this referral, plus additional requirements that could be needed in the future such as new power station infrastructure. This approach was taken to demonstrate that both the towns would be well below the safeguard threshold (100,000 tonnes carbon dioxide equivalent (tCO₂e) per year).

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Table 2-2 Existing Environment

Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
Vegetation associations, types and condition	<p>The Project is located within Pre-European Vegetation Associations 764 and 127. The Vegetation Association 127 is tidal mudflats and Vegetation Association 764 is characterised as pindan with low trees: <i>Acacia</i> thicket with scattered low trees over spinifex <i>Acacia eriopoda</i>, <i>Corymbia dichromophloia</i>, <i>Triodia pungens</i> and <i>T.bitextura</i>. More than 95% of both of these Vegetation Associations remains in the State, Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (Dampierland), subregion (Fitzroy Trough) and within the Local Government Area (the Shire of Derby-West Kimberley).</p> <p>The DE comprises native vegetation representing three vegetation types (GHD, 2024). Areas that are not considered native vegetation have been modified with significant changes to the vegetation structure and no longer represent an intact vegetation type. The vegetation recorded in the DE were (GHD, 2024):</p> <ul style="list-style-type: none"> – VT02: Open woodland of <i>Corymbia dichromophloia</i>, <i>Adansonia gregorii</i> and <i>Lysiphyllum cunninghamii</i> over open shrubland (where more recently burnt) or tree form of <i>Acacia tumida</i> var. <i>kulparn</i> over open shrubland of <i>Alstonia linearis</i>, <i>Dodonaea hispidula</i> and <i>Brachychiton diversifolius</i> subsp. <i>diversifolius</i> over open tussock grassland of <i>Chrysopogon fallax</i>, <i>Eriachne obtusa</i> and <i>Aristida hygrometrica</i> over open forbland of <i>Trichodesma zeylanicum</i> var. <i>latise paleum</i>, <i>Trianthema pilosum</i> and <i>Microstachys chamaelea</i> on light brown sandplain. – VT03: Open woodland of <i>Adansonia gregorii</i>, <i>Corymbia zygophylla</i> and <i>Corymbia opaca</i> over open woodland of <i>Lysiphyllum unninghamii</i>, <i>Hakea arborescens</i> and <i>Melaleuca cajuputi</i> subsp. <i>cajuputi</i> over shrubland of <i>Flueggea virosa</i> subsp. <i>melanthesoides</i>, <i>Terminalia canescens</i> and <i>Calytrix exstipulata</i> over mixed open forbland of <i>Jasminum molle</i>, <i>Drosera derbyensis</i>, <i>Ptilotus polystachyus</i> and <i>Waltheria indica</i> on light brown sandy loam seasonal drainage flats. – VT04: Open woodland of <i>Adansonia gregorii</i>, <i>Corymbia dichromophloia</i> and <i>Corymbia zygophylla</i> over open woodland of <i>Lysiphyllum cunninghamii</i>, <i>Gyrocarpus americanus</i> subsp. <i>americanus</i> and <i>Hakea arborescens</i> over mixed shrubland of <i>Acacia monticola</i>, <i>Acacia tumida</i> var. <i>kulparn</i>, <i>Calytrix exstipulata</i> and <i>Flueggea irosa</i> subsp. <i>elanthesoides</i> over open hummock grassland of <i>Triodia caelestialis</i> over open tussock grassland of <i>Eriachne obtusa</i> and <i>Chrysopogon fallax</i> over mixed open forbland of <i>Solanum cunninghamii</i>, <i>Melhania oblongifolia</i>, 	Flora and vegetation	N/A	<ul style="list-style-type: none"> – Loss of vegetation and flora through clearing, including significant and riparian vegetation, and flora – Introduction and/or the spread of weeds – Alteration of fire regimes – Alteration to hydrological flows – Generation of dust – Spills or leaks of chemical, hydrocarbon and/or hazardous materials.

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
	<p><i>Waltheria indica</i> and <i>Trichodesma zeylanicum</i> var. <i>latise paleum</i> on light brown sandy loam plains.</p> <ul style="list-style-type: none"> – Planted native trees over weeds – Scattered natives over weeds. – Cleared <p>The area of these vegetation types within the DE is provided in the EPA referral supporting document and the EPBC Act referral.</p> <p>The vegetation condition ranges from Very Good to Completely Degraded with the majority of the vegetation in Very Good condition (GHD, 2024). Good or Degraded vegetation is associated with signs of disturbance through clearing for road and track maintenance, presence of weeds and/or clearing for historic gravel extraction (GHD, 2024).</p>			
Significant vegetation	<p>No State or Commonwealth listed Threatened Ecological Communities or Department of Biodiversity, Conservation and Attractions (DBCAs) listed Priority Ecological Communities were recorded within the DE (GHD, 2024).</p> <p>VT03 is considered to be riparian vegetation, since it contains seasonal drainage flats. There is up to 2.6 ha of riparian vegetation within the DE to be cleared.</p>	Flora and vegetation	N/A	<ul style="list-style-type: none"> – Loss of vegetation and flora through clearing, including significant and riparian vegetation, and flora – Introduction and/or the spread of weeds – Alteration of fire regimes – Alteration to hydrological flows – Generation of dust – Spills or leaks of chemical, hydrocarbon and/or hazardous materials.
Significant flora	<p>No State or Commonwealth listed Threatened flora taxa were recorded within the DE during the GHD (2024) survey. No priority flora species were recorded within the DE.</p> <p>A total of two species recorded within the Survey Area represent range extensions from the species current known range (GHD, 2024). These taxa include:</p> <ul style="list-style-type: none"> – <i>Haemodorum capitatum</i> (the record from the survey (GHD, 2024) is the first collection for the Derby region) 	Flora and vegetation	N/A	<ul style="list-style-type: none"> – Loss of vegetation and flora through clearing, including significant and riparian vegetation, and flora – Introduction and/or the spread of weeds – Alteration of fire regimes

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
	<ul style="list-style-type: none"> – <i>Gyrocarpus americanus subsp.</i> (These records are approximately 160 km southwest from the nearest record) 			<ul style="list-style-type: none"> – Alteration to hydrological flows – Generation of dust – Spills or leaks of chemical, hydrocarbon and/or hazardous materials.
Fauna habitat	<p>Three fauna habitat types have been mapped across the DE (GHD, 2024). These fauna habitats align with the vegetation types identified above. Overall, the habitats contain a diversity of fauna, and all provide habitat for significant fauna species that are present or likely to be present in the local area.</p> <p>The fauna habitats within the DE are:</p> <ul style="list-style-type: none"> – Mixed tall closed woodland sandplain – Mixed tall open shrubland sandplain – Open Eucalypt woodland <p>The areas of these habitat types within the DE is provided in the EPA referral supporting document and the EPBC Act referral.</p> <p>The DE does not present a significant ecological linkage. The fauna habitats within the DE are part of a contiguous, largely intact area of remnant vegetation present in Derby. Land within the Derby township has been subject to clearing, but this clearing is minimal and much of the remnant vegetation intact in the local area. Overall, the habitats within the DE are largely contiguous through the local area.</p>	Terrestrial fauna	Listed Threatened species and ecological communities	<ul style="list-style-type: none"> – Loss of fauna habitat through clearing, including habitat for significant fauna species.
Significant fauna	<p>The GHD (2024) survey recorded three conservation significant fauna species within the DE or in close vicinity to the DE, with an additional six species considered likely to occur. The species that are known to occur or are likely to occur in the DE are:</p> <ul style="list-style-type: none"> – The Fork-tailed Swift (<i>Apus Pacificus</i>) is listed as Migratory under the EPBC Act and BC Act. Potential foraging habitat (considered to be supporting habitat) for this species will be cleared for the Project. – The Northern Brushtail Possum (<i>Trichosurus vulpecula arnhemensis</i>) is listed as Vulnerable under the EPBC Act and BC Act. Potential foraging, breeding, shelter and dispersal habitat (considered to be critical habitat) for this species will be cleared for the Project 	Terrestrial fauna	Listed Threatened species and ecological communities	<ul style="list-style-type: none"> – Loss of fauna habitat through clearing, including habitat for significant fauna species – Fauna injury/death from vehicle strike, clearing activities or direct collision with infrastructure – Fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, increased generation of dust during construction.

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
	<ul style="list-style-type: none"> – The Northern Coastal Free-tailed Bat (<i>Ozimops cobourgianus</i>) is listed as Priority 1 by DBCA. Potential foraging, breeding, roosting and dispersal habitat (considered to be critical habitat) for this species will be cleared for the Project. – The Gouldian Finch (<i>Chleobia gouldiae</i>) is listed as Endangered under the EPBC Act, DBCA listed Priority 4. Potential foraging and nesting/breeding habitat (considered to be critical habitat) for this species will be cleared for the Project. – The Grey Falcon (<i>Falco hypoleucos</i>) is listed as Vulnerable under the EPBC Act and BC Act. Potential foraging habitat (considered to be supporting habitat) for this species will be cleared for the Project. – The Peregrine Falcon (<i>Falco peregrinus</i>) is listed as Other Specially Protected Fauna under the BC Act. Potential foraging habitat (considered to be supporting habitat) for this species will be cleared for the Project. – The Barn Swallow (<i>Hirundo rustica</i>) is listed as Migratory under the EPBC Act and BC Act. Potential foraging habitat (considered to be supporting habitat) for this species will be cleared for the Project. – The Oriental Cuckoo (<i>Cuculus opatus</i>) is listed as Migratory under the EPBC Act and BC Act. Potential foraging habitat (considered to be supporting habitat) for this species will be cleared for the Project. – The Yellow Wagtail (<i>Motacilla flava</i>) is listed as Migratory under the EPBC Act and BC Act. Potential foraging habitat (considered to be supporting habitat) for the species will be cleared for this Project. – The Northern Blue-tongued Skink (<i>Tiliqua scincoides intermedia</i>) is listed as Critically Endangered under the EPBC Act and Priority 4 by DBCA. Potential foraging, breeding, shelter and dispersal habitat (considered to be critical habitat) for this species will be cleared for the Project. <p>Suitable habitat for these species is discussed in detail in the EPA referral supporting document and the EPBC Act referral, including the extent of suitable habitat in the DE.</p> <p>Short-range endemic species likely to occur in the Kimberley are land and freshwater snails. The habitats likely to contain short-range endemic species include vine thickets, boulder piles, isolated hills and other landforms, vegetated gullies and freshwater habitats. These habitats are not present within the DE and therefore short-range endemic fauna are not expected to be relevant to the Project.</p>			

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
Surface water	<p>No permanent water bodies or drainage lines are located within the DE. The DE is within the Fitzroy River Basin (DWER, 2024). No permanent water bodies or drainage lines are located within the DE. The DE overlaps the Derby Water Reserve, which is a Public Drinking Water Source Area (PDWSA), and it also overlaps the Derby and Canning – Kimberley Groundwater Areas proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act).</p> <p>The DE is located 1.8 km from the closest watercourse, a minor perineal watercourse, tributary of Airport Creek.</p> <p>There are no significant or nationally important wetlands, rivers or watercourses identified within the DE (GHD, 2024). There are no Ramsar wetlands in close proximity to the DE, the closest important wetland is approximately 50 km north of the DE (Big Springs).</p> <p>The DE is primarily located in areas classified as having an extremely low probability (low confidence) of Acid Sulphate Soils (ASS), intersecting areas with a high probability (low confidence) of ASS (Fitzpatrick, et al., 2011). There is a high probability of occurrence of ASS along the network connection route and existing power station portion of the DE.</p>	Inland waters	N/A	<ul style="list-style-type: none"> – A minor and temporary impact on the quality of inland waters as a result of sediments and/or contaminants being transported with stormwater runoff – Changes to surface water flows and increased risk of land erosion and sedimentation in nearby waterways due to clearing of native vegetation within the DE – Risk of contamination of soils and subsequent mobilisation to surface waters may result from accidental release of chemicals and/or hydrocarbons (i.e. leaks, spills) – Exposure of ASS by ground disturbing associated with construction of the network connection.
Groundwater	<p>The DE overlaps Derby Groundwater Area proclaimed under the RIWI Act. Based on publicly available data, the depth to groundwater in the area surrounding the DE is estimated to be between <5 m to 48 m below ground level (DWER, 2020).</p>	Inland waters	N/A	<ul style="list-style-type: none"> – If groundwater is encountered, short-term dewatering of potentially acidic groundwater may be required – Changes to groundwater infiltration from clearing of native vegetation within the DE – Minor temporary drawdown of groundwater should dewatering be required to construct solar infrastructure, transmission connection infrastructure (the transmission line may be

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
				overhead or underground) or the thermal power station.
Amenity	<p>The Project will have a permanent impact on visual amenity of the DE and surrounds, as well as temporary impacts on amenity during clearing and construction (i.e. dust, noise and vibrations).</p> <p>Construction of the Project will generate noise, dust and vibration of short-term duration within the DE. Noise and vibration may cause nuisance during construction to nearby sensitive receptors, however these impacts will be of a short duration and temporary. The network connection will be constructed adjacent to existing roads and a residential area.</p>	Social Surroundings	N/A	<ul style="list-style-type: none"> – Potential to impact upon amenity (visual, noise and vibration).
Cultural Heritage	<p>There are no World Heritage Properties or Commonwealth Heritage Places within the DE or within 20 km of the DE.</p> <p>The West Kimberley National Heritage Place is located approximately 4 km west of the existing power station. All activities will be confined to the DE, therefore there will be no impacts to this National Heritage Place as a result of the Project and it is not discussed further.</p> <p>The Project is not located within an Indigenous Land Use Agreement area (Landgate, 2025).</p> <p>There are currently two registered native title claims within the DE: Booroola Moorool Morrool (WC2016/005, WAD598/2016) and Warrwa Combined (WC2014/004, WAD33/2019) (NNTT, 2025). Whilst there is no native title determination yet, where Horizon Power’s proposed activities would impact native title rights and interests due to the need for formal land tenure (Sites A and B), the current land tenure is freehold, which is inconsistent with native title rights and interests. The proposed connection corridor does not affect any undetermined native title rights and interests.</p> <p>A search of the Aboriginal Cultural Heritage Inquiry System (ACHIS) indicates that the DE intersects the publicly known boundaries of two registered sites and one lodged site. Aboriginal cultural heritage survey will be undertaken and all known Aboriginal cultural heritage intersecting the DE will be avoided.</p> <p>A search of the Heritage Council WA inHerit database confirms two State Heritage sites occur within the DE (DPLH, 2025a). Frosty Pool (Place No. 7207) and Holman</p>	Social Surroundings	N/A	<p>The location and extent of Aboriginal cultural heritage values within the DE will be confirmed during an Aboriginal cultural heritage survey with the support of relevant Traditional Owners where possible. Horizon Power is committed to avoiding direct impacts to all known Aboriginal cultural heritage.</p> <p>The Project has the potential to indirectly impact Aboriginal cultural heritage and values of the DE and surrounding areas through:</p> <ul style="list-style-type: none"> – Dust generation during construction has the potential to settle on Aboriginal cultural heritage within or adjacent to the DE – Vibrations during construction has the potential to cause physical damage to Aboriginal cultural heritage within or adjacent to the DE

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
	House (Place No. 09741) are located within the network connection route of the DE. These sites are also municipal inventory (DPLH, 2025b)			<ul style="list-style-type: none"> – Accidental fires during construction or operations, has the potential to cause physical damage to Aboriginal cultural heritage within or adjacent to the DE.
Conservation Reserves and Environmentally Sensitive Areas	There are no DBCA managed lands within the DE (DBCA, 2024a). The closest ESA is 48 km northeast of the DE.	Flora and vegetation Social surroundings	N/A	N/A
Land and soil quality	<p>The vast majority of the DE (92.51%) is described as having an extremely low probability of occurrence of ASS. However, this classification has a confidence level 4, which means that this is a provisional classification inferred from surrogate data with no on-ground verification (Fitzpatrick et al., 2011). , there is a high probability of occurrence of ASS along the network connection route and existing power station portion of the DE.</p> <p>A search on the DWER Contaminated Sites Database (DWER, 2025) was conducted to identify the presence or absence of contaminated sites within the DE. The search identified that the existing power station portion of the DE overlaps:</p> <ul style="list-style-type: none"> – Site number 793 classified as, “remediated for restricted use”: Hydrocarbons (such as from diesel or oil) are present in soil and groundwater at the site. <p>Additional contaminated sites are located approximately 2 km from the DE.</p>	Terrestrial environmental quality	N/A	<ul style="list-style-type: none"> – Exposure of ASS by ground disturbance associated with construction of the network connection or thermal power station – If groundwater is encountered, short-term dewatering of potentially acidic groundwater may be required – Soil erosion from clearing, earthworks and vehicle/machinery movement – Soil contamination from accidental release of chemicals and/or hydrocarbons (i.e. leaks, spills) particularly during the construction phase. Since minor quantities of chemicals and hydrocarbons will be handled and/or temporarily stored through construction, impacts resulting in the event of accidental

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Environmental Value	Assessment	Related Key Environmental Factor relevant to the Project	Related MNES relevant to the Project	Related Project Activities that would Affect this Environmental Value
				release are expected to be negligible – Soil contamination from accidental release of waste – Disturbance to existing contaminated sites within DE.
Air quality	The network connection route and existing power station portion of the DE intersects Derby town.	Air quality	N/A	– Fugitive dust may be generated from vehicle movements, clearing and construction activities, having a temporary and localised impact on air quality. The majority of dust is expected to be generated during the construction phase.

