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Halls Creek Future Energy System

EPBC Act Referral Supporting Document

June 2026



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Abbreviations/Acronyms

Abbreviations/Acronyms	Definition
ABN	Australian Business Number
ASS	Acid Sulfate Soil
BC Act	<i>Biodiversity and Conservation Act 2016</i>
BESS	Battery Energy Storage System
BoM	Bureau of Meteorology
CoA	Commonwealth of Australia
DBCA	Department of Biodiversity Conservation and Attractions
DCCEEW	Department of Climate Change Energy the Environment and Water
DE	Development Envelope
DoE	Department of Environment
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water Environment and Resources
DPLH	Department of Planning, Lands and Heritage
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EPBC Act	<i>Environment Protection and Biodiversity Conservation 1999</i>
FES	Future Energy System
GoWA	Government of Western Australia
GPS	Global Positioning System
ha	hectares
IBRA	Interim Biogeographic Regionalisation for Australia
ILUA	Indigenous Land Use Agreement
LGA	Local Government Area
m	metres
MNES	Matters of National Environmental Significance
MW	megawatts
n.d	no date
no.	number
PDWSA	Public Drinking Water Source Area
PMST	Protected Matters Search Tool
PPA	power purchase agreement
PV	photovoltaic
RIWI Act	<i>Rights in Water and Irrigation Act 1914</i>
TEC	Threatened Ecological Community
TSSC	Threatened Species Scientific Committee
WA	Western Australia

Contents

1	Introduction	1
1.1	Background	3
1.2	Scope and purpose of this document	3
1.3	Proponent	4
2	Proposed Action	8
2.1	Proposed Action construction and operational requirements.....	8
2.1.1	Pre-construction.....	8
2.1.2	Construction	8
2.1.3	Operations.....	10
2.2	Land access	12
2.3	Proposed Action benefits and justification.....	13
2.4	Proposed Action alternatives.....	13
2.4.1	Alternative sites	13
2.4.2	Do nothing.....	13
3	Stakeholder engagement	15
3.1	Key stakeholders	15
3.2	Stakeholder engagement process	15
3.3	Stakeholder consultation outcomes.....	18
4	Existing environment.....	23
4.1	Climate	23
4.2	Geology, landform and soils	23
4.3	Hydrology.....	27
4.3.1	Surface hydrology.....	27
4.3.2	Groundwater	27
4.4	Elevation	27
4.5	Regional biogeography	27
4.6	Flora and fauna	29
4.6.1	Surveys	29
4.6.2	Flora diversity	32
4.6.3	Introduced species	32
4.6.4	Significant flora	32
4.6.5	Vegetation.....	32
4.6.6	Vegetation type and condition.....	34
4.6.7	Threatened Ecological Communities.....	35
4.6.8	Riparian vegetation	35

PROTECTED

4.6.9	Fauna habitat	38
4.6.10	Significant fauna	41
4.7	Conservation reserves and Environmentally Sensitive Areas	51
4.8	Social context	51
4.8.1	Native title	51
4.8.2	Aboriginal cultural heritage features	51
4.8.3	European heritage	51
4.8.4	Other projects in the surrounding area	52
5	Matters of National Environmental Significance	53
5.1	Threatened species and ecological communities	54
5.1.1	Potential impacts	54
5.1.2	Mitigation	55
5.1.3	Assessment of impacts	56
5.2	Migratory species	61
5.2.1	Potential impacts	61
5.2.2	Mitigation	61
5.2.3	Assessment of impacts	61
6	Impact Assessment	63
6.1	Significant Impact Guidelines	63
6.1.1	Critically Endangered and Endangered species	63
6.1.2	Vulnerable species	68
6.1.3	Migratory species	72
7	Offsets	74
8	Conclusion	75
9	References	76
	Appendix A Environmental Management Plan	80
	Appendix B Biological Survey: Kimberley IRP (GHD, 2024)	81
	Appendix C Protected Matters Search Tool (20 km buffer)	83

1 Introduction

1.1 Background

Regional Power Corporation, trading as (T/A) Horizon Power, is a Western Australian (WA) Government Trading Enterprise 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 WA State Government has committed to reducing government carbon emissions by 80% (below 2020 levels by 2030), and Horizon Power is supporting the Government to achieve this target. Many towns in the Kimberley are powered by high emission fossil fuels such as diesel and gas. In Halls Creek, 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 Halls Creek in the Kimberley region of WA (the Proposed Action). The Proposed Action will ensure security of energy supply to Halls Creek 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 agreement with the independent power producer will likely be 20 years, with options for extension.

A transition to a renewable generation system will improve energy security and equity for the town by reducing reliance on transported fuel, stabilising long-term operating costs, and providing a more consistent and reliable supply. The current thermal power station is subject to high operating costs due to the remoteness of the facility, vulnerability to supply disruptions and fuel price fluctuations. Severe weather events and flooding associated with monsoonal lows and cyclones can cut off access to Halls Creek, further impacting fuel supply and delivery of equipment or parts for repairs and maintenance. The Proposed Action addresses current energy access challenges and delivers a more robust, resilient power solution for the community of Halls Creek.