2.3 Key Assumptions and Uncertainties

The GHD (2024) survey reported no limitations in either the desktop or field components, and therefore, do not pose any substantial uncertainty with respect to this EMP.

Horizon Power will commission Aboriginal cultural heritage surveys of the DE to confirm Aboriginal cultural heritage values. These will be carried out with the support of relevant Traditional Owners. Amendments to the DE will be considered during the detailed design phase and construction methods will consider the location of the DE to ensure a suitable clearance area can be maintained around any potential Aboriginal cultural heritage.

3 Roles and Responsibilities

Horizon Power has a standard project management methodology that will be applied to this Project and is applied to projects of this nature. A project board is established as a governing committee, which comprises executive and senior managers from Horizon Power.

The role of the project board is to support the project sponsor with the management of the Project by providing a decision-making and governance framework that is logical, robust and repeatable.

The project team roles and responsibilities are provided in Table 3-1.

Table 3-1 Project Board Roles and Responsibilities

Role	Responsibility
Project Sponsor (Executive member)	<ul style="list-style-type: none"> – Oversee the overall delivery of the Project to ensure good governance is achieved and Project objectives are met.
Project Director (Senior Manager)	<ul style="list-style-type: none"> – Establish the project team to deliver the Project. – Ensure plans, systems and processes are established, implemented and maintained by the project team to ensure good governance is achieved on the project. – Ensure the Project objectives are visible to the project team and delivery of the objectives are met by the project. – Monitor performance of the Project.
Horizon Power Manager Sustainability	<ul style="list-style-type: none"> – Oversee specific onsite compliance obligations for the Project. – Ensure appropriate investigation, reporting and remediation if an environmental incident occurs and provide approval for works to recommence on site when appropriate to do so.
Project Manager	<ul style="list-style-type: none"> – Establish project plans to manage the Project. – Manage project team activities to deliver the project. – Implement systems and processes to ensure good governance is achieved on the project. – Manage scope, cost, time, quality, resourcing and compliance obligations for the Project. – Report performance of the Project.
Site Representative	<ul style="list-style-type: none"> – Oversee activities onsite to deliver the Project. – Ensure work cease where required if an environmental incident occurs and escalation of incident. – Monitor systems and processes being implemented onsite to ensure good governance is achieved on the project. – Manage specific onsite compliance obligations for the Project. – Report onsite performance of the Project.
Contractor Environmental Officer	<ul style="list-style-type: none"> – Oversee activities onsite to deliver the Project. – Monitor systems and processes being implemented onsite to ensure good governance is achieved on the project. – Manage specific onsite compliance obligations for the Project. – Report onsite performance of the Project.

This EMP outlines the environmental management activities for the implementation of the Project. Horizon Power and their appointed contractor will undertake these activities, and Horizon Power acknowledges they are legal requirements to be met.

The responsibilities for the implementation of the management actions outlined in this document are detailed in Table 3-1. The actions may be undertaken by employees and/or contractors of Horizon Power when communicated and documented to relevant personnel through environmental training.

4 Environmental Training

All construction personnel and sub-contractors will undergo a project induction, which includes information on the importance of the environmental approvals conditions and the requirements to enable environmental outcomes to be achieved. They will be advised of their responsibilities with regard to the EPBC Act, EP Act, BC Act, and other relevant legislation, in addition to ministerial and contractual requirements (if applicable).

Toolbox meetings will be used to reinforce messages on environmental protection, to relay new information and to encourage and celebrate positive outcomes. Key personnel working on the Project will undertake cultural awareness training to ensure an appropriate level of understanding is maintained on heritage and related matters for the duration of construction activities.

Records of all training and inductions conducted will be maintained and include:

- the person receiving the training
- the date the training was received
- the name of the person conducting the training
- a summary of the training.

5 Communication

Horizon Power undertakes ongoing engagement with key stakeholders. These stakeholders include State Government Agencies and Ministers, Local Government, Traditional Owners, Local Community and Corporate companies.

Horizon Power’s ongoing consultation will continue throughout the construction phase and beyond, to ensure transparent and clear engagement informs our progress and that all concerns are addressed. Critically, Horizon Power have, and will, engage extensively with the Traditional Owners and will continue to work with them throughout the Project process.

Communication during the construction phase of the Project will occur on a daily, weekly or as needed basis with relevant staff, project managers or external stakeholders. Communication will be subject to the requirements of the construction contract, as determined by Horizon Power. Horizon Power has identified key external stakeholders and will ensure information is communicated as appropriate and as required. A log of communications with external stakeholders and the public will be maintained.

Key external stakeholders are provided in Table 5-1.

Table 5-1 Key Project stakeholders

Category	Stakeholders
Agencies acting on behalf of the Commonwealth Government	<ul style="list-style-type: none"> – Regional Development Australia Kimberley – DCCEEW
State Government – Departmental	<ul style="list-style-type: none"> – Hon Divina D’Anna – Member for Kimberley – Hon Amber-Jade Sanderson – Minister for Energy and Decarbonisation
State Government - Agencies	<ul style="list-style-type: none"> – Department Planning, Lands and Heritage – Kimberley Development Commission, – Water Corporation, – Department of Communities, – DBCA.
Local Government	<ul style="list-style-type: none"> – Shire of Derby/West Kimberley
Traditional owners	<ul style="list-style-type: none"> – Derby Claim #1 - Warrwa – Derby Claim #2 - Borrooloola Moorool Moorool – Madanaa Nada Aboriginal Corporation – Kimberley Land Council
Aboriginal Community-Controlled Organisations (ACCO’s)	<ul style="list-style-type: none"> – Emama Nguda Aboriginal Corporation – Dambimangari Aboriginal Corporation – Mowanjum Aboriginal Corporation
Corporate	<ul style="list-style-type: none"> – Major Account Holders, Derby Chamber of Commerce and Industry, Clean Energy Council, First Nations Clean Energy Network, Kimberley Land Council, Kimberley Aboriginal Lands Trust, EDL Energy
Derby Community	<ul style="list-style-type: none"> – Customer and community members
Community-led environmental organisations	<ul style="list-style-type: none"> – Derby Landcare Group – Hon. Robin Chappel & Chappel Research

All external communication will be managed by Horizon Power. Construction Contractors will not engage with external stakeholders unless otherwise instructed by Horizon Power or as per contract terms.

6 Reporting

Horizon Power has well established management measures that will be implemented during construction of the Project. In addition, Horizon Power maintains an Environmental Management System (EMS). Works conducted as a part of this Project will be compliant with both Horizon Power’s Environmental Policy and EMS.

6.1 State Reporting Requirements

Horizon Power will report to Department of Water and Environmental Regulation (DWER) on the implementation of this EMP as part of annual compliance reporting required under the conditions of approval for the Project (if applicable).

6.2 Commonwealth Reporting Requirements

Horizon Power will report to DCCEEW on the implementation of this EMP as part of annual compliance reporting required under the conditions of approval for the Project (if applicable).

Where compliance audits undertaken by Horizon Power identify that the environmental management actions and/or the environmental objectives are not being achieved (i.e. non-compliance or an environmental incident), Horizon Power will notify DCCEEW. Consistent with standard document control procedures, Horizon Power will maintain copies of all reports submitted to DCCEEW and advertise these on the Horizon Power website as required under the conditions of approval. The reporting requirements for this EMP are identified in Table 6-1.

Table 6-1 Reporting Requirements

Aspect	Report from	Report to	Reporting Frequency
Annual Compliance Report	Environmental Officer	DCCEEW	Annually (as part of annual compliance reporting)
Non-compliance with EMP or Environmental Incident	Environmental Officer	DCCEEW	Reporting frequency will be defined once approval conditions are obtained.
Independent audit of commitments made in EMP	Environmental Officer	DCCEEW	Reporting frequency will be defined once approval conditions are obtained.

The format and content of annual reporting will be in accordance with the requirements of the annual reporting conditions. The format and content of reporting of a non-compliance event or an environmental incident will be subject to the nature of the non-compliance/incident and will include all requested information from DCCEEW and in accordance with the approval conditions.

6.3 Environmental Incidents / Non-compliances

Internal monitoring of the environmental aspects outlined in this Plan will occur throughout the construction phase of the Project. Any non-conformances or incidents within this EMP will be investigated, rectified or mitigated as soon as possible to ensure minimal ongoing environmental harm. Relevant procedures will be amended/updated as necessary and inductions and other workforce communication will be undertaken in a timely manner to minimise the risk of re-occurrences.

Environmental incidents and non-compliances will be identified and recorded as soon as possible by the relevant responsible persons within the contractor organisation or Horizon Power. Incidents will be mitigated or rectified where possible within 24 hours of being identified. Incidents and non-conformances will be reported to the Horizon Power representative within 24 hours of identification or as soon as reasonably practicable.

Any non-conformance to this EMP is to be investigated to determine:

- why the non-conformance occurred

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- what was the environmental harm or alteration of the environment that resulted from the non-conformance
- what changes to Project activities and/or management plans is required
- measures to prevent, control or abate the environmental harm that may have occurred.

A log of incidents and non-conformances is to be maintained.

In the event of an environmental incident, the priority is to ensure the safety of all site personnel and the neighbouring community. All practical steps shall then be taken to minimise further environmental damage through the implementation of the appropriate contingency and corrective actions, as outlined in the environmental management measures in Section 8 and Section 9.

7 Rational and Choice of Provisions

This EMP adopts provisions based on industry standard practices for avoidance, minimisation and rehabilitation of environmental impacts during construction.

The provisions reflect the temporary duration of construction activities, and the intermittent, episodic and acute nature of impacts posed by construction activities, such as un-authorized clearing, dust emissions during high winds, or accidental spills of hazardous materials or wastes.

The provisions have also reflected the potential for chronic impacts to occur post construction, such as the spread of introduced weeds or ongoing erosion of areas disturbed during construction, as well as impacts relating to maintenance and operating activities.

The majority of provisions address episodic and acute impacts and provide short term mitigation. Provisions also address the longer-term timeframes to demonstrate weed control success.

8 State Environmental Management Measures

As per the EP Act referral documentation, the Environmental Factors that have the potential to be present in the DE and/or immediate surrounds are:

- Flora and vegetation
- Terrestrial fauna
- Inland waters
- Social surroundings.
- Terrestrial environmental quality
- Air quality
- Greenhouse gas (GHG) emissions.

A description of the Environmental Factors relevant to the Project is provided in Table 2-2.

8.1 Environmental Management Objectives

This EMP utilises objective-based components. The selection of objective-based components rather than outcome-based components is due to the Project construction activities posing environmental risks that are generally intermittent, episodic or acute impact events that are less applicable to long term objective measurement and reporting.

The management-based components provided within this EMP seek to align with established industry practises to avoid and minimise potential environmental and heritage impacts. This EMP has the following objectives for the preliminary key environmental factors and other environmental factors identified in the referral of the Project:

- Flora and Vegetation: to minimise impacts to flora and vegetation required for construction and operation of the Project as far as practicable
- Terrestrial Fauna: to minimise fauna habitat loss and minimise direct and indirect impacts to fauna as far as practicable
- Inland Waters: to minimise impacts to surface water and groundwater hydrological regimes or water quality
- Social Surroundings: to minimise impacts to heritage values and visual amenity
- Terrestrial Environmental Quality: to minimise impacts from Acid Sulphate Soils (ASS) and site contamination as far as practicable
- Air Quality: to minimise impacts to air quality, resulting from the generation of gaseous and dust emissions during construction.

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8.2 Flora and Vegetation

The management components for flora and vegetation are outlined in Table 8-1.

Table 8-1 Flora and Vegetation – management components

<p>EPA Factor: Flora and Vegetation</p> <p>EPA Objective: <i>“To protect flora and vegetation so that biological diversity and ecological integrity are maintained.”</i></p> <p>EMP Objective:</p> <ul style="list-style-type: none"> – To minimise impacts to flora and vegetation required for construction and operation of the Project as far as practicable <p>Key Environmental Values:</p> <ul style="list-style-type: none"> – Native vegetation including significant flora and riparian vegetation <p>Key Impact and Risks:</p> <ul style="list-style-type: none"> – Loss of vegetation and flora through clearing, including significant and riparian vegetation, and flora – Introduction and/or the spread of weeds – Alteration of fire regimes – Alteration to hydrological flows – Generation of dust – Spills or leaks of chemical, hydrocarbon and/or hazardous materials. 				
Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
Vegetation clearing				
<p>No clearing of vegetation to occur outside of the predefined clearing limits and boundaries described within approval documents, during or attributable to construction.</p> <p>No impacts to significant flora and significant vegetation outside of the predefined clearing limits and boundaries described within approval documents.</p>	<p>Clearing and ground disturbing activities (including soil and geotechnical investigations) limited to the defined clearing limits and boundaries described within the approval document.</p> <p>Driving for geotechnical investigations will be in convoy and no more than 10 m x 10 m of clearing is permitted per test location.</p> <p>The extent of the approved clearing will be clearly</p>	<p>Drawings, inductions and shape/CAD files showing approved clearing areas provided to Construction Contractor Representative.</p> <p>Job Hazard Analysis (JHA) or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.</p> <p>Track logs from soil and geotechnical investigations of</p>	<p>Prior to construction.</p>	<p>Contractor to check that drawings, inductions and shape/CAD files show correct approved clearing areas.</p> <p>Record of provision of drawings and shape/CAD files showing approved clearing areas.</p> <p>All relevant contractors to sign onto JHA or equivalent.</p> <p>Pre-clearing photos to be documented and daily inspection of clearing extents during clearing activities and weekly inspections</p>

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
	<p>communicated in documentation and inductions.</p>	<p>where vehicles have driven within the predefined clearing limits.</p> <p>Inspection of clearing extents during clearing activities to confirm no over clearing (including soil and geotechnical investigations).</p>		<p>during the remainder of construction to confirm no over clearing.</p> <p>Visual inspection and record of cleared areas to be undertaken post-clearing to confirm no over clearing and relevant shapefiles provided to Horizon Power.</p> <p>Track logs from soil and geotechnical investigations to show no vehicle movement outside of predefined clearing limits.</p> <p>Clearing area shapefiles from soil and geotechnical investigations to show no clearing outside of predefined clearing limits.</p> <p>Report unauthorised clearing as soon as practicable after identified.</p>
	<p>At risk, 'avoidance areas' will be demarcated on Project drawings and physically on site prior to clearing activities.</p>	<p>At risk 'avoidance areas' clearly marked out on all relevant Project drawings and demarcated on site with shapefiles provided.</p> <p>JHA or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.</p> <p>Daily inspections during clearing and weekly inspections during the remainder of construction within the work area of at risk 'avoidance area' demarcation will be undertaken to confirm</p>	<p>During construction.</p>	<p>Contractor to check that drawings and shape/CAD files show correct approved clearing areas.</p> <p>Record of provision of drawings and shape/CAD files showing approved clearing areas.</p> <p>Daily site inspections during clearing and weekly inspections during the remainder of construction to confirm appropriate demarcations of at-risk avoidance areas are maintained.</p>

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
		markings remain in place and are accurate.		Construction reports which will include clearing extents and shapefiles. Vegetation clearing records and annual environmental reporting.
	Personnel access routes and parking will be restricted and clearly demarcated on site.	Approved clearing areas including designated access routes and parking areas to be clearly demarcated on site and communicated appropriately. Routine inspection of Project defined clearing limits and Boundaries demarcation during clearing activities. Daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.	During construction and operation.	Vegetation clearing records and annual environmental reporting. Report unauthorized clearing as soon as practicable after identified. Construction site plan showing all approved access areas. Daily site inspections during and weekly inspections during the remainder of construction.
	Review environmental constraints that are outlined in approval documents during detailed design and avoid sensitivities where possible.	Pre-construction reviews of the construction plan shows that infrastructure is placed in cleared areas where practicable.	During construction.	Construction site plan showing all approved access areas.
	Areas required for temporary construction purposes and areas required for operational maintenance and repair activities, will be located within existing cleared areas, or areas required for permanent infrastructure, where possible.	Drawings, inductions and shape/CAD files showing approved clearing areas provided to Construction Contractor Representative. Job Hazard Analysis (JHA) or equivalent to include the risks and mitigation actions to be understood and adhered to as	Prior to and during construction and operation.	Daily inspection of Project defined clearing limits and boundaries demarcation during clearing activities and weekly inspections during the remainder of construction. Vegetation clearing records and annual environmental reporting.

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
		they pertain to the contractor and scope of work on the JHA.		Report unauthorized clearing as soon as practicable after identified.
	Minimise clearing to the extent required during construction, and the ongoing maintenance and operation of the assets.	Routine inspection of Project defined clearing limits and boundaries demarcation during clearing activities. Daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.	During construction and operation.	Vegetation clearing records and annual environmental reporting. Report unauthorized clearing as soon as practicable after identified.
	Visual inspection and record of cleared areas to be undertaken post-clearing to confirm no over clearing.	N/A.	Post construction.	Annual Compliance Reporting.
Weeds				
Minimise the spread and/or introduction of weeds.	All site personnel to be inducted on environmental responsibilities including hygiene management.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	A weed register will be developed and maintained for declared weeds, WONS or serious environmental weed species. The register will contain relevant information such as species, distribution, abundance and history of control method.	Record of weed register.	Prior to and during construction.	Weed register.
	Develop and implement vehicle and equipment clean on entry/exit procedures; Any machinery used to remove weed-infested topsoil will be cleaned down before entering or leaving	Routine spot checks of vehicles and equipment compliance with cleaning.	During construction.	Results of spot checks of vehicle and equipment cleaning compliance.

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
	the work site to prevent the introduction and spread of weeds into new areas.			
	Vehicles and machinery to remain on designated roads/access tracks areas where possible.	Routine spot checks of vehicles and equipment compliance with cleaning.	During construction.	Results of spot checks of vehicle and equipment cleaning compliance.
	<ul style="list-style-type: none"> – Implement a yearly weed monitoring and management program for the first year following completion of ground disturbance activities. – Ad-hoc weed checks during operational maintenance activities, in accordance with standard Horizon Power network weed control 	Yearly weed inspection and management program.	Post construction.	Annual Compliance Reporting.
Hydrological flows				
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Refer to Table 8-3 for management targets, actions, monitoring, timing and reporting of management measures in relation to hydrological flows.			
Fire regimes				
No unplanned fires as a result of Project activities.	All site personnel to be inducted on environmental responsibilities including fire prevention.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	All non-essential work is to be stopped or postponed in the event that a Total Fire Ban with Catastrophic fire danger ratings or Emergency Warning is issued for the area. Works to be conducted in accordance with all	N/A.	At all times.	Incident reporting system. Weekly site inspection report.

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
	local fire control laws and regulations.			
	Where increased risk of fire is identified, fire-resistant barriers like screens will be employed to confine sparks generated by welders and other hot work activities.	N/A.	At all times.	Incident reporting system. Weekly site inspection report.
	Fire extinguishers will be strategically positioned in locations with a higher risk of fire.	N/A.	At all times.	Incident reporting system. Weekly site inspection report.
	Hot work permits will be mandatory before commencing any hot work.	Compliance with hot work permits.	At all times.	Hot work permit record system. Weekly site inspection report.
	Vehicles and equipment access limited to designated roads/access tracks and cleared areas where possible.	N/A.	At all times.	Incident reporting system. Weekly site inspection report
	Smoking will be confined to designated smoking area only.	N/A.	At all times.	Incident reporting system. Weekly site inspection report.
	Identify potential ignition sources and/or activities with the potential to lead to fire.	N/A.	At all times.	Incident reporting system. Weekly site inspection report.
Dust emissions				
Minimise impacts to flora and vegetation from increased generation of dust emissions during construction.	Refer to Table 8-6 for management targets, actions, monitoring, timing and reporting of management measures in relation to dust emissions.			
Spills or leaks of chemical, hydrocarbon and/or hazardous materials				

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Management Targets	Management Actions	Monitoring	Timing / Frequency of Monitoring	Reporting
Minimise impacts to flora and vegetation from spills or leaks of chemical, hydrocarbon and/or hazardous materials.	Refer to Table 8-5 for management targets, actions, monitoring, timing and reporting of management measures in relation to spills or leaks of chemical, hydrocarbon and/or hazardous materials.			

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8.3 Terrestrial Fauna

The management components for fauna are outlined in Table 8-2.

Table 8-2 Terrestrial Fauna – management components

EPA Factor: Terrestrial Fauna EPA Objective: "To protect terrestrial fauna so that biological diversity and ecological integrity are maintained." EMP Objective: to minimise fauna habitat loss and minimise direct and indirect impacts to fauna as far as practicable Key Environmental Values: Significant fauna species and habitats Key Impact and Risks: – Loss of fauna habitat through clearing, including habitat for significance fauna species – Fauna injury/death from vehicle strike, clearing activities or direct collision with infrastructure – Fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, increased generation of dust during construction.				
Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Clearing and ground disturbance				
Minimise fauna habitat loss.	Refer to Table 8-1 for management targets, actions, monitoring, timing and reporting of management measures in relation to vegetation clearing in the DE, which directly relates to habitat clearing within the DE.			
Fauna injury/death				
– No deaths of significant fauna during vegetation clearing for construction. – Minimise fauna injury/death during Project construction and operation.	Personnel induction regarding threatened fauna and direct and indirect impacts (e.g., risk of vehicle strike, interaction with construction activities, waste management).	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	Speed limits between 40-80 km/hr in order to avoid fauna strikes during clearing and construction.	Visual monitoring by all construction personnel.	During construction.	Incident reporting.
	Clearing to be undertaken progressively in one direction to allow fauna dispersal.	N/A.	During construction.	Clearing records. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
				Register as soon as possible as the injury or death is identified. Annual Compliance Reporting.
	Prior to the commencement of clearing, a licenced fauna specialist will be present for a pre-clearance survey to oversee the works (See Appendix A for pre-clearance fauna survey requirements). If any listed fauna is identified during clearing, clearing will stop until the listed fauna has moved out of the clearing area or has been relocated by the licenced fauna handler.	N/A.	Prior to clearing.	Internal Project clearing permit, signed by Supervisor. Licenced fauna specialist to report on areas they inspected, the species found and the location of where any fauna were released to.
	<p>Management of excavations including:</p> <ul style="list-style-type: none"> – Excavations shall remain open for the minimal required time to facilitate the ongoing construction. – Excavations will be done in sections. – Fauna escape batters, ramps or egress ladders will be implemented in excavated areas where required to be left open overnight – Posts shall be raised as soon as practical after the holes are excavated, and holes will not be left open overnight where possible. Where excavations are required to be left open 	Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation.	During construction.	<p>Daily monitoring for trapped fauna during construction in non-battered excavations.</p> <p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p>

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	<p>overnight, fauna egress points will be made.</p> <ul style="list-style-type: none"> Any excavations required will generally not be left open and an inspection will be undertaken at the commencement of each workday, to identify and address any potential instances of trapped animals. 			
	<p>In the event of listed threatened fauna injury, advice shall be sought from local qualified wildlife organisations/persons.</p> <p>Sick or injured wildlife will be allocated to an appropriate specialist organisation for care.</p> <p>Fauna fatality and injury will be recorded as an environmental incident.</p>	<p>In case of fauna injury, advice undertaken and, if necessary, relocation of rescue animals to an appropriate specialised organisation.</p> <p>Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation and/or treatment.</p>	<p>During construction.</p>	<p>Animal injury or fatalities reported as an incident in the incident records system.</p> <p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p> <p>Licensed fauna handler to report on areas they inspected, the species found and the location of where any fauna were released to.</p>
	<p>Night-time vehicle movements during construction will be limited where possible to minimise the potential for vehicle strikes. Working hours will generally take place between daylight hours.</p>	<p>In case of fauna injury, advice undertaken and, if necessary, relocation of rescue animals to an appropriate specialised organisation.</p>	<p>During construction.</p>	<p>Animal injury or fatalities reported as an incident in the incident records system.</p> <p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p>

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	Fauna identified within the demarcated clearing areas unable to move away from the clearing areas without intervention are to be moved to a location deemed appropriate for the safety and survival of the fauna individual/s.	Daily visual inspections for native fauna within non-battered excavations during construction.	During construction.	Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting. Licenced fauna handler to report on areas they inspected, the species found and the location of where any fauna were released to.
	Pre-clearance surveys and fauna relocation for the Northern Brushtail Possum and Northern Blue-tongue Skink as detailed in Appendix A.	As detailed in Appendix A.	Prior to construction.	A report of the fauna identification work undertaken must be provided to Horizon Power by the contractor, as detailed in Appendix A.
Disturbance to native fauna				
Minimise disturbance to native fauna from noise, light and vibration during Project construction.	Construction works will generally occur during the daylight hours.	Noise emissions will be kept at a minimum during daylight hours. No increase in noise will occur during night-time hours.	During construction.	Noise complaints will be recorded. Compliance with implementation of noise and vibration minimisation strategies will be developed and implemented during construction of the Project.
	Light emissions from on-site construction lighting towers will occur transiently, not remaining in the same location unnecessarily.	No light emission from on-site construction lighting towers will in the same location for longer than six months.	During construction.	Incident reports.
	No clearing during Northern Blue-tongue Skink birthing season (December to January).	N/A.	During clearing.	Vegetation clearing records and annual environmental reporting.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Refer to Table 8-4 for management targets, actions, monitoring, timing and reporting of management measures in relation to noise and vibration.				
Minimise disturbance to native fauna from feral animals during Project construction	Personnel induction to include introduction of feral animals, requirement to report sightings of feral animals, no feeding of native and/or feral animals and no pets allowed on site.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	General construction waste material and food waste to be appropriately managed and disposed of off-site at an appropriate facility.	Routine inspections of waste storage and handling areas. Waste stored in fauna-proof containers and disposed of appropriately.	During construction.	Weekly inspection. Waste disposal records.
No standing water across the DE during operations that Cane Toads could potentially breed in	Drainage control will be established during detailed design and may include: <ul style="list-style-type: none"> – Ground under and between ground mounted solar arrays may be covered with bluestone. – Design the site to drain water or sloped so the water runs off site. 	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	During operations.	Report any standing water as soon as practicable after identified and modification to remove standing water.
Dust emissions				
Minimise disturbance to native fauna from increased generation of dust during construction.	Refer to Table 8-6 for management targets, actions, monitoring, timing and reporting of management measures in relation to dust emissions.			
Fire regimes				
Prevent indirect impacts on fauna habitats due to accidental fires	Refer to Table 8-1 for management targets, actions, monitoring, timing and reporting of management measures in relation to no unplanned fires.			

8.4 Inland Waters

The management components for inland waters are outlined in Table 8-3.

Table 8-3 Inland Waters – management components

EPA Factor: Inland Waters				
EPA Objective: “To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.”				
EMP Objective: To minimise impacts to surface water and groundwater hydrological regimes or water quality				
Key Environmental Values: Riparian vegetation within the DE, the DE is within the Derby Water Reserve PDWSA.				
Key Impact and Risks:				
<ul style="list-style-type: none"> – Excavation of ASS – Changes to surface water flows – Soil erosion and sediment discharge – Accidental spills or leaks of hazardous materials or wastes – Changes to groundwater infiltration – Minor temporary drawdown of groundwater should dewatering be required 				
Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Acid sulfate soils				
Minimise the risk of ASS mobilization and leaching into groundwater/surface water.	Refer to Table 8-5 for management targets, actions, monitoring, timing and reporting of management measures for the excavation of ASS.			
Hydrological flows				
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Local drainage to be considered during site design and layout.	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	Prior to construction.	Construction site plan.
Soil erosion and sediment discharge				
Minimise the risk of soil erosion and sedimentation of surface water.	Refer to Table 8-5 for management targets, actions, monitoring, timing and reporting of management measures in relation to soil erosion and sediment discharge.			