The Proposed Action will nominally consist of solar photovoltaic (PV) system (up to 4 megawatts alternating current (MWAC)), Battery Energy Storage Systems (BESS) (up to 2 megawatts MW / 2 megawatt-hour (MWh)), an underground network connection route (up to 3 kilometres (km)) and new thermal power station (up to 4 MW). The location of the Proposed Action is shown in Figure 1-1, the Indicative Disturbance Footprint (IDF) in Figure 1-2 and the indicative conceptual layout in Figure 1-3.

1.2 Scope and purpose of this document

The Proposed Action may have potential impacts to Matters of National Environmental Significance (MNES). Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on an MNES.

The following MNES may be impacted by the Proposed Action:

- Listed Threatened species and ecological communities
- Listed Migratory species.

This supporting document has been prepared as supporting information for the formal referral of the Proposed Action in accordance with the '*EPBC Act referral preparation guide*' (DCCEEW, 2024). It contains complementary information only and should be read in conjunction with the EPBC Referral form.

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An Environmental Management Plan (EMP) has been developed for the Proposed Action and is provided in Appendix A.

1.3 Proponent

The proponent for this Proposed Action 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
Proposed Action key contact	Srini Venkata Project Manager decarbonisation@horizonpower.com.au

Figure 1-1 Proposed Action location and Development Envelope



LEGEND

- Development envelope
- Roads

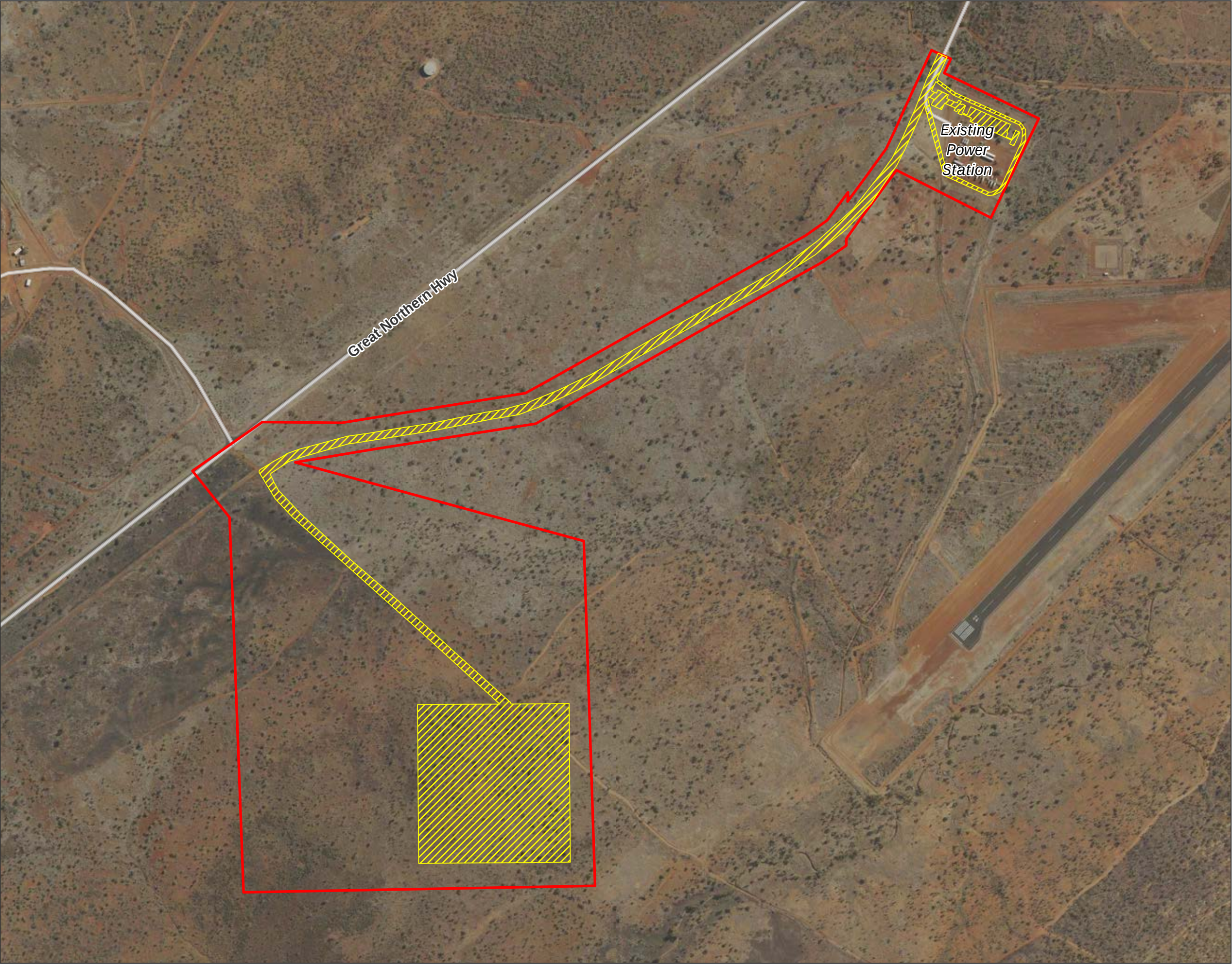
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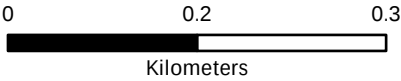
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Figure 1-2 Indicative Disturbance Footprint



- LEGEND
- Development envelope
 - Indicative Disturbance Footprint
 - Roads



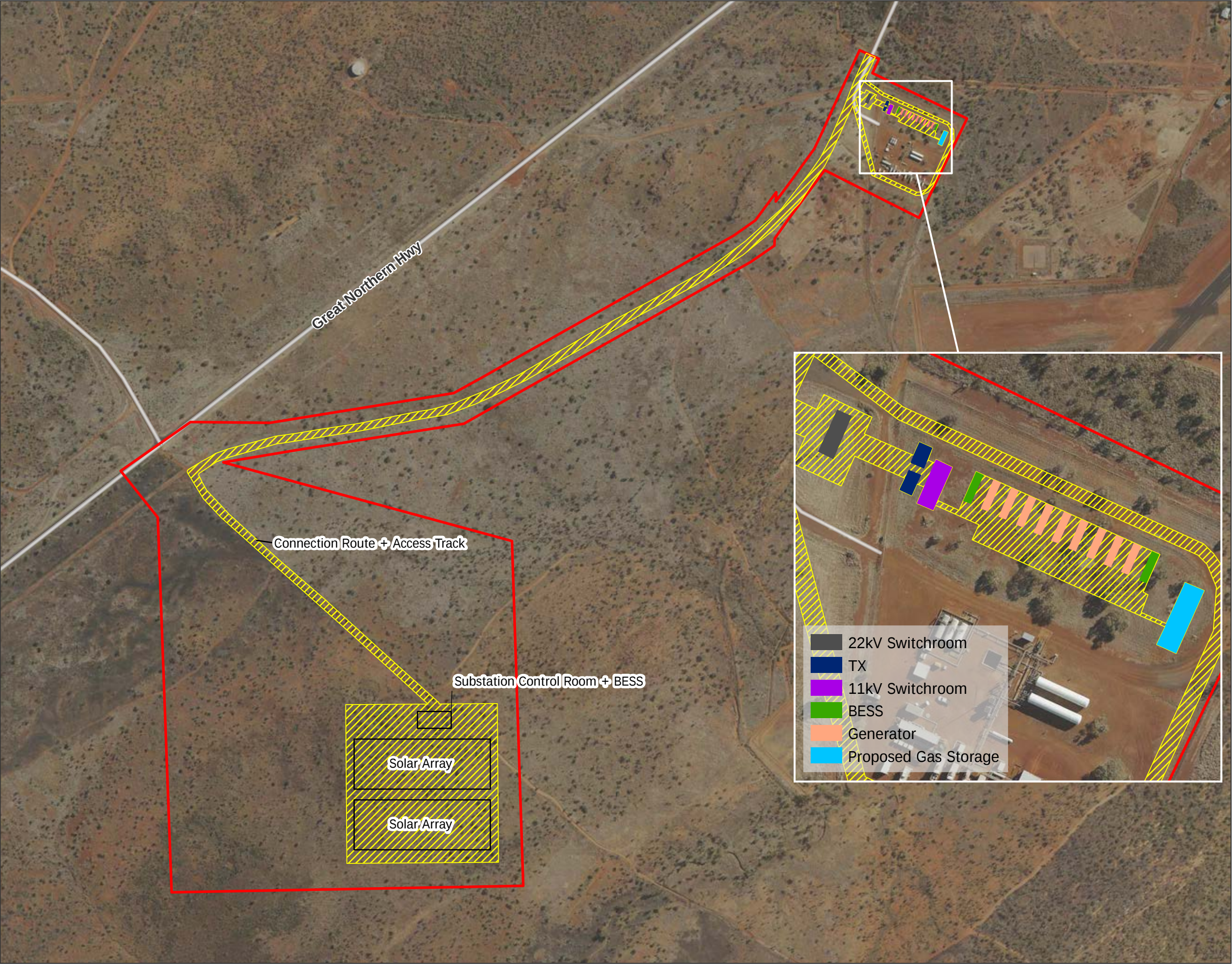
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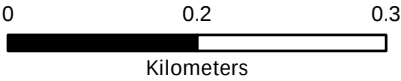
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Figure 1-3 Proposed Conceptual Site



- LEGEND
- Development envelope
 - Indicative Disturbance
 - Footprint
 - Roads



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2 Proposed Action

The solar PV and BESS will be installed at a site approximately 3 km south-west of Halls Creek, on a portion of Lot 504 on Deposited Plan 400197, Reserve 23136. The network connection route corridor will follow Old Great Northern Hwy to connect the solar PV and BESS to the existing power station. The network connection will be an underground electrical distribution and will be up to 3 km long. The new thermal power station would be installed adjacent to the site of the existing power station location on a portion of Lot 9005 on Deposited Plan 69970.

The Development Envelope (DE) is shown on Figure 1-1 and has a total extent of 64.42 hectares (ha) and represents the boundary surrounding the Proposed Action within which all development will be contained. The DE has been developed as the area within which the least environmental constraints (detailed in Section 2.4.1 and Figure 4-4).

Construction and operation of the Proposed Action will require permanent clearing of up to 11.37 ha of native vegetation within the IDF (which totals to 12.98 ha). It should be noted that this 11.37 ha clearing extent represents the maximum area of disturbance required to construct and install the Proposed Action, where opportunities are available, clearing will be further minimised. The IDF is shown in Figure 1-2 and the indicative conceptual layout in Figure 1-3.