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Spills or leaks of chemical, hydrocarbon and/or hazardous materials				
Minimise the risk of hazardous material and waste leaching into groundwater/surface water.	Refer to Table 8-5 for management targets, actions, monitoring, timing and reporting of management measures in relation to spills or leaks of chemical, hydrocarbon and/or hazardous materials.			
Groundwater				
Minimise the risk of changes to groundwater infiltration and groundwater drawdown.	Any water abstraction required for construction of the Project will be undertaken to minimise drawdown, and water allowed to infiltrate as close to the source as possible. If the groundwater is acidic, it would be treated and discharged in accordance with an ASS Management Plan.	Routine inspection of Project to monitor groundwater levels.	During construction.	Groundwater monitoring records.
	Compliance with conditions administered under Section 5C and 26D Licences under the RIWI Act.	As per requirements of works approvals and/or licencing under Part V of the EP Act.	At all times.	Annual Compliance Reporting.
Riparian vegetation				
No clearing of riparian vegetation outside of the predefined clearing limits and boundaries described within approval documents.	Refer to Table 8-1 for management targets, actions, monitoring, timing and reporting of management measures in relation to vegetation clearing in the DE, which directly relates to clearing of riparian vegetation within the DE.			

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8.5 Social Surroundings

The management components for social surroundings are outlined in Table 8-4.

Table 8-4 Social Surroundings – management components

EPA Factor: Social Surroundings EPA Objective: “To protect social surroundings from significant harm.” EMP Objective: To minimise impacts to heritage values and visual amenity Key Environmental Values: Sites of Heritage significance and visual amenity Key Impact and Risks: – Potential indirect impacts to known Aboriginal cultural heritage sites and areas as a result of vibration and dust deposition, vibration and fires during construction – Potential to impact upon amenity (visual, noise and vibration) – Potential for accidental direct impact to previously unrecorded Aboriginal cultural heritage Sites (that have the potential to be uncovered during ground disturbing activities).				
Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Heritage sites				
No disturbance of known Aboriginal cultural heritage sites.	All site personnel to be inducted on Aboriginal cultural heritage.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	Horizon Power will commission an Aboriginal cultural heritage survey with the support of relevant Traditional Owners to identify heritage sites and areas.	Aboriginal cultural heritage survey report.	Prior to construction.	N/A.
	At risk, avoidance areas within the DE will be clearly established through consultation with Traditional Owners and demarcated in a culturally appropriate manner prior to ground disturbing activities to prevent damage to Aboriginal cultural heritage sites outside of the approved disturbance area.	Place boundary to verify buffer and/or demarcation in a culturally appropriate manner.	Prior to construction.	Incident reports. Induction records. Annual Compliance Reporting.
	Engagement of Aboriginal cultural heritage monitors as per Heritage	Visual inspections of heritage sites during ground disturbance.	During construction.	Incident reports.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	Protection Agreement requirements and/or heritage survey outcome recommendations to monitor initial ground disturbing earthworks and to manage Aboriginal cultural heritage values of the site and the adjacent areas.	Regular engagement with Traditional Owners.		Induction records. Annual Compliance Reporting.
	Any potential Aboriginal materials or other unexpected finds found on site during excavation, such as subsurface artefacts, will be subject to an immediate shutdown of nearby activities and a suitable exclusion zone. The Manager Sustainability will be immediately notified. Horizon Power will consult with Traditional Owners and, if required, an archaeologist will be engaged to assess the archaeological material and provide a report to Horizon Power. Horizon Power will work with Traditional Owners and, if required, the archaeologist to implement an appropriate course of action.	Visual inspections of heritage sites during ground disturbance and flagging/fencing as applied Regular engagement with Traditional Owners	During construction.	Incident reports. Induction records. Annual Compliance Reporting.
	Enable Traditional Owners to monitor the heritage places to enable knowledge transfer to occur and ensure the heritage values are protected for future generations.	Visual inspections of heritage sites during ground disturbance. Regular engagement with Traditional Owners.	At all times.	Incident reports. Induction records. Annual Compliance Reporting.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	<p>Continue to engage and consult with Traditional Owners to ensure heritage values are managed.</p> <p>Regularly liaise with Traditional Owners to establish and maintain processes and accountability between the parties.</p>	Regular engagement with Traditional Owners.	At all times.	<p>Incident reports.</p> <p>Induction records.</p> <p>Annual Compliance Reporting.</p>
	<p>If required, any disturbance to heritage features will be undertaken in accordance with the <i>Aboriginal Heritage Act 1972</i> and any other applicable legislation, aligned with the Horizon Power Aboriginal Cultural Heritage Management Policy and following consultation with the Traditional Owners.</p> <p>Compliance with conditions administered under the <i>Aboriginal Heritage Act 1972</i> as required.</p>	As per requirements under the <i>Aboriginal Heritage Act 1972</i> .	At all times.	Annual Compliance Reporting.
Dust				
Minimise dust deposition on Aboriginal cultural heritage sites	<p>Dust suppression, including use of water carts to be implemented where required during construction activities in proximity to Aboriginal cultural heritage sites as required.</p>	<p>Visual inspections of heritage sites (by heritage monitors) during ground disturbance.</p> <p>Ad hoc inspections of heritage sites (by heritage monitors) during Project construction.</p>	During construction.	<p>Incident reports.</p> <p>Annual Compliance Reporting.</p>
Refer to Table 8-6 for additional management targets, actions, monitoring, timing and reporting of management measures in relation to dust emissions.				
Noise and vibration				
Minimise construction noise and vibration	Construction works will be undertaken in accordance with	Compliance with Environmental Protection (Noise) Regulations	During construction.	<p>Incident reports.</p> <p>Complaint closeout.</p>

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	the Environmental Protection (Noise) Regulations 1997.	1997 and/or approved Noise Management Plan. Investigation and reporting of all complaints.		Annual Compliance Reporting.
	Comply with local government noise management requirements.	Compliance with Environmental Protection (Noise) Regulations 1997 and/or approved Noise Management Plan. Investigation and reporting of all complaints.	During construction.	Incident reports. Complaint closeout. Annual Compliance Reporting.
	Establish complaints register.	Compliance with Environmental Protection (Noise) Regulations 1997 and/or approved Noise Management Plan. Investigation and reporting of all complaints.	During construction.	Incident reports. Complaint closeout. Annual Compliance Reporting.
	Reduce noise emissions as much as practicable.	Compliance with Environmental Protection (Noise) Regulations 1997 and/or approved Noise Management Plan. Investigation and reporting of all complaints.	During construction.	Incident reports. Complaint closeout. Annual Compliance Reporting.
	Heavy vehicle movements minimised as far as practicable.	Compliance with Environmental Protection (Noise) Regulations 1997 and/or approved Noise Management Plan. Investigation and reporting of all complaints.	During construction.	Incident reports. Complaint closeout. Annual Compliance Reporting.
	In the event of significant noise activities noise and vibration minimisation strategies (e.g. soft start) will be developed and implemented during Project construction.	Compliance with implementation of noise and vibration minimisation strategies.	During construction.	Annual Compliance Reporting.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Fire regimes				
Refer to Table 8-1 for management targets, actions, monitoring, timing and reporting of management measures in relation to fire regimes.				
Visual amenity				
Minimise adverse visual amenity.	Maximise visual amenity through site layout design and construction materials, where possible.	Investigation and reporting of all complaints.	Prior to construction.	Annual Compliance Reporting Complaint closeout.
	Establish complaints register.	Investigation and reporting of all complaints.	During construction.	Annual Compliance Reporting Complaint closeout.

8.6 Terrestrial Environmental Quality

The management components for terrestrial environmental quality are outlined in Table 8-5.

Table 8-5 Terrestrial Environmental Quality – management components

EPA Factor: Terrestrial Environmental Quality EPA Objective: To maintain the quality of land and soils so that environmental values are protected EMP Objective: To minimise impacts from Acid Sulphate Soils (ASS) and site contamination as far as practicable Key Environmental Values: There is a high probability of ASS along the network connection route and existing power station portion of the DE, the DE overlaps one contaminated site Key Impact and Risks: <ul style="list-style-type: none"> – Exposure of ASS – Soil erosion and sediment discharge – Disturbance to existing contaminated sites – Accidental release of chemicals and/or hydrocarbons (i.e. leaks, spills) or waste 				
Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Acid sulfate soils				
No mobilization of ASS during construction.	All site personnel to be inducted on environmental responsibilities including area of ASS risk.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	If ASS is encountered, an ASS investigation will be undertaken in the area that the ASS was encountered. If the investigation identifies ASS within excavation areas, the Contractor will develop and implement an ASS Management Plan (ASSMP) as required.	As per the ASS management plan.	Prior to and during construction.	Inspection report. ASS investigation survey report ASSMP approved by DWER (if required).
	Construction activities will be undertaken in accordance with the recommendations provided in the ASS investigation and/or ASS management plan.	As per the ASS management plan.	During construction.	ASSMP approved by DWER (if required).

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	Any water abstraction required for construction of the Project will be undertaken to minimise drawdown, and water allowed to infiltrate as close to the source as possible. If the groundwater is acidic, it would be treated and discharged in accordance with an ASSMP.	As per the ASS management plan.	During construction.	ASSMP approved by DWER (if required).
Soil erosion and sediment discharge				
No noticeable change in sediment discharge. No noticeable increase in soil erosion.	Establishment of designated access roads to prevent unauthorised disturbance.	Routine inspections of erosion and sediment discharge.	At all times.	Inspection Report. Incident Report.
	Erosion and sediment control measures will be applied to prevent erosion of exposed areas and sediment discharge to adjacent areas, where practicable.	Routine inspections of erosion and sediment discharge.	During construction.	Inspection Report. Incident Report.
	Laydown areas will be rehabilitated or otherwise stabilised as early as practicable to minimise the potential for erosion.	Routine inspections of erosion and sediment discharge.	Post construction.	Inspection Report. Incident Report.
	Extreme weather will be monitored by the construction contractor and if a cyclone warning is issued, a site inspection and clean-up will be undertaken prior to the cyclone. This will include filling in any holes, as well as stabilisation or dispersal of piles of dirt and removal of rubbish.	Monitoring of weather.	During construction.	Inspection Report. Incident Report. Cyclone Management Plan.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	A cyclone management plan will be developed by the contractor prior to construction, if works that cause sedimentation or erosion are proposed during cyclone season.			
Groundwater				
Minimise the risk of changes to groundwater infiltration and groundwater drawdown.	Refer to Table 8-3 for management targets, actions, monitoring, timing and reporting of management measures in relation to spills or leaks of chemical, hydrocarbon and/or hazardous materials.			
Contamination				
All suspected contamination, such as Site number 793 (refer to Table 2-2) is characterised and appropriately managed.	All site personnel to be inducted on environmental responsibilities.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.
	In the event of excavation encountering suspected contaminated materials, the excavation works are to be stopped, and advice sought from a qualified environmental professional. If required, the suspected contamination will be sampled and analysed to determine the appropriate remediation and disposal.	Visual monitoring during excavation.	During construction.	Reporting of all suspected contamination. Contamination report from environmental professional
	If dewatering is required in areas of known contamination, the construction contractor will develop a dewatering contamination plan or similar.	Dewatering contamination plan or similar.	Prior to construction.	Dewatering contamination plan or similar.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Spills or leaks of chemical, hydrocarbon and/or hazardous materials				
<p>All accidental spills or leaks of hazardous materials or waste is appropriately managed.</p> <p>Minimise the risk of spills or leaks of hazardous materials or waste.</p>	<p>All site personnel to be inducted on environmental responsibilities including storage of hydrocarbons and chemicals, bunding requirements, refuelling requirements and incident response measures in the event of a spill.</p>	<p>Record of all site personnel that have undertaken the induction.</p>	<p>Prior to construction.</p>	<p>Induction records.</p>
	<p>Spill management procedures to be developed prior to construction.</p>	<p>Record of storage and spill management procedures.</p>	<p>Prior to construction.</p>	<p>Inspection Report. Incident Report.</p>
	<p>Hazardous materials used during construction will be stored in compliance with relevant Australian Standards and Regulations.</p>	<p>Record of storage and spill management procedures.</p>	<p>At all times.</p>	<p>Inspection Report. Incident Report.</p>
	<p>On-site refuelling of machinery and plant to occur on designated areas, or using catch trays, and at least 50 m away from all surface water features and drainage areas. Tracked equipment that must be refuelled in situ will be refuelled at least 50 m away from surface water features and spill kits present during refuelling.</p>	<p>Weekly site inspections of hazardous materials and waste storage and handling areas to identify spills / leaks and discharges, and check that storage, handling and signage is appropriate.</p>	<p>At all times.</p>	<p>Inspection Report. Incident Report.</p>
	<p>Scheduled / major maintenance of vehicles / plant to be undertaken off-site.</p>	<p>Record of maintenance of vehicles.</p>	<p>At all times.</p>	<p>Inspection Report. Incident Report.</p>
	<p>Provision of spill response kits at refuelling locations and any locations where hydrocarbons or chemicals are stored.</p>	<p>Record of storage and spill management procedures.</p>	<p>At all times.</p>	<p>Inspection Report. Incident Report.</p>

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
	Safety Data Sheets (SDSs) and hazardous materials inventory to be retained on site.	Record of storage and spill management procedures.	At all times.	Inspection Report. Incident Report.
	During construction, temporary ablution facilities to be self-contained. Sewage to be collected by a licensed contractor and disposed at an appropriately licensed waste facility.	Record of storage and spill management procedures.	At all times.	Inspection Report. Incident Report.
	General construction waste material to be appropriately managed and disposed of off-site at an appropriate facility.	Record of storage and spill management procedures.	At all times.	Inspection Report. Incident Report.
	Diesel storage will not exceed 5000 litres within the Derby Water Reserve Public Drinking Water Source Area (along the network connection route portion of the DE).	Record of diesel storage.	At all times	Inspection Report. Incident Report.
Construction and operation of prescribed activities and premises				
Achieve all management targets in relation to terrestrial environmental quality.	Compliance with conditions administered under the works approvals and/or licencing under Part V of the EP Act as required.	As per requirements of works approvals and/or licencing under Part V of the EP Act.	At all times.	As per requirements of works approvals and/or licencing under Part V of the EP Act.
Dangerous goods				
Achieve all management targets in relation to terrestrial environmental quality.	Compliance with conditions administered under a Dangerous Goods Site Licence as required.	As per requirements of Dangerous Goods Site Licence.	At all times.	As per requirements of Dangerous Goods Site Licence.

8.7 Air Quality

The management components for air quality are outlined in Table 8-6.

Table 8-6 Air Quality – management components

EPA Factor: Air Quality EPA Objective: “To maintain air quality and minimise emissions so that environmental values are protected.” EMP Objective: To minimise impacts to air quality, resulting from the generation of gaseous and dust emissions during construction Key Environmental Values: Derby township, located approximately 2.5 km north of the solar and BESS facility Key Impact and Risks: – Gaseous emissions generated during construction – Dust emissions generated during construction				
Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Gaseous emissions				
Minimise gaseous emissions resulting from construction of the Project.	Machinery and vehicles are regularly serviced and operated/maintained in accordance with the manufacturer’s specifications.	Record of maintenance of vehicles.	At all times.	Inspection Report. Incident Report.
	Vehicles on site will be switched off and not left idling when not in use.	N/A.	At all times.	N/A.
	Source construction materials locally and with a lower emissions footprint where available, suitable and practicable.	N/A.	Prior to construction.	N/A.
	Vehicle selection will take into account fuel consumption efficiency, whilst allowing operational efficiency.	N/A.	At all times.	N/A.
	Ongoing maintenance of vehicles to ensure efficient fuel use.	N/A.	At all times.	N/A.