2.1 Proposed Action construction and operational requirements.

2.1.1 Pre-construction

Pre-construction activities will occur up to 12 months prior to construction and is expected to be awarded by the end of 2027. It will 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 (GPS) equipment to mark Proposed Action 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 10 boreholes to a depth of 25 metres (m) and up to 5 tests pits (up to 5 metres (m) width by 5 m width) and 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 may require driving on vegetation to access test locations
- Network Connection Route 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 up to 25 m and up to 5 tests pits (up to 5 m width by 5 m width) and up to 3 m depth may be conducted to support the geotechnical investigations. Access is expected to be from the existing road. No more than 10 m x 10 m of clearing is permitted per test location. Geotechnical investigations may require driving on vegetation to access test locations
- Thermal power station 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 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 (2 m width by 3 m width) up to 3 m depth may be conducted to support the geotechnical investigations. Geotechnical investigations may require driving on vegetation to access test locations.

2.1.2 Construction

The construction phase is expected to commence in 2028 for a duration of up to 24 months. Clearing of native vegetation is expected to take approximately 4 to 6 weeks and will be undertaken at the commencement of construction. Construction activities will be determined by weather due to access

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limitations during the wet season in the east Kimberley, which typically occurs between December to March.

Construction personnel will consist of a Proposed Action workforce of up to 50 staff. Construction works will consist of:

- Clearing of up to 11.37 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. Licences will be obtained by the contractor as required in accordance with Part V of the *Environmental Protection Act 1986*
- Supply of water for construction purposes will be trucked water, with licenses obtained in accordance with the *Rights in Water and Irrigation Act 1914*
- 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 supply, 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, substation and other ancillary infrastructure:
 - Solar PV panels and frame will be nominally up to 4 m tall from ground level. The battery containers, substation and office building will nominally 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 5,000 steel piles (250 mm diameter) installed to a nominal depth of up to 5 m
 - Excavation works for footings for the substation, battery system, office building and other ancillary infrastructure may involve excavation of up to 1,000 m³ of soil (footing depth typically up to 2 m deep)
 - Excavation works for internal electrical cabling may involve excavation of up to 20 km of trenching and up to 1.5 m deep, resulting in excavation of up to 1,000 m³ of soil
- Installation of a network connection from the solar and BESS facility, following Old Great Northern Hwy to the existing power station. The network connection will an underground distribution:
 - Underground – Trenching excavations and reinstatement of up to 3 km and up to 3 m wide and up to 2 m deep, total excavation of up to 5,000 m³ of soil
- Installation of the new thermal power station:
 - Excavation works for footings for the thermal power station may involve excavation of up to 500 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 0.5 km of trenching and up to 2.5 m deep, resulting in excavation of up to 500 m³ of soil
 - Installation of the power station including up to 4 engine generators, transformers, substation, 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
 - Delivery and installation of Liquefied Natural Gas (LNG) storage tanks and vaporisers
 - Installation of piping, valves and associated instruments
 - Electrical works including power supply, lighting and control system

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- Construction of the unloading bay for receiving LNG deliveries via road tankers
- Installation of control and safety systems including but not limited to fire suppression, gas detection and emergency shutdown systems
- Installation of ancillary infrastructure such as fencing, lighting and utility connections
- 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.

2.1.3 Operations

The operational phase is expected to commence in 2030, 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 three personnel per shift. There will be no accommodation onsite, personnel will commute to site daily.

Activities associated with the operational phase will include:

- Operation and maintenance/monitoring of the solar and BESS facility, network connection, substation and thermal power station
- Pressure testing and leak detection, system integration and functional testing.
- Regulatory inspections and approvals
- Routine maintenance activities for the solar and BESS facility and thermal power station including visual inspections, solar panel cleaning (if required), solar panel replacement, minor and major services, electrical inspections and testing
- Regular maintenance of the network line. Activities will include visual inspections, thermal imaging and electrical testing
- Routine maintenance activities including weed control
- Ongoing maintenance such as vegetation control, stormwater/drainage management, wildlife monitoring and reporting.

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

Infrastructure is expected to be permanent and become part of the Halls Creek electricity network.

2.1.4 Indicative Construction Timeline

The indicative timeline for construction activities is outlined below:

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Pre-Construction Mobilisation (2–6 weeks)

Purpose: Set up access, establish compliance processes, and prepare the site.

Typical Activities:

- Mobilisation of construction crew and equipment
- Establishment of environmental controls (erosion measures, fauna management procedures, weed hygiene stations)
- Cultural heritage and environmental pre-clearance surveys (flora, fauna, heritage, weeds)
- Setting up temporary facilities: site offices, laydown areas, sanitation, water tanks
- Safety inductions, environmental inductions, traffic management set-up.

Vegetation Clearing and Topsoil Management (3–8 weeks)

Purpose: Vegetation removal in preparation for civil earth works.

Typical Activities:

- Marking clearing boundaries and avoidance areas
- Preclearance fauna survey if not already undertaken
- Clearing using physical methods (dozers, chainsaws, mulchers etc.)
- Fauna spotter-catcher presence during clearing
- Stockpiling and/or transporting cleared vegetation per environmental approvals
- Stripping and stockpiling topsoil for later rehabilitation
- Initial weed control treatments before civil works.

Civil Works & Earthworks (8–16 weeks)

Purpose: Prepare land for solar arrays, access roads, and BESS.

Typical Activities:

- Grading and levelling of the solar farm footprint
- Earthworks for BESS pad
- Construction of internal access roads and turning circles
- Drainage works: swales, culverts, erosion controls
- Excavation for cable trenches
- Establishment of fenced boundaries.

Structural Installation – Solar Array (8–20 weeks)

Purpose: Build the physical solar farm infrastructure.

Typical Activities:

- Installation of tracker posts or fixed-tilt structures (pile driving or screw foundations)
- Assembly of mounting structures
- Installation of solar PV modules
- Wire management and above-ground DC cabling on the mounting system.

DC and AC Electrical Works (6–16 weeks, overlaps with structural works)

Purpose: Electrically integrate the solar plant and BESS.

Typical Activities:

- DC cabling from modules to combiner boxes and DC feeders
- AC cabling from inverters to transformers
- Installation of inverter stations, skid-mounted transformers, switchgear

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- Laying and backfilling of underground cables to the substation
- Earthing grid installation.

BESS Installation and Integration (6–12 weeks)

Purpose: Install and integrate the battery system and controls.

Typical Activities:

- Construction/finishing of the BESS concrete pad
- Delivery and placement of BESS containers/enclosures
- Installation of HVAC systems, fire suppression systems, and safety systems
- AC and DC electrical connection to the site network
- Communications fibre installation to the control room.

Substation and Grid Connection Works (8–20 weeks)

(Typically run in parallel with main construction.)

Typical Activities:

- Building the solar farm substation
- Installing transformers, switchgear, protection systems
- Connections to nearby distribution network
- Fibre and SCADA integration with utility operator
- Testing and commissioning of protection systems.

Commissioning, Testing & Energisation (4–10 weeks)

Purpose: Ensure systems are safe, functional, and compliant.

Typical Activities:

- Mechanical and electrical completion checks
- Solar array commissioning (string tests, insulation resistance tests)
- BESS commissioning (functional checks, capacity tests, fire system tests)
- SCADA integration and communications testing
- Hold-points with network operator for staged energisation
- Full system performance testing.

Site Rehabilitation & Demobilisation (2–6 weeks)

Purpose: Restore remaining land and leave the site in compliant condition.

Typical Activities:

- Revegetation of unused/temporary areas using stockpiled topsoil
- Weed control and ongoing environmental monitoring
- Removal of temporary construction facilities
- Final erosion control measures
- Closing out environmental and compliance documentation.

2.2 Land access

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.

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The thermal power station location is currently leased to Horizon Power by the Shire of Halls Creek for the purposes of construction, operation and maintenance of a power station. The solar farm parcel has been acquired by way of a Reserve and Management Order to Horizon Power.

2.3 Proposed Action benefits and justification

As discussed, a transition to a renewable generation system will improve energy security and equity for the town of Halls Creek. As a renewable energy project, the Proposed Action has the potential to reduce up to approximately 4,200 tonnes of CO₂e per annum compared to the emissions of the existing Halls Creek power station. The Proposed Action will ensure security of energy supply to Halls Creek after the expiry of the existing PPA and contribute to the local economy through construction and operation phase job opportunities. In addition, the Proposed Action will:

- Reduce reliance on transported fuel to assist in achieving decarbonisation goals
- Stabilise long-term operating costs, reducing estimated fuel spend by \$12-40.2 million over 20 years, as well as reduced exposure to volatile future market prices
- Energy affordability, with optimised generation mix expected to reduce long-term cost to supply
- Community benefits, with opportunities for local employment
- Future proofing, infrastructure designed to accommodate emerging technologies and customer energy resources
- Environmental, Social and Governance (ESG) benefits, with an estimated \$15.42 million ESG benefits created by the project centralised system over the 20 year contract.

2.4 Proposed Action alternatives

2.4.1 Alternative sites

The biological survey covered a larger extent than the DE within Halls Creek, with additional sites also surveyed during options assessment phase (see Section 4.6.1 for further detail). These areas combined with the DE are referred to as the Survey Area and provide regional context for this Proposed Action. The biological survey was undertaken to inform environmental constraints in Halls Creek, and to aid in site selection for the Proposed Action. The DE for this Proposed Action was selected as it presented the fewest environmental constraints. Importantly, selection of the location of the DE allowed the avoidance of impact to the minor drainage lines habitat which are suitable for Gouldian Finch and other Threatened fauna species.

2.4.2 Do nothing

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

- High electricity supply costs due to volatile fuel prices and transport logistics
- Potential reduced reliability due to fuel supply chain disruptions
- Increased carbon emissions
- Missed economic opportunities in a renewable energy transition.

2.4.3 Impact reduction

A desktop phase assessment was undertaken during project scoping, to determine sites that might be suitable for the proposed works. A number of sites were considered, and discarded due to proximity to waterways and/or Public Drinking Water Source Areas.