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Management Targets	Management Actions	Monitoring	Timing / frequency of actions	Reporting
Dust emissions				
Minimise visible dust emissions resulting from construction of the Project.	All site personnel to be inducted on minimisation of dust emissions.	Record of all site personnel that have undertaken the induction.	Prior to construction.	Site induction records.
	Use of water carts as needed to wet down dust generating surfaces such as roads, earthworks areas.	N/A.	During construction.	N/A.
	Ground disturbance and/or clearing of vegetation will be restricted during high winds if dust cannot be adequately controlled.	Routine monitoring of wind conditions.	During construction.	N/A.
	Review of weather forecasts will be undertaken prior to native vegetation clearing to identify periods of extreme weather conditions likely to result in increased dust emissions so that additional mitigation measures can be implemented; or ground disturbance and/or clearing of native vegetation will be halted.	Routine monitoring of wind conditions.	During construction.	N/A.
	Use of defined haul routes for machinery/vehicles travelling on unsealed surfaces or roads, and reduced vehicle speed in areas of unconsolidated soil.	N/A.	During construction.	N/A.
	Any complaints relating to dust emissions will be recorded and investigated as per Horizon Power's incident management procedure.	N/A.	During construction.	Complaints record.

9 Commonwealth Potential Environmental Impacts, Risks and Management Measures

9.1 Threats to Matters Protected under the EPBC Act

As per the EPBC Act referral documentation, the MNES that have the potential to be present in the DE and/or immediate surrounds are Listed Threatened species and ecological communities. A description of Listed Threatened species and ecological communities relevant to the Project is provided in Table 2-2.

9.2 Potential Impacts and Risks

Clearing for construction of the Project will directly impact Threatened and Migratory fauna habitat as detailed in Table 2-2.

Other aspects of the construction and operation phase of the Project that have the potential to result in impacts to Threatened and/or Migratory fauna include:

- Fauna injury/death from vehicle strike, clearing activities or direct collision with infrastructure
- Fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, alteration of fire regimes, increased generation of dust during construction.

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9.3 Risk Assessment

An environmental risk assessment is required as part of the DCCEE's 'Environmental Management Plan Guidelines' (DCCEE, 2024). Each environmental risk for MENS related to the Project has been given a rating in terms of likelihood and consequence using the criteria outlined in Table 9-1 and Table 9-2 below. These ratings are then combined using Table 9-3 to generate a risk rating of low, medium, high or severe.

Table 9-1 Likelihood

Qualitative Measure of Likelihood	How Likely is it that this event
Highly Likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the Project
Possible	Might occur during the life of the Project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances

Table 9-2 Qualitative Measure of Consequence

Descriptor	Qualitative Measure of Consequence
Minor	Minor incident of environmental damage that can be reversed
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts
High	Substantial instances of environmental damage that could be reversed with intensive efforts
Major	Major loss of environmental amenity and real danger of continuing
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage

Table 9-3. Risk Rating

	Consequence				
	Minor	Moderate	High	Major	Critical
Highly Likely	Medium	High	High	Severe	Severe
Likely	Low	Medium	High	High	Severe
Possible	Low	Medium	Medium	High	Severe
Unlikely	Low	Low	Medium	High	High
Rare	Low	Low	Low	Medium	High

The risk rating for each environmental risk has been assessed and is outlined in Table 9-4.

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Table 9-4 Environmental Risk Assessment

Development Phase	Potential Impact	Likelihood	Consequence	Inherent Risk	Planned Mitigation	Likelihood	Consequence	Residual Risk
Pre-construction / construction phase	Loss of fauna habitat through clearing, including habitat for significance fauna species in excess of the approved extent.	Possible	Moderate	Medium	As detailed in Section 9.4.	Unlikely	Moderate	Low
	Fauna injury/death from vehicle strike, clearing activities or direct collision with infrastructure.	Possible	Moderate	Medium		Rare	Moderate	Low
	Fauna activity disturbance from temporary increase in noise/vibration/light.	Possible	Minor	Low		Rare	Minor	Low
	Fauna activity disturbance from attraction of feral animals (including Cane Toads).	Possible	Moderate	Medium		Rare	Moderate	Low
	Fauna activity disturbance from alteration of fire regimes.	Possible	Moderate	Medium		Rare	Moderate	Low
	Fauna activity disturbance from increased generation of dust during construction.	Unlikely	Minor	Low		Rare	Minor	Low
Operation	Fauna injury/death from direct collision with infrastructure.	Possible	Moderate	Medium		Unlikely	Moderate	Low

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9.4 Management Measures

Mitigation and management of the potential direct and indirect impacts on MNES associated with the Project will be implemented in accordance with standard construction industry environmental practices, as well as relevant Horizon Power standards and procedures.

An overview of the mitigation and management measures proposed is provided in the following sections. This includes identification of each impact/risk, a description of each measure proposed, the location and timing for each measure, monitoring and reporting requirements, and performance and completion criteria. Measures have been developed to be consistent with the layout as contained within the DCCEEW Environmental Management Plan Guidelines (DCCEEW, 2024).

9.4.1 Environmental Management Activities, Controls and Performance Targets

The Project will minimise fauna habitat loss and minimise direct and indirect impacts to fauna as far as practicable. The following management objectives for EPBC Act listed Threatened and Migratory fauna have been identified:

- Minimise EPBC Act listed Threatened and Migratory fauna habitat loss
- No deaths of EPBC Act listed Threatened or Migratory fauna during vegetation clearing for construction
- Minimise EPBC Act listed Threatened or Migratory fauna injury/death during Project construction and operation
- Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from noise, light and vibration during Project construction
- Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from feral animals (including Cane Toads) during Project construction
- Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from increased generation of dust during construction
- Prevent indirect impacts on fauna habitats due to accidental fires.

Additional general management objectives for the Project include:

- No mobilization of ASS during construction
- All suspected contamination is characterised and appropriately managed
- All accidental spills or leaks of hazardous materials or waste is appropriately managed to minimise the risk of spills or leaks of hazardous materials or waste
- Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows
- No noticeable increase in sediment discharge or soil erosion
- Minimise the spread and/or introduction of weeds.

9.4.2 Environmental Management Actions

In order to comply with relevant environmental legislation and manage the impacts to the local environment, Horizon Power has defined objective, outcomes and management-based provisions to ensure that impacts to the noted MNES are avoided and minimised as far as practicable during implementation of the Project (Table 9-5).

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Table 9-5 Environmental Management Measures to Mitigate Impacts to MNES

Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
Construction – Fauna habitat Management							
Minimise EPBC Act listed Threatened and Migratory fauna habitat loss.	<p>Clearing and ground disturbing activities (including soil and geotechnical investigations) limited to the defined clearing limits and boundaries described within the approval document.</p> <p>Driving for geotechnical investigations will be in convoy and no more than 10 m x 10 m of clearing is permitted per test location.</p> <p>The extent of the approved clearing will be clearly communicated in documentation and inductions.</p>	<p>Drawings, inductions and shape/CAD files showing approved clearing areas provided to Construction Contractor Representative.</p> <p>Job Hazard Analysis (JHA) or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.</p> <p>Track logs from soil and geotechnical investigations of where vehicles have driven within the predefined clearing limits.</p> <p>Inspection of clearing extents during clearing activities to confirm no over clearing (including soil and geotechnical investigations).</p>	Prior to commencement of clearing.	<p>Contractor to check that drawings, inductions and shape/CAD files show correct approved clearing areas.</p> <p>Record of provision of drawings and shape/CAD files showing approved clearing areas.</p> <p>All relevant contractors to sign onto JHA or equivalent.</p> <p>Pre-clearing photos to be documented and daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.</p> <p>Visual inspection and record of cleared areas to be undertaken post-clearing to confirm no over clearing and relevant shapefiles provided to Horizon Power.</p> <p>Track logs from soil and geotechnical investigations to show no vehicle movement outside of predefined clearing limits.</p> <p>Clearing area shapefiles from soil and geotechnical investigations to show no clearing outside of predefined clearing limits.</p> <p>Report unauthorised clearing as soon as practicable after identified.</p>	<p>Drawings and inductions do not show correct approved clearing areas.</p> <p>Shape/CAD files not provided.</p> <p>JHA does not include risk of clearing outside approved area.</p>	<p>All clearing activities will cease immediately. Clearing will not recommence until at risk ‘avoidance areas’ and clearing boundaries have been checked and confirmed to be accurately maintained.</p> <p>In the event of an incident, recommencement will only occur once approval is granted by the Horizon Power Manager Sustainability.</p> <p>In the event of an environmental incident, a thorough record will be maintained, and an investigation into its causes will be initiated. In cases of unauthorised clearance of vegetation containing habitats for MNES, an assessment for potential rehabilitation will be conducted.</p>	<p>Construction Contractor Environmental Officer.</p> <p>Horizon Power Project manager.</p> <p>Horizon Power Manager Sustainability.</p>
	At risk, ‘avoidance areas’ will be demarcated on Project drawings and physically on site prior to clearing activities.	<p>At risk ‘avoidance areas’ clearly marked out on all relevant Project drawings and demarcated on site with shapefiles provided.</p> <p>JHA or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.</p> <p>Daily inspections of avoidance areas during clearing to confirm markings remain in place and are accurate.</p> <p>Weekly inspections of avoidance areas during the remainder of construction to confirm markings remain in place and are accurate.</p>	<p>Prior to commencement of clearing.</p>	<p>Contractor to check that drawings and shape/CAD files show correct approved clearing areas.</p> <p>Record of provision of drawings and shape/CAD files showing approved clearing areas.</p> <p>Daily site inspections during clearing and weekly inspections during the remainder of construction to confirm appropriate demarcations of at-risk avoidance areas are maintained.</p> <p>Construction reports which will include clearing extents and shapefiles.</p> <p>Vegetation clearing records and annual environmental reporting.</p>	<p>Drawings do not show correct approved clearing areas.</p> <p>Shape/CAD files not provided.</p> <p>Site inspections show at risk ‘Avoidance areas’ not properly demarcated on site.</p> <p>Clearing more than that described in 9.3 JHA does not include risk of clearing within at-risk avoidance areas.</p>	<p>Rehabilitation efforts will commence within a timeframe of 6 to 12 months following the incident. If deemed appropriate, refresher or updated training sessions will be organized.</p> <p>Notification will be provided to DCCEEW along with the investigation report as part of any annual compliance reporting, should any specified triggers be met or exceeded.</p>	<p>Construction Contractor Environmental Officer.</p> <p>Horizon Power Project manager.</p> <p>Horizon Power Manager Sustainability.</p>

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
	Personnel access routes and parking will be restricted and clearly demarcated on site.	Approved clearing areas including designated access routes and parking areas to be clearly demarcated on site and communicated appropriately. Routine inspection of Project defined clearing limits and boundaries demarcation during clearing activities Daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.	Prior to commencement of clearing. During construction.	Vegetation clearing records and annual environmental reporting. Report unauthorized clearing as soon as practicable after identified. Construction site plan showing all approved access areas. Daily site inspections during clearing and weekly inspections during the remainder of construction.	Construction site plan does not show correct approved access areas. Site inspections show access. Routes and parking areas not clearly demarcated.	Review and amend construction site plan and physically demarcate the areas on site.	Construction Contractor Environmental Officer.
	Review environmental constraints that are outlined in approval documents during detailed design and avoid sensitivities where possible.	Pre-construction reviews of the construction plan shows that infrastructure is placed in cleared areas where practicable.	During construction.	Construction site plan showing all approved access areas.	Preconstruction review does not show that infrastructure is placed in cleared areas where practicable.	Review and amend construction site plan.	Construction Contractor Environmental Officer.
	Areas required for temporary construction purposes and areas required for operational maintenance and repair activities, will be located within existing cleared areas, or areas required for permanent infrastructure, where possible.	Drawings, inductions and shape/CAD files showing approved clearing areas provided to Construction Contractor Representative. Job Hazard Analysis (JHA) or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.	Prior to and during construction and operation.	Daily inspection of Project defined clearing limits and boundaries demarcation during clearing activities and weekly inspections during the remainder of construction. Vegetation clearing records and annual environmental reporting. Report unauthorized clearing as soon as practicable after identified.	Drawings and inductions do not show correct approved clearing areas. Shape/CAD files not provided. JHA does not include risk of clearing outside approved area.	Review and amend construction site plan and physically demarcate the areas on site.	Construction Contractor Environmental Officer. Horizon Power Project Manager.
	Minimise clearing to the extent required during construction, and the ongoing maintenance and operation of the assets.	Routine inspection of Project defined clearing limits and boundaries demarcation during clearing activities. Daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.	During construction. During operation.	Vegetation clearing records and annual environmental reporting. Report unauthorized clearing as soon as practicable after identification.	Drawings and inductions do not show correct approved clearing areas. Shape/CAD files not provided. JHA does not include risk of clearing outside approved area.	Review and amend construction site plan and physically demarcate the areas on site.	Construction Contractor Environmental Officer. Horizon Power Project Manager.
No mobilization of ASS during construction.	If ASS is encountered, an ASS investigation will be undertaken in the area that the ASS was encountered. If the investigation identifies ASS within excavation areas, the Contractor will develop and implement an ASS ASSMP as required. Construction activities will be undertaken in accordance with the recommendations provided in the ASS investigation and/or ASS management plan. Any water abstraction required for construction of the Project will be undertaken to minimise drawdown, and water allowed to infiltrate as close to the source as possible. If the groundwater is acidic, it would be treated and discharged in accordance with an ASSMP. All site personnel to be inducted on environmental responsibilities including area of ASS risk.	Record of all site personnel that have undertaken the induction. As per the ASS management plan.	Prior to commencement of construction activities. During construction.	Induction records. Inspection report. ASS investigation survey report. ASSMP approved by DWER (if required).	Construction activities undertaken without ASS management plan or ASS survey report which confirms low risk of ASS mobilisation. ASSMP not approved by DWER (if required). Site induction doesn't include risk of ASS.	Construction activities will cease within high-risk areas and recommence once investigations or ASS management activities have been carried out. ASSMP to be submitted for approval (if required) before construction can commence in Moderate or higher risk ASS areas. ASS risk added to site induction.	Horizon Power Project Manager.