The Proposed Action has been designed to avoid and/or mitigate impacts to Threatened fauna to the maximum extent possible. During the selection phase, particular focus has been placed on reducing

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the amount of fauna habitat clearing required for construction, including habitat for Gouldian Finch. A survey was conducted in 2024 covering three sites, including the connection corridor and two solar farm options.

Impact reduction actions undertaken for this Proposed Action include:

- Avoidance of the minor drainage line habitat within the DE, which the Gouldian Finch was recorded within during the field survey
- IDF project elements placed to reduce the impact of permanently clearing foraging habitat for Gouldian Finch from 20 ha to 11.37 ha
- Selection of a site close to the existing power station site to reduce clearing required for the connection infrastructure by utilising existing cleared areas
- Proposed undergrounding of the connection infrastructure to avoid direct collisions and associated injury/mortality of Threatened fauna, particularly birds and bats with overhead lines.

A licensed fauna specialist will be engaged prior to the commencement of clearing activities to supervise avoidance, dispersal and relocation of any fauna during clearing activities.

3 Stakeholder engagement

3.1 Key stakeholders

The key stakeholders identified for the Proposed Action are provided in Table 3-1.

Table 3-1 Key project stakeholders

Category	Stakeholders
Agencies acting on behalf of the Commonwealth Government	– Regional Development Australia Kimberley, DCCEEW
State Government – Ministers	– Hon Divina D’Anna – Member for Kimberley – Hon Amber-Jade Sanderson – Minister for Energy and Decarbonisation – Hon Stephen Dawson – Minister for Regional Development; Ports; Science and Innovation; Medical Research; Kimberley.
State Government - Entities	– Department Planning, Lands and Heritage, Kimberley Development Commission, Water Corporation, DWER, Department of Communities, Main Roads WA, Department of Biodiversity Conservation and Attractions
Traditional Owners	– Ngarrawanji Aboriginal Corporation Registered Native Title Body Corporate (RNTBC) – Kimberley Land Council – Koongie-Elvire Applicant – Jaru Aboriginal Corporation RNTBC – Malarngowem Aboriginal Corporation RNTBC – Yarlil Group (unregistered claim).
Local Government	– Shire of Halls Creek
Corporate	– Major Account Holders – East Kimberley Chamber of Commerce and Industry – Clean Energy Council – First Nations Clean Energy Network – Kimberley Land Council – Kimberley Aboriginal Lands Trust – EDL Energy – Telstra.
Halls Creek Community	– Customer and community members
Aviation Authorities	– Civil Aviation Safety Authority, Airservices Australia
Community-led organisations	– Olabud Doogethu Aboriginal Corporation – Halls Creek Wildlife Conservancy – Jungarni-Jutiya Indigenous Corporation – Yura Yungi Medical Services Aboriginal Corporation – Kimberley Language Resource Centre – Binarrri-binyja yarrawoo (BBY) Aboriginal Corporation.

3.2 Stakeholder engagement process

The Horizon Power stakeholder engagement process is guided by an Engagement and Communications Plan that is informed by a strategic engagement framework. This framework combines principles from the Engagement Institute (formerly IAP2) and national industry organisations, like The Energy Charter & Clean Energy Council.

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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. Horizon Power is 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 webpage, established at project inception in 2023, with FAQs continues to provide easy access to information and serves as a portal for community members to sign up for updates, ask questions, and stay informed about the project's progress. The project page was updated mid-2025 and the Proposed Action is now presented as a standalone webpage. Since re-launch, as of May 2026, the page has received more than 150 page views.

Community members and stakeholders can contact the team by emailing kununurra@horizonpower.com.au or decarbonisation@horizonpower.com.au, or by reaching out to the Horizon Power Customer and Community team in the Kununurra depot. These email addresses are used to register for project updates, ask questions, and provide feedback.

Engagement is further supported through the Horizon Power Customer Council — an advisory group representing regional interests — and through the annual customer and community survey, which gathers feedback and sentiment on Horizon Power's activities.

In February 2026, Horizon Power presented at the East Kimberley Chamber of Commerce and Industry 'Halls Creek Business Connect' in Halls Creek to provide project updates. The event was attended by representatives from Horizon Power's Customer & Community division. The event saw a strong turnout, with 25 attendees representing a diverse cross-section of Halls Creek business owners and key local stakeholders, including the Shire of Halls Creek.

During late 2025, a communication campaign invited Aboriginal people in Halls Creek with knowledge of cultural heritage sites or stories in or near the proposed solar farm site (neighbouring the existing Halls Creek power station) to get in touch and share information with Horizon Power's Traditional Owner Relationships and Reconciliation team.

Earlier in 2025 Horizon Power participated in the Shire of Halls Creek, Community Strategic Planning process kick-off meeting where the Proposed Action was presented for the community to consider during the review process.

The Horizon Power CEO presented the Halls Creek Future Energy System project to about 350 key Kimberley stakeholders at the annual 2024 and 2025 Kimberley Economic Forum events in Kununurra and Broome respectively.

The Proposed Action was presented to the Regional Development Australia Kimberley Committee, in Derby on 7 September 2023. Horizon Power commenced engagement with the Shire of Halls Creek in September 2023 and has maintained regular and ongoing engagement

Two electronic direct mail campaigns have been issued to Halls Creek and Kimberley Horizon Power customers containing a link to the project webpage inviting customers to provide feedback. The current database for the Halls Creek community members requesting information about Halls Creek Future Energy System planning totals 35 people.