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
Prevent indirect impacts on fauna habitats due to accidental fires.	<p>All site personnel to be inducted on environmental responsibilities including fire prevention.</p> <p>All non-essential work is to be stopped or postponed in the event that a Total Fire Ban with Catastrophic fire danger ratings or Emergency Warning is issued for the area. Works to be conducted in accordance with all local fire control laws and regulations.</p> <p>Where increased risk of fire is identified, fire-resistant barriers like screens will be employed to confine sparks generated by welders and other hot work activities.</p> <p>Fire extinguishers will be strategically positioned in locations with a higher risk of fire.</p> <p>Hot work permits will be mandatory before commencing any hot work.</p> <p>Vehicles and equipment access limited to designated roads/access tracks and cleared areas where possible.</p> <p>Smoking will be confined to designated smoking area only.</p> <p>Identify potential ignition sources and/or activities with the potential to lead to fire.</p>	No accidental fires as a result of construction activities.	During construction and operation.	<p>Record of all site personnel that have undertaken the induction.</p> <p>Weekly site inspection report.</p> <p>Compliance with hot work permits.</p>	<p>Site inspections show that management measures not implemented.</p> <p>Inductions are not made prior to construction activities, or personnel do not demonstrate the correct knowledge.</p> <p>Any incidents of fires occurring within or outside the DE, resulting from construction works.</p>	<p>No hot work until management measures implemented.</p> <p>Refresher training will be undertaken.</p> <p>The incident will be reported, and the cause investigated.</p> <p>Extinguish the fire, if safe to do so.</p> <p>If the fire is uncontrolled, notify emergency services and the Local Government Authority.</p>	Construction Contractor Environmental Officer.
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Local drainage to be considered during site design and layout.	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	Prior to commencement of Construction activities.	Construction site plan.	Pre-construction review does not show consideration of surface water drainage flows.	Review and amend Construction Site plan.	Construction Contractor Environmental Officer.
Minimise the spread and/or introduction of weeds.	<p>A weed register will be developed and maintained for declared weeds, WONS or serious environmental weed species.</p> <p>The register will contain relevant information such as species, distribution, abundance and history of control method.</p>	Avoid the introduction and spread of weeds species and maintain weeds register with relevant information.	During construction.	<p>Record of weed register.</p> <p>Implement yearly weed monitoring and management program for the first year following completion of ground disturbance activities.</p>	<p>Site inspection shows requirements not met.</p> <p>New significant weed infestation (WONS/Declared Plant) (i.e. above existing background levels) identified.</p>	<p>Where new weed infestation is evident, appropriate controls shall be deployed.</p> <p>Education on clean on entry requirements.</p>	Construction Contractor Environmental Officer.
	Develop and implement vehicle and equipment clean on entry/exit procedures; Any machinery used to remove weed-infested topsoil will be cleaned down before entering or leaving the work site to prevent the introduction and spread of weeds into new areas.	All vehicles and equipment verified and cleaned on arrival site.	All construction activities.	Routine spot checks of vehicles and equipment compliance with cleaning.	Non-compliance with clean on entry.	Ensure non-compliance issues identified in site inspections are resolved.	Construction Contractor Environmental Officer.
	Vehicles and machinery to remain on designated compliance roads/access tracks areas where possible.	Approved clearing areas including designated access routes and parking areas to be clearly demarcated on site and communicated appropriately.	During construction.	Routine spot checks of vehicles and equipment compliance with cleaning.	Non-compliance with clean on entry.	Ensure non-compliance issues identified in site inspections are resolved.	Construction Contractor Environmental Officer.
	All site personnel to be inducted on environmental responsibilities including hygiene management.	Correct knowledge about weed species and hygiene protocol importance.	Prior to their commencement onsite.	Induction records.	<p>Site inspection shows requirements not met.</p> <p>New significant weed infestation (WONS/Declared Plant) (i.e. above</p>	<p>Where new weed infestation is evident, appropriate controls shall be deployed.</p> <p>Education on clean on entry requirements.</p>	Construction Contractor Environmental Officer.

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
					existing background levels) identified.		
Construction – General EPBC Act listed Threatened and/or Migratory species management							
No deaths of EPBC Act listed Threatened or Migratory fauna during vegetation clearing for construction Minimise EPBC Act listed Threatened or Migratory fauna injury/death during Project construction and operation	Personnel induction regarding threatened fauna and direct and indirect impacts (e.g., risk of vehicle strike, interaction with construction activities, waste management, introduction of feral animals, requirement to report sightings of feral animals, no feeding of native and/or feral animals and no pets, traps or firearms allowed on site).	Record of all site personnel that have undertaken the induction.	Prior to construction.	Induction records.	Quarterly inspection finds personnel working on site not correctly inducted. Personnel not complying with requirement.	Personnel not correctly inducted will cease work and recommence after the induction. Refresher training will be conducted within 1 week of determining that requirement is not being met.	Construction Contractor Environmental Officer.
	Speed limits between 40-80km/hr in order to avoid fauna strikes during clearing and construction.	No incidents of speeding within the construction site boundary (defined as the area of works within the DE).	During construction.	Visual monitoring by all construction personnel. Incident reporting.	Any incident of speeding within the construction boundary.	Refresher training will be conducted within 1 week.	Construction Contractor Environmental Officer.
	General construction waste material and food waste to be appropriately managed and disposed of off-site at an appropriate facility.	Routine inspections of waste storage and handling areas. Waste stored in fauna-proof containers and disposed of appropriately.	During construction.	Weekly inspection. Waste disposal records.	Weekly inspection finds waste not being disposed of appropriately.	Review and update waste management and increase frequency of inspections or collections as required.	Construction Contractor Environmental Officer.
	Clearing will be undertaken progressively in one direction, to allow fauna dispersal.	Clearing is undertaken progressively in the same direction, reducing probability of fauna injury or mortality.	During construction.	Clearing records. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting.	Clearing is not undertaken progressively in one direction.	Refresher training conducted within 1 week of determining that requirement is not being met.	Construction Contractor Environmental Officer.
	Prior to the commencement of clearing, a licenced fauna specialist will be present for a pre-clearance survey to oversee the works (see Appendix A for pre-clearance survey requirements). If any listed fauna is identified during clearing, clearing will stop until the listed fauna has moved out of the clearing area or has been relocated by the licenced fauna handler.	Commencement of mechanical clearing of vegetation occurs without a pre-clearance fauna inspection	Prior to clearing.	Internal Project clearing permit, signed by Supervisor. Licenced fauna specialist to report on areas they inspected, the species found and the location of where any fauna were released to.	Commencement of clearing occurs without a pre-clearance fauna inspection.	Clearing will cease immediately until the pre-clearance requirements are completed Incident will be recorded, and the cause investigated.	Construction Contractor Environmental Officer.
	Management of excavations including: – Excavations shall remain open for the minimal required time to facilitate the ongoing construction. – Excavations will be done in sections. – Fauna escape batters, ramps or egress ladders will be implemented in excavated areas where required to be left open overnight. – Posts shall be raised as soon as practical after the holes are excavated, and holes will not be left open overnight where possible. Where excavations required to be left open overnight, fauna egress points will be made.	No incidents to MNES species due to excavations remaining open. Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation.	During construction.	Daily monitoring for trapped fauna during construction in non-battered excavations. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting. Licenced fauna handler to report on areas they inspected, the species found and the location of	Fauna egress within excavations sites has not been installed. Dead or injured fauna as a result of interaction with trenches on site.	Refresher training will be conducted within 1 week of determining that requirement is not being met. Inspection will be undertaken daily to ensure fauna egress is installed correctly.	Construction Contractor Environmental Officer.

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
	<ul style="list-style-type: none"> Any excavations required will generally not be left open and an inspection will be undertaken at the commencement of each workday, to identify and address any potential instances of trapped animals. 			where any fauna were released to.			
	<p>In the event of EPBC Act listed threatened fauna injury, advice shall be sought from local qualified wildlife organisations/persons.</p> <p>Sick or injured wildlife will be allocated to an appropriate specialist organisation for care.</p> <p>Fauna fatality and injury will be recorded as an environmental incident.</p>	<p>In case of fauna injury, advice undertaken and, if necessary, relocation of rescue animals to an appropriate specialised organisation.</p> <p>Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation and/or treatment.</p>	During construction.	<p>Animal injury or fatalities reported as an incident in the incident records system.</p> <p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p>	Fauna injured without proper rescue undertaken.	<p>The appropriate specialised organisation will be contacted to assist with rescue/movement of fauna if possible.</p> <p>Refresher training will be conducted.</p> <p>The incident will be reported, and the cause investigated.</p>	Construction Contractor Environmental Officer.
	Night-time vehicle movements during construction will be limited where possible to minimise the potential for vehicle strikes. Working hours will generally take place between during daylight hours.	In case of fauna injury, advice undertaken and, if necessary, relocation of rescue animals to an appropriate specialised organisation.	During construction.	<p>Animal injury or fatalities reported as an incident in the incident records system.</p> <p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p>	Fauna injured without proper rescue undertaken.	<p>The appropriate specialised organisation will be contacted to assist with rescue/movement of fauna if possible.</p> <p>Refresher training will be conducted.</p> <p>The incident will be reported, and the cause investigated.</p>	Construction Contractor Environmental Officer.
	Fauna identified within the demarcated clearing areas unable to move away from the clearing areas without intervention are to be moved to a location deemed appropriate for the safety and survival of the fauna individual/s.	Daily visual inspections for native fauna within non-battered excavations during construction.	During construction.	<p>Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified.</p> <p>Annual Compliance Reporting.</p> <p>Licensed fauna handler to report on areas they inspected, the species found and the location of where any fauna were released to.</p>	Fauna not identified within Project area.	Refresher training will be conducted.	Construction Contractor Environmental Officer.
	Pre-clearance surveys and fauna relocation for the Northern Brushtail Possum and Northern Blue-tongue Skink as detailed in Appendix A.	No physical harm to Northern Brushtail Possums and Northern Blue-tongue Skinks during construction or geotechnical investigations.	Prior to construction.	A report of the fauna identification work undertaken must be provided to Horizon Power by the contractor, as detailed in Appendix A.	No physical harm to Northern Brushtail Possums and Northern Blue-tongue Skinks during construction or geotechnical investigations.	<p>The appropriate specialised organisation will be contacted to assist with rescue/movement of fauna if possible.</p> <p>Refresher training will be conducted.</p> <p>The incident will be reported, and the cause investigated.</p>	Construction Contractor Environmental Officer.
	Drainage control will be established during detailed design and may include:	No Cane Toad reproduction at the site.	During operations.	Report any standing water as soon as practicable after identified and	Standing water identified on site.	Implement additional drainage controls.	Construction Contractor

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
	<ul style="list-style-type: none"> Ground under and between ground mounted solar arrays may be covered with bluestone Design the site to drain water or sloped so the water runs off site. 			modification to remove standing water.			Environmental Officer.
Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from noise, light and vibration during Project construction.	Standard construction noise and vibration management measures will be implemented as per Table 8-4. Construction works will generally occur during the daylight hours.	Noise emissions will be kept at a minimum during daylight hours. No increase in noise will occur during night-time hours.	During construction.	Noise complaints will be recorded. Compliance with implementation of noise and vibration minimisation strategies will be developed and implemented during construction of the Project.	Complaints of excessive noise.	Complaints regarding noise will be recorded and investigated by Horizon Power or the Contractor, and the procedures will be revised.	Construction Contractor Environmental Officer.
	Light emissions from on-site construction lighting towers will occur transiently, not remaining in the same location unnecessarily.	No light emission from on-site construction lighting towers will in the same location for longer than six months.	During construction.	Incident reports.	Light emissions from towers remaining in the same location without construction activities occurring in the area within a month.	The incident will be reported, and the cause investigated.	Construction Contractor Environmental Officer.
	No clearing during Northern Blue-tongue Skink birthing season (December to January).	N/A.	During clearing.	Vegetation clearing records and annual environmental reporting.	Clearing occurs during December or January.	The incident will be reported, and the cause investigated. Clearing will stop immediately.	Construction Contractor Environmental Officer.
Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from increased generation of dust during construction.	<p>All site personnel to be inducted on minimisation of dust emissions.</p> <p>Use of water carts as needed to wet down dust generating surfaces such as roads, earthworks areas.</p> <p>Ground disturbance and/or clearing of vegetation will be restricted during high winds if dust cannot be adequately controlled.</p> <p>Review of weather forecasts will be undertaken prior to native vegetation clearing to identify periods of extreme weather conditions likely to result in increased dust emissions so that additional mitigation measures can be implemented; or ground disturbance and/or clearing of native vegetation will be halted.</p> <p>Use of defined haul routes for machinery/vehicles travelling on unsealed surfaces or roads, and reduced vehicle speed in areas of unconsolidated soil.</p> <p>Machinery and vehicles are regularly serviced and operated/maintained in accordance with the manufacturer's specifications.</p> <p>Vehicles on site will be switched off and not left idling when not in use.</p> <p>Any complaints relating to dust emissions will be recorded and investigated as per Horizon Power's incident management procedure.</p>	<p>No excessive dust nuisance events recorded.</p> <p>Gaseous Air Quality emissions will be kept to a minimum.</p>	During construction.	<p>Site induction records.</p> <p>Incident reports.</p> <p>Complaints record.</p>	<p>Public complaints of excessive dust pollution.</p> <p>Excessive dust reported by personnel or contractors.</p>	<p>The incident will be reported, and the cause investigated.</p> <p>Any complaints relating to dust emissions will be recorded and investigated as per Horizon Power's incident management procedure.</p> <p>Refresher training will be conducted.</p>	Construction Contractor Environmental Officer.
Construction – General management measures							
No noticeable increase in sediment discharge or soil erosion.	Establishment of designated access roads to prevent unauthorised disturbance.	No excessive sedimentation events recorded.	During construction.	Routine inspections of erosion and sediment discharge. Monitoring of weather.	Inspection of clearing areas shows	Review and amend construction site plan to ensure appropriate	Construction Contractor Project Manager.

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Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
	<p>Erosion and sediment control measures will be applied to prevent erosion of exposed areas and sediment discharge to adjacent areas, where practicable.</p> <p>Laydown areas will be rehabilitated or otherwise stabilised as early as practicable to minimise the potential for erosion.</p> <p>Extreme weather will be monitored by the construction contractor and if a cyclone warning is issued, a site inspection and clean-up will be undertaken prior to the cyclone. This will include filling in any holes, as well as stabilisation or dispersal of piles of dirt and removal of rubbish.</p> <p>A cyclone management plan will be developed by the contractor prior to construction if works that may cause sediment or erosion are proposed during cyclone season.</p>	No injury, harm or damage to the site as a result of extreme weather events.		<p>Site inspection reports.</p> <p>Cyclone Management Plan.</p>	<p>disturbance outside of the approved areas.</p> <p>Extreme weather warning issued.</p> <p>Cyclone Management Plan not developed.</p>	<p>sediment controls are in place.</p> <p>A site inspection and clean-up will be undertaken prior to the cyclone.</p> <p>Development of Cyclone Management Plan.</p>	Cyclone Management Plan.
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Local drainage to be considered during site design and layout.	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	Prior to construction.	<p>Construction site plan.</p> <p>Routine inspections of surface water drainage and flows.</p>	Inspection of clearing areas shows disturbance outside of the approved areas.	Review and amend construction site plan to ensure appropriate surface water drainage and flows controls are in place.	Construction Contractor Project Manager.
All suspected contamination such as Site number 793 (refer to Table 2-2) is characterised and appropriately managed.	<p>All site personnel to be inducted on environmental responsibilities.</p> <p>In the event of excavation encountering suspected contaminated materials, the excavation works are to be stopped, and advice sought from a qualified environmental professional.</p> <p>If required, the suspected contamination will be sampled and analysed to determine the appropriate remediation and disposal.</p> <p>If dewatering is required in areas of known contamination, the construction contractor will develop a dewatering contamination plan or similar.</p>	<p>No new areas of contamination identified.</p> <p>No dewatering in areas of known contamination.</p>	During construction.	<p>Induction records.</p> <p>Visual monitoring during excavation.</p> <p>Dewatering contamination plan or similar.</p>	<p>Monitoring during excavation identifies areas of previously unknown contamination.</p> <p>Dewatering encounters contamination.</p>	Works will cease in that area until samples of the material have been tested and confirmed to be inert. If found to be contaminated, the material will be removed following relevant contaminated waste guidance and protocols and treated or appropriately disposed of to a licenced facility.	Construction Contractor Project Manager.
All accidental spills or leaks of hazardous materials or waste is appropriately managed and minimise the risk of spills or leaks of hazardous materials or waste.	<p>All site personnel to be inducted on environmental responsibilities including storage of hydrocarbons and chemicals, bunding requirements, refuelling requirements and incident response measures in the event of a spill.</p> <p>Spill management procedures to be developed prior to construction.</p> <p>Hazardous materials used during construction will be stored in compliance with relevant Australian Standards and Regulations.</p> <p>On-site refuelling of machinery and plant to occur on designated areas, or using catch trays, and at least 50m away from all surface water features and drainage areas.</p> <p>Tracked equipment that must be refuelled in situ will be refuelled at least 50 m away from surface</p>	No new uncontrolled pollution incidents recorded.	During construction.	<p>Site induction records.</p> <p>Record of storage and spill management procedures.</p> <p>Weekly site inspections of hazardous materials and waste storage and handling areas to identify spills / leaks and discharges, and check that storage, handling and signage is appropriate.</p> <p>Record of diesel storage.</p>	Site inspections identify uncontrolled pollution incidents.	<p>Spill response protocols will be implemented including containing the pollution incident as quickly as possible.</p> <p>The incident will be reported, and the cause investigated.</p> <p>Refresher training will be conducted as appropriate.</p>	Construction Contractor Environmental Officer.