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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 support the engagement of Traditional Owner groups and Aboriginal Knowledge holders with respect to Horizon Power activities within the region. The TORR team reviewed and adapted communication materials for Traditional Owners and Aboriginal community engagement including the Traditional Owner engagement approaches aligned with Horizon Power's specific policies and guidelines relating to Traditional Owner Engagement. These strategies and guiding principles include our Stretch Reconciliation Action plan, Aboriginal and Torres Strait Islander Commitment, which refers to Horizon Power making a positive impact on Aboriginal and Torres Strait Islander customers, suppliers, employees and communities.

The TORR team continue to coordinate the engagement with Traditional Owners through Land Councils and Registered Native Title Prescribed Body Corporates (PBC's). This engagement has occurred separate to community engagement due to cultural governance models and Traditional Owners' respective annual calendar of meeting dates. Horizon Power first met with Traditional Owners in September 2023, and engagement remains ongoing.

The key points raised from the Halls Creek Community to date includes:

1. Strong community support for solar, but delivery must match local realities

There is widespread interest in solar and renewables across Halls Creek and surrounding communities; however, affordability, maintenance, installer access and social factors significantly limit the effectiveness of rooftop only solutions without funding or alternative models.

2. Solar farms are broadly seen as the most practical large scale solution

Many stakeholders favour a solar farm (near town or on stations) as a more reliable, scalable and lower risk option than widespread rooftop solar, particularly given housing constraints, business turnover and limited ratepayer base.

3. Energy resilience is critical for remote and Aboriginal communities

Recent flood related diesel fuel disruptions have reinforced the need to reduce reliance on diesel in remote communities, strengthening support for solar based solutions to improve reliability, resilience and energy security.

4. Growth and decarbonisation need to progress together

The Tanami Road upgrade is expected to drive significant growth and change in Halls Creek, creating momentum for decarbonisation. While the current power system is viewed as functioning adequately, stakeholders support planning for renewable options that align with long term growth rather than complex or premature solutions.

Horizon Power will continue to implement the Engagement and Communications Plan as the project progresses through future milestones, ensuring engagement remains appropriate to the project phase, community expectations and decision-making readiness.

Future engagement will continue to leverage established channels and trusted forums, including key strategic regional events, to share project updates and maintain visibility of progress. Horizon Power will retain all existing engagement pathways, including in person engagement where appropriate,

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digital channels and direct contact points, enabling community members and stakeholders to engage at times and in ways that suit them.

As the project reaches its next major milestone, Horizon Power will return to the community to formally present the future energy plan, outline proposed infrastructure and delivery pathways, and seek feedback to inform final design and implementation considerations. This engagement will be tailored to the local context and will support two-way dialogue, ensuring community perspectives are understood and appropriately considered.

Prior to the commencement of final build and construction activities, a dedicated communications plan will be developed to support this phase. This plan will focus on providing timely, clear and consistent information about construction activities, timeframes, potential impacts and mitigation measures, and will be designed to manage expectations and minimise disruption to the community.

At project completion, Horizon Power intends to host a community launch event to acknowledge community involvement, mark the transition to the new energy system, and share outcomes achieved throughout the project. This event will provide an opportunity to close the engagement loop by reflecting on the project journey and reinforcing Horizon Power's ongoing commitment to working with the community.

3.3 Stakeholder consultation outcomes

The outcomes of the stakeholder consultation undertaken to date for the Proposed Action is provided in Table 3-2.

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Table 3-2 Stakeholder consultation register

Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Outcomes / Response
Resident & Horizon Power customer and community	16 August 2023	Community drop-in session	– Solar farm is the best option and should be built close to town – Solar farm is best option and could be built out on stations and up high to shade cattle	Acknowledged and recorded feedback.
Halls Creek Community	February 2026	Article in 'Wat Na' Community newsletter regarding Aboriginal Knowledge holders and description of FES project.	– Renewable energy options being explored near Halls Creek	Distributed to community
Mira Consultants	16 August 2023	Community drop-in session	– Rooftop solar is best option to help customers and small businesses. However, note that social issues could impact this.	Acknowledged and recorded feedback.
Jungarni-Jutiya Indigenous Corporation	16 August 2023	Community drop-in session	– Visits satellite remote communities regularly to undertake power interactions with members. Keen to assist with community engagement in future.	Acknowledged and recorded feedback.
Yuri Yungi Medical Services	16 August 2023	Community drop-in session	– Advised residential homeowners can't afford solar – Issues with solar installation result in less benefit – Consider a Kimberley grid benefitting from the Hydro (Ord River Hydro) plan and the hydrogen production. – Move away from micro grids and seek benefit from a solar farm with an interconnected system. – Businesses in Halls Creek are short lived with no interest to invest in rooftop solar – There are too many social issues to put rooftop solar on social/state housing (rocks thrown on houses, no maintenance) – Only 33 rate payers in Halls Creek. – Aboriginal Stakeholder for Expression of Interest - Aboriginal Knowledge Holder regarding FES due diligence.	Acknowledged and recorded feedback.
Shire of Halls Creek	17 August 2023	Shire meeting	– Significant interest in solar energy and broader renewable solutions. – What kW per hectare rate does a solar farm yield – Interested in installing rooftop solar across Shire residential properties (estimated ~28 dwellings), but funding is uncertain and there is no current capacity to support additional renewable projects beyond small scale measures.	Acknowledged and recorded