Management Objective / Desired Outcome	Management Measure	Performance Target / Completion Criteria	Timing	Monitoring / Reporting Activity	Corrective Action Trigger(s)	Corrective Action	Corrective Action Responsibility
	<p>water features and spill kits present during refuelling.</p> <p>Scheduled / major maintenance of vehicles / plant to be undertaken offsite.</p> <p>Provision of spill response kits at refuelling locations and any locations where hydrocarbons or chemicals are stored.</p> <p>SDSs and hazardous materials inventory to be retained on site.</p> <p>During construction, temporary ablution facilities to be self-contained. Sewage to be collected by a licensed contractor and disposed at an appropriately licensed waste facility.</p> <p>General construction waste material to be appropriately managed and disposed of off-site at an appropriate facility.</p> <p>Diesel storage will not exceed 5000 litres within the Derby Water Reserve Public Drinking Water Source Area (along the network connection route portion of the DE).</p>						
Achieve all management targets in relation to terrestrial environmental quality.	<p>Compliance with conditions administered under the works approvals and/or licencing under Part V of the EP Act as required.</p> <p>Compliance with conditions administered under a Dangerous Goods Site Licence as required.</p>	<p>As per requirements of works approvals and/or licencing under Part V of the EP Act.</p> <p>As per requirements of Dangerous Goods Site Licence.</p>	At all times	<p>As per requirements of works approvals and/or licencing under Part V of the EP Act.</p> <p>As per requirements of Dangerous Goods Site Licence.</p>	Requirements of works approvals and/or licencing under Part V of the EP Act or of Dangerous Goods Site Licence are not followed.	Review construction site plan to ensure all requirements are being met.	Horizon Power.
Operation – General EPBC Act listed Threatened and/or Migratory species management							
Minimise the spread and/or introduction of weeds.	<p>Implement a quarterly weed monitoring and management program for the first year following completion of ground disturbance activities.</p> <p>Ad-hoc weed checks during operational maintenance activities in accordance with standard Horizon Power network weed control.</p>	Avoid the introduction and spread of weeds species and maintain weeds register with relevant information.	Post construction.	Quarterly weed inspection and management program for the first year following completion of ground disturbance activities. Ad hoc weed checks during operational maintenance activities.	New significant weed infestation (e.g., above existing background levels) occurred.	Where new weed infestation is evident, relevant treatments will be applied.	Horizon Power Operations Manager.

9.5 Monitoring

Frequent observations of the construction site will be conducted to ensure the objectives of this EMP are implemented and that the required management actions are in place.

Key monitoring measures have been established to assess the potential effects of the Project on MNES and their habitats, both during and after construction. This monitoring encompasses the evaluation of both immediate and secondary consequences resulting from the Project. Qualified individuals with expertise in the specified methodology will conduct the monitoring activities. The outlined monitoring plan for the Project can be found in Table 10-6.

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Table 10-6 Environmental monitoring

Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
Construction – Fauna Habitat Management					
Minimise EPBC Act listed Threatened and Migratory fauna habitat loss.	<p>Drawings, inductions and shape/CAD files showing approved clearing areas provided to Construction Contractor Representative.</p> <p>Job Hazard Analysis (JHA) or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA.</p> <p>Track logs from soil and geotechnical investigations of where vehicles have driven within the predefined clearing limits.</p> <p>Inspection of clearing extents during clearing activities to confirm no over clearing (including soil and geotechnical investigations).</p>	<p>Contractor to check that drawings, inductions and shape/CAD files show correct approved clearing areas.</p> <p>Record of provision of drawings and shape/CAD files showing approved clearing areas.</p> <p>All relevant contractors to sign onto JHA or equivalent.</p> <p>Pre-clearing photos to be documented and daily inspection of clearing extents during clearing activities and weekly inspections during the remainder of construction to confirm no over clearing.</p> <p>Visual inspection and record of cleared areas to be undertaken post-clearing to confirm no over clearing and relevant shapefiles provided to Horizon Power.</p> <p>Track logs from soil and geotechnical investigations to show no vehicle movement outside of predefined clearing limits.</p> <p>Clearing area shapefiles from soil and geotechnical investigations to show no</p>	<p>Inspection of drawings and shape/CAD files.</p> <p>Inspection of photos.</p> <p>Visual inspection records.</p> <p>Inspection of vehicle track logs.</p>	N/A.	Prior to and during clearing

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
		clearing outside of predefined clearing limits. Report unauthorised clearing as soon as practicable after identified.			
	All 'avoidance areas' clearly marked out on all relevant Project drawings and demarcated on site with shapefiles provided. JHA or equivalent to include the risks and mitigation actions to be understood and adhered to as they pertain to the contractor and scope of work on the JHA. Daily inspections during clearing and weekly inspections during the remainder of construction within the work area of at risk 'Avoidance area' demarcation will be undertaken to confirm markings remain in place and are accurate.	Contractor to check that drawings and shape/CAD files show correct approved clearing areas. Record of provision of drawings and shape/CAD files showing approved clearing areas. Daily site inspections during clearing and weekly inspections during the remainder of construction to confirm appropriate demarcations of at-risk avoidance areas are maintained. Construction reports which will include clearing extents and shapefiles. Vegetation clearing records and annual environmental reporting.	Inspection of drawings and shape/CAD files. Clearing areas visual assessment to confirm at risk 'avoidance areas' are appropriately marked out on site.	5m around at risk 'avoidance areas' within the DE.	Prior to and during clearing During construction
	Approved clearing areas including designated access routes and parking areas to be clearly demarcated on site and communicated appropriately. Routine inspection of Project defined clearing limits and	Vegetation clearing records and annual environmental reporting. Report unauthorised clearing as soon as practicable after identified.	Clearing areas visual assessment. Incident records. Vegetation clearing records. Annual Compliance Reporting.	Clearing areas.	Prior to and during clearing and construction.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
	boundaries demarcation during clearing activities. Daily inspection of clearing extents during clearing activities to confirm no over clearing and weekly inspections during the remainder of construction.	Construction site plan showing all approved access areas. Daily site inspections during clearing and weekly inspections during the remainder of construction.			
	Pre-construction reviews of the construction plan shows that infrastructure is placed in cleared areas where practicable.	Construction site plan showing all approved access areas.	Pre-construction reviews of Construction Site plan.	Clearing areas.	Prior to and during construction.
No mobilization of ASS during construction.	No mobilization of ASS during construction.	Inspection report. ASS investigation survey. ASSMP approved by DWER (if required). Site induction records.	Written records. Pre-construction review. ASSMP if required.	N/A.	Prior to commencement of construction activities. During construction.
Prevent indirect impacts on fauna habitats due to accidental fires.	No accidental fires as a result of construction activities.	Record of all site personnel that have undertaken the induction. Weekly site inspection report. Compliance with hot work permits.	Written records.	N/A.	Weekly.
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	Construction Site plan.	Written records. Pre-construction review.	N/A.	Prior to construction.
Minimise the spread and/or introduction of weeds.	Avoid the introduction and spread of weeds species and maintain weeds register with relevant information.	Record of weed register. Implement a yearly weed monitoring and management program for the first year	Written records. Visual inspection. Weed monitoring reports.	Clearing areas.	Quarterly.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
		following completion of ground disturbance activities.			
	All vehicles and equipment verified and cleaned on arrival site.	Routine spot checks of vehicles and equipment compliance with cleaning.	Photographic record, GPS of non-conformance. Records of waste disposal Records verifying plant and machinery arriving on site is clean.	N/A.	Weekly.
	Approved clearing areas including designated access routes and parking areas to be clearly demarcated on site and communicated appropriately.	Routine spot checks of vehicles and equipment compliance with cleaning.	Photographic record, GPS of non-conformance. Records of waste disposal Records verifying plant and machinery arriving on site is clean.	Clearing areas.	Weekly.
	Correct knowledge about weed species and hygiene protocol importance.	Induction records.	Written records. Visual inspection. Weed monitoring reports.	N/A.	Weekly.
Construction – General EPBC Act listed threatened and/or migratory species management					
No deaths of EPBC Act listed Threatened or Migratory fauna during vegetation clearing for construction. Minimise EPBC Act listed Threatened or Migratory fauna injury/death during Project construction.	Record of all site personnel that have undertaken the induction.	Inductions records.	Written records.	N/A.	Prior to personnel commencing work on site. Quarterly during the construction phase.
	No incidents of speeding within the construction site boundary (defined as the area of works within the DE).	Visual monitoring by all construction personnel. Incident reporting.	Visual Inspection. Written records.	Construction site boundary.	Incidental.
	Routine inspections of waste storage and handling areas. Waste stored in fauna-proof containers and disposed of appropriately.	Weekly inspection. Waste disposal records.	Visual inspection. Review of disposal records.	N/A.	Weekly.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
	Clearing is undertaken progressively in the same direction, reducing probability of fauna injury or mortality.	Clearing records. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting.	Visual inspection. Written records.	Construction site boundary.	Weekly. Annually for compliance report.
	No commencement of mechanical clearing of vegetation occurs without a pre-clearance fauna survey as detailed in Appendix A	Internal Project clearing permit, signed by Supervisor. Licenced fauna specialist to report on areas they inspected, the species found and the location of where any fauna were released to.	Visual inspection. Review of written records.	Clearing areas.	Prior to clearing.
	No incidents to MNES species due to excavations remaining open. Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation.	Daily monitoring for trapped fauna during construction in non-battered excavations. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting.	Visual inspection. Written records.	Construction site boundary (non-battered excavation).	Daily during excavations Annually for compliance report.
	In case of fauna injury, advice undertaken and, if necessary, relocation of rescue animals to an appropriate specialised organisation.	Animal injury or fatalities reported as an incident in the incident records system. Record known injuries to, or deaths of conservation	Visual inspection. Written records.	N/A.	Opportunistic. Daily during excavations

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
	Daily inspections of non-battered excavations during construction to identify trapped fauna and to enable capture and relocation and/or treatment.	significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting.			
	In case of fauna injury, advice obtained and, if necessary, relocation of rescue animals to an appropriate specialised organisation.	Animal injury or fatalities reported as an incident in the incident records system. Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified Annual Compliance Reporting.	Visual inspection. Written records.	N/A.	Opportunistic.
	Daily visual inspections for native fauna within non-battered excavations not battered during construction.	Record known injuries to, or deaths of conservation significant fauna species in a Conservation Significant Fauna Interaction Register as soon as possible as the injury or death is identified. Annual Compliance Reporting. Licenced fauna handler to report on areas they inspected, the species found and the location of where any fauna were released to.	Visual inspection. Written records.	N/A.	Daily as required.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
	No physical harm to Northern Brushtail Possums and Northern Blue-tongue Skinks during construction or geotechnical investigations, as per Appendix A.	A report of the fauna identification work undertaken must be provided to Horizon Power by the contractor, as detailed in Appendix A.	Written records, as per Appendix A	Development Envelope.	Prior to construction and geotechnical investigations.
	No Cane Toad reproduction at the site.	Report any standing water as soon as practicable after identified and modification to remove standing water.	Visual inspection. Written records.	N/A.	Opportunistic.
Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from noise, light and vibration during Project construction.	Noise emissions will be kept at a minimum during daylight hours. No increase in noise will occur during night-time hours.	Noise complaints will be recorded. Compliance with implementation of noise and vibration minimisation strategies will be developed and implemented during construction of the Project.	Review of written records.	Construction site boundary.	Weekly.
	No light emission from on-site construction lighting towers will remain in the same location for a long period.	Incident reports.	Review of written records. Visual inspection.	Construction site boundary.	Weekly.
	No clearing during Northern Blue-tongue Skink birthing season (December to January).	Vegetation clearing records and annual environmental reporting.	Visual inspection. Written records.	Construction site boundary.	During December and January.
Minimise disturbance to EPBC Act listed Threatened or Migratory fauna from increased generation of dust during construction.	No excessive dust nuisance events recorded. Gaseous Air Quality emissions will be kept to a minimum.	Incident reports.	Review of written records. Visual inspection.	Construction site boundary.	Weekly.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
Construction – General management measures					
No noticeable increase in sediment discharge or soil erosion.	No excessive sedimentation events recorded. No injury, harm or damage to the site as a result of extreme weather events.	Routine inspections of erosion and sediment discharge. Monitoring of weather. Site inspection reports.	Review of written records. Visual inspection.	Construction site boundary.	Weekly.
Minimise indirect impacts to surrounding/adjacent areas from altered surface water drainage and flows.	Pre-construction reviews of the construction site plan shows that there will be minimal alteration to surface water drainage flows.	Construction site plan. Routine inspections of surface water drainage and flows.	Review of written records. Visual inspection.	Construction site boundary.	Weekly.
All suspected contamination is characterised and appropriately managed.	No new areas of contamination identified.	Induction records. Visual monitoring during excavation.	Review of written records. Visual inspection.	Construction site boundary.	Weekly.
All accidental spills or leaks of hazardous materials or waste is appropriately managed and minimise the risk of spills or leaks of hazardous materials or waste.	No new uncontrolled pollution incidents recorded.	Site induction records. Record of storage and spill management procedures. Weekly site inspections of hazardous materials and waste storage and handling areas to identify spills / leaks and discharges, and check that storage, handling and signage is appropriate. Record of diesel storage.	Review of written records. Visual inspection.	Construction site boundary.	Opportunistically.
Achieve all management targets in relation to terrestrial environmental quality.	As per requirements of works approvals and/or licencing under Part V of the EP Act. As per requirements of Dangerous Goods Site Licence.	As per requirements of works approvals and/or licencing under Part V of the EP Act. As per requirements of Dangerous Goods Site Licence.	As per requirements of works approvals and/or licencing under Part V of the EP Act. As per requirements of Dangerous Goods Site Licence.	Construction site boundary.	At all times.

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Management Objective / Desired Outcome	Performance Target/Completion Criteria	Monitoring/Reporting Activity	Monitoring Method	Monitoring Area	Frequency
Operation – General EPBC Act listed Threatened and/or Migratory species management					
Minimise the spread and/or introduction of weeds.	Avoid the introduction and spread of weeds species and maintain weeds register with relevant information.	Quarterly weed inspection and management program for the first year following completion of ground disturbance activities. Ad hoc weed checks during operational maintenance activities.	Visual inspection. Review of written records.	Operational area.	Quarterly.

10 Adaptive Management and Review of the EMP

10.1 Audit and Review

Internal monitoring will be conducted throughout the construction phase of the Project to assess the environmental aspects outlined in this EMP. Any instances of non-conformance or incidents associated with measures set out in this EMP will be investigated and addressed to minimise potential environmental impacts. Appropriate procedures will be implemented as needed, and refresher training will be conducted to reduce the likelihood of future occurrences.

Horizon Power will conduct annual audits lead by the Horizon Power Project Manager and Manager Sustainability during the construction phase of the Project to verify the implementation of management and monitoring measures and to ensure that the required management measures are successfully implemented and delivering the intended outcomes.

The proposed auditing schedule for this EMP is identified in Table 10-1.

Table 10-1. Environmental audit schedule

Timing	Action	Schedule
Pre-construction	Review of construction procedures to ensure EMP management/monitoring actions are incorporated within works procedures.	Prior to construction (single event)
Construction	Inspections by site environmental personnel to identify compliance with EMP.	Periodic (Weekly)
	Internal audit for assessment of compliance with EMP.	Annually (once per calendar year)
Post construction	Internal audit for assessment of compliance with EMP.	Annually (once per calendar year for up to three years)
Decommissioning	To be determined as part of any future decommissioning plan, which will be in accordance with Horizon Power's standard operating procedures and will be approved by Horizon Power's Manager Sustainability.	To be determined as part of any future decommissioning plan.

10.2 Environmental Management Plan Review

This EMP is intended to be dynamic and may be updated to reflect changes in management practices and the natural environment with time. This will also allow flexibility to adopt new technologies/management measures. Amendments to management actions and targets will be completed on an as needs basis. This will include revision/amendment of management actions that are not achieving the desired outcomes, monitoring identifying additional impacts and management actions, changes to relevant legislation or improvements to practices to achieve a greater environmental outcome.

The EMP will be reviewed by the Project Manager and Manager Sustainability annually during construction to:

- Consider the effectiveness / appropriateness of management and monitoring actions
- Consider opportunities for improvement in environmental performance (for example, changes to construction methodology or timing)

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- Identify any general need to update this emp (for example, to capture new information on relevant environmental factor or MNES knowledge or management, or updates to the EP Act, BC Act, EPBC Act or policy statements).

Horizon Power acknowledges that a revision to this EMP may trigger a need for additional approval by DCCEEW or the EPA prior to implementing any changes to the specified management or monitoring actions.

11 References

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12 Appendix A – Fauna Pre-clearance Survey and Relocation

12.1 Northern Brushtail Possum

A pre-clearance fauna survey will be undertaken within 14 days prior to clearing for construction to identify Northern Brushtail Possum habitat. This includes the identification and inspection of Northern Brushtail Possum hollows and determination of whether the Northern Brushtail Possum hollows are being utilised. This will be undertaken by a licenced fauna specialist.

Transects will be completed within the Development Envelope for this inspection as follows:

- Transects spaced at 100 metres on average, to identify evidence of use by the Northern Brushtail Possum; and
- Where evidence of Northern Brushtail Possum use is identified, transects spaced at 20 metres on average will be undertaken, to identify evidence of Northern Brushtail Possum hollows that may be in use.

If a Northern Brushtail Possum hollow is identified:

- Hollows showing signs of recent use will be flagged by the fauna specialist and a 20 m avoidance area will be established around the hollow so they will not be impacted by the Project.
- If a hollow is in use and cannot be avoided for the Project, activities may not proceed without approval from the Horizon Power Sustainability Manager and additional controls will be implemented, including:
 - Engaging a licenced fauna specialist to install fauna monitoring cameras to confirm presence of Northern Brushtail Possum in hollows
 - Remove and relocate the identified Northern Brushtail Possum to an area of suitable habitat in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*.
 - Relocation will be undertaken within 48 hours of commencement of clearing to reduce the risk of animals returning to the work area prior to clearing.

12.2 Northern Blue-tongue Skink

Within 48 hours of clearing commencement, the proposed impact area will be surveyed for Northern Blue-tongue Skink. If a Northern Blue-tongued Skink is identified, the fauna specialist will remove and relocate the Northern Blue-tongued Skink to an area of suitable habitat in accordance with a section 40 authorisation under the *Biodiversity Conservation Act 2016*. Relocation will be undertaken within 48 hours of commencement of clearing to reduce the risk of animals returning to the work area prior to clearing.

12.3 Geotechnical investigations

During geotechnical investigations, a fauna specialist will attend site and identify if any hollows suitable for use are present in the proposed testing location. If any hollows suitable for use are identified, these will be avoided with a 20 m buffer, and an alternative location will be selected for the proposed tests.

Any Northern Blue-tongued Skink identified during geotechnical investigations will be avoided or relocated from the test area.

12.4 Pre-clearance fauna survey reporting

A report of the fauna identification work undertaken must be provided to Horizon Power including:

- The location of the Northern Brushtail Possum hollows
- The location of Northern Brushtail Possum or Northern Blue-tongued Skink sighting

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- Location of animal release if relocated
- Date and time the fauna was recorded
- The gender of the fauna if known
- The vegetation type and weather conditions it was recorded in
- The name and copy of fauna licence of the fauna specialist that relocated fauna.

Appendix B - Significant fauna species considered unlikely or highly unlikely to occur within the Development Envelope

Table 11-1 Likelihood of occurrence definitions

Assessment outcome	Description
Known	Species recorded during the field survey or from recent, reliable records from within or close proximity to the DE.
Likely	Species are likely to occur in the DE where there is suitable habitat within the DE and there are recent records of occurrence of the species in close proximity to the DE OR Species known distribution overlaps with the DE and there is suitable habitat within the DE.
Unlikely	Species assessed as may occur include those species previously recorded within 40 km of the DE however: There is limited (i.e. the type, quality and quantity of the habitat is generally poor or restricted) habitat in DE The suitable habitat within the DE is isolated from other areas of suitable habitat and the species has no capacity to migrate into the DE OR Those species that have a known distribution overlapping with the DE however: There is limited habitat in the DE (i.e. the type, quality and quantity of the habitat is generally poor or restricted). The suitable habitat within the DE is isolated from other areas of suitable habitat and the species has no capacity to migrate into the DE.
Highly unlikely	Species that are considered highly unlikely in the DE include: Those species that have no suitable habitat within the DE. Those species that have become locally extinct or are not known to have ever been present in the region of the DE.

Significant fauna species considered unlikely or highly unlikely to occur within the DE

Fauna species	Status	Likelihood of occurrence
Common Sandpiper (<i>Actitis hypoleucos</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Common Noddy (<i>Anous stolidus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The species is uncommon in shallow coastal waters (GHD, 2024).
Australian Lesser Noddy (<i>Anous</i>)	Vulnerable under BC Act and EPBC Act	Unlikely to occur Records of this species are rare in the region. The species prefers ocean and island habitat (GHD, 2024).

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Fauna species	Status	Likelihood of occurrence
<i>tenuirostris melanops</i>)		
Ruddy Turnstone (<i>Arenaria interpres</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Sharp-tailed Sandpiper (<i>Calidris acuminata</i>)	Migratory under BC Act and Vulnerable under EPBC Act	Unlikely to occur Suitable habitat absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Sanderling (<i>Calidris alba</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Red Knot (<i>Calidris canutus</i>)	Vulnerable under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Curlew Sandpiper (<i>Calidris ferruginea</i>)	Critically Endangered under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Pectoral Sandpiper (<i>Calidris melanotos</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Red-necked stint (<i>Calidris ruficollis</i>)	Migratory under BC Act and Migratory under EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Long-toed Stint (<i>Calidris subminuta</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Streaked Shearwater (<i>Calonectris leucomelas</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Records are rare in the region. The species prefers ocean and island habitat. There is no suitable habitat within the DE (GHD, 2024).
Red-rumped Swallow (<i>Cecropis daurica</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The species is not recorded locally and is vagrant of northern Australia (GHD, 2024).
Greater Sand Plover (<i>Charadrius leschenaultia</i>)	Vulnerable under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Lesser Sand Plover (<i>Charadrius mongolus</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Oriental Plover (<i>Charadrius veredus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
White-winged Black Tern (<i>Chlidonias leucopterus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur There is no suitable wetland.
Red Goshawk (<i>Erythrotriorchis radiatus</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur The species has not been recorded locally. Occurrence would be considered vagrant (GHD, 2024).

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Fauna species	Status	Likelihood of occurrence
Lesser Frigatebird (<i>Fregata ariel</i>)	Migratory under BC Act and EPBC Act	Highly unlikely to occur This species is considered to be mainly pelagic and near coastal. The survey area lacks suitable habitat (GHD, 2024).
Great Frigatebird (<i>Fregata minor</i>)	Migratory under BC Act and EPBC Act	Highly unlikely to occur This species is considered to be mainly pelagic and near-coastal. The Survey Area lacks suitable habitat (GHD, 2024).
Swinhoe's Snipe (<i>Gallinago megala</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Pin-tailed Snipe (<i>Gallinago sternura</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat is absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Gull-billed Tern (<i>Gelochelidon nilotica</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Suitable habitat absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Oriental Pratincole (<i>Glareola maldivarum</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur All survey sites lack suitable habitat (open plains). May occasionally hawk aerially over survey areas (GHD, 2024).
Caspian Tern (<i>Hydroporgne caspia</i>)	Migratory under BC Act and EPBC Act.	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Asian Dowitcher (<i>Limnodromus semipalmatus</i>)	Migratory under BC Act and Vulnerable under EPBC Act	Unlikely to occur Suitable habitat absent or marginal. All survey sites lack suitable tidal or shallow wetland habitat.
Bar-tailed Godwit (<i>Limosa lapponica</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Northern Siberian Bar-tailed Godwit (<i>Limosa lapponica menzbieri</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Black-tailed Godwit (<i>Limosa limosa</i>)	Migratory under BC Act and Endangered under EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Purple-Crowned Fairy-Wren (<i>Malurus coronatus subsp. Coronatus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Survey area is considered to be beyond current known range (GHD, 2024).
Grey Wagtail (<i>Motacilla cinerea</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas are beyond the current known range for the species. The species occurs as a vagrant in northern WA, although there are several regional records from the Broome area (GHD, 2024).
Eastern Curlew (<i>Numenius madagascariensis</i>)	Critically Endangered under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).

Fauna species	Status	Likelihood of occurrence
Little Curlew (<i>Numenius minutus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Eurasian Whimbrel (<i>Numenius phaeopus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Osprey (<i>Pandion haliaetus</i>)	Migratory under BC Act and EPBC Act.	Unlikely to occur The survey areas lack suitable coastal and estuarine habitat (GHD, 2024).
Abbot's Booby (<i>Papasula abbotti</i>)	Endangered under BC Act and EPBC Act	Highly unlikely to occur The survey area is beyond the known range of this pelagic species. Highly unlikely to be recorded in coastal areas including the survey area sites (GHD, 2024).
Night Parrot (<i>Pezoporus occidentalis</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur Habitat assessment indicates that the survey sites are not considered suitable roosting or breeding habitat based on the lack of <i>Triodia</i> (GHD, 2024).
White-tailed Tropicbird (<i>Phaethon lepturus</i>)	Migratory under BC Act and EPBC Act	Highly unlikely to occur The species occupies pelagic ocean habitat off north of Western Australia. Any occurrence would be considered rare vagrant (GHD, 2024).
Red-tailed Tropicbird (<i>Phaethon rubricauda wetralis</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur Although wide-ranging, it prefers pelagic and offshore island habitat (GHD, 2024).
Red-necked Phalarope (<i>Phalaropus lobatus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Ruff (<i>Philomachus pugnax</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Glossy Ibis (<i>Plegadis falcinellus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Pacific Golden Plover (<i>Pluvialis fulva</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Grey Plover (<i>Pluvialis squatarola</i>)	Migratory under BC Act and Vulnerable under EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Princess Parrot (<i>Polytelis alexandrae</i>)	Priority 4 under BC Act and Vulnerable under EPBC	Highly unlikely to occur The survey area sites are beyond the northern limit of the species known range. The species occurs in arid bioregions to the south. Any local occurrence would be considered vagrant (GHD, 2024).
Australian Painted Snipe (<i>Rostratula australis</i>)	Endangered under BC Act and EPBC Act	Unlikely to occur Based on the site assessment, the survey area lacks suitable habitat, namely low dense fringing wetland vegetation (GHD, 2024).
Little Tern (<i>Sternula albifrons</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur Based on the field assessment, the survey area lacks suitable coastal wetland habitat (GHD, 2024).

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Fauna species	Status	Likelihood of occurrence
Grey-tailed Tattler (<i>Tringa brevipes</i>)	Priority 4 under DBCA and Migratory under EPBC	Unlikely to occur The survey areas lacks suitable habitat (coastal wetlands, dams, shorelines).
Wood Sandpiper (<i>Tringa glareola</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey area lacks suitable habitat (coastal wetlands, dams, shorelines).
Common Greenshank (<i>Tringa nebularia</i>)	Migratory under BC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Marsh Sandpiper (<i>Tringa stagnatillis</i>)	Migratory under BC Act and Endangered under EPBC Act	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Masked Owl (northern) (<i>Tyto novaehollandiae kimberli</i>)	Vulnerable under BC Act and EPBC Act	Unlikely to occur The survey area is considered marginal habitat at best as it lacks tall wet forest or deep vegetated gully habitat favoured by this species (GHD, 2024).
Terek Sandpiper (<i>Xenus cinereus</i>)	Migratory under BC Act and Vulnerable under EPBC	Unlikely to occur The survey areas lack suitable habitat (coastal wetlands, dams, shorelines).
Northern Quoll (<i>Dasyurus hallucatus</i>)	Endangered under BC Act and EPBC	Unlikely to occur Not known to occur within the location of the survey area (GHD, 2024).
Northern leaf-nosed bat (<i>Hipposideros stenotis</i>)	Priority 2 under BC Act.	Unlikely to occur Based on the field assessment, the survey area lacks rocky cave-forming or potential day roost habitat (GHD, 2024).
Ghost Bat (<i>Macroderma gigas</i>)	Vulnerable under BC Act and EPBC Act	Unlikely to occur Based on the field assessment, the survey area lacks rocky cave-forming geology known to be preferred day roost habitat. Large tree hollows may be marginal roost habitat (GHD, 2024).
Water Mouse (<i>Xeromys myoides</i>)	Vulnerable under BC Act and EPBC Act.	Highly unlikely to occur The species has not been recorded within the Kimberley region (GHD, 2024).
Saltwater Crocodile (<i>Crocodylus porosus</i>)	Migratory under BC Act and EPBC Act	Unlikely to occur The survey area was assessed as not suitable for the species due to lacking coastal, estuarine or rivers habitats (GHD, 2024).
Small Toadlet (<i>Uperoleia minima</i>)	Priority 3 under DBCA	Unlikely to occur The survey area sites are located beyond the western edge of accepted distribution. A database record or call recording has not been verified. The survey area lacks suitable habitat, namely floodplain supporting dense grassland (GHD, 2024).