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Outcomes / Response
			- One proposed site (Site 3) is not suitable for renewables as it is earmarked for a housing estate. - Town growth is anticipated from the Tanami Road upgrade. - Supporters of Net Zero by 2050 pathway focused on aspirations, near term actions and growth rather than major infrastructure projects, with rooftop solar seen as the primary practical decarbonisation lever. - The Recreation Centre has rooftop solar installed but continues to face electricity bills of around \$70,000 per year. - Balgo and remote communities should have solar as the floods caused issues with fuel supply to diesel generators and is not a viable or reliable energy source for the community. - Key stakeholder for EOI-Aboriginal Knowledge Holder regarding FES.	
Regional Development Australia Kimberley	7 Sept 2023	Presentation	- Energy resilience in face of recent flood events. - Positive comments about projects and supporting engagement activities	Acknowledged and recorded.
Kimberley Development Commission	20 Sept 2023	Community information session	- Discussion of project and short-listed sites - Stakeholder asked to be kept updated - Request that Horizon Power ensure clear messaging to manage perceptions and combat incorrect messages regarding renewables to gain community support.	Acknowledged and recorded.
2024 Kimberley Economic Forum (Kununurra) 150 delegates	28-30 August 2024	Regional economic development event – project presentation and brochure handout	Query regarding other towns and communities in the Kimberley being considered for decarbonisation	Yes, additional towns in the Kimberley are being considered for decarbonisation.
Resident & Horizon Power customer and community members	6 August 2025	Shire Community Strategic Planning process kick-off meeting	- Only 21 rate payers in the Shire. - Tanami Road sealing will be transformational for Halls Creek. - Accessing solar installer in Halls Creek could be challenging - How can we get more rooftop solar on houses in Mardiwah Loop community - Can Ringers Soak and other remote Aboriginal Communities in the Shire of Halls Creek be considered for the Kimberley Communities Solar Saver project?	Sunshine Saver product re-launch for customers unable to access rooftop solar.

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Outcomes / Response
Traditional owner Groups – Jaru Aboriginal Corporation RNTBC – Ngarrawanji Aboriginal Corporation RNTBC – Koongie-Elvire Applicant – Yarlil Group – Malarngowem Aboriginal Corporation RNTBC	December 2025	Email	Seek Aboriginal Knowledge holders for FES project	Seek Aboriginal Knowledge for FES project
Ngarrawanji Aboriginal Corporation RNTBC	January 2026	Phone	Expression of Interest for Aboriginal Knowledge holders for FES project	Email response to arrange heritage surveys
Koongie-Elvire Applicant Meeting	January 2026	Phone	Expression of Interest for Aboriginal Knowledge holders for FES project	Response to discuss project further
Koongie-Elvire Applicant Meeting	29 January 2026	Teams Meeting	Discuss FES Project	No response
Yura Yungi Medical Services Aboriginal Corporation	November 2025	Email	Seek Aboriginal Knowledge holders for Future Energy System project	No response – communication passed on to community noticeboard/team
– Kimberley Language Resource Centre – Binarri-binyja yarrowoo (BBY) Aboriginal Corporation	November 2025	Email	Seek Aboriginal Knowledge holders for Future Energy System project	No response from corporations to confirm receipt of correspondence.
Ngarrawanji Aboriginal Corporation RNTBC	February 2026	Several Emails and Phone calls	Follow up on heritage surveys for Halls Creek FES project	Received response from Heritage service provider
Ngarrawanji Aboriginal Corporation RNTBC	Week commencing 2nd March 2026	Email and Phone call	Follow up on heritage survey dates for Halls Creek FES	Ongoing discussions/communications regarding the Future Energy System project

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Stakeholder	Date	Type of consultation	Stakeholder comments/issue/topic raised	Outcomes / Response
2025 Kimberley Economic Forum (Broome) 200 delegates	28-30 May 2025	Regional economic development event – project presentation and brochure handout	Request for project timeline update	Estimated completion 2029-2030
East Kimberley Chamber of Commerce and Industry Business After Hours (Halls Creek)	25 Feb 2025	Presentation	Halls Creek Future Energy System Project update	No response
Halls Creek Chamber Connect	11 Feb 2026	Presentation	Halls Creek Future Energy System Project update	No response

4 Existing environment

4.1 Climate

The Proposed Action is located in Halls Creek within the east Kimberley region of WA. This region experiences a tropical semi-arid climate due to its location between the wetter northern regions of the Kimberley and the arid Great Sandy Desert to the south. There are two distinct seasons: the wet and dry season. The wet season is generally from December to March and the dry season from May to October, where it is typically dry for very long periods (Shire of Halls Creek, 2026).

The closest meteorological recording station is located at Halls Creek Meteorological Office (Site No. 002012). Climatic data from this station indicates the mean maximum temperatures ranges from 38.3°C in November to 27.3°C in June/July. The mean minimum temperatures ranges from 24.8°C in December to 12.7°C in July. The mean annual rainfall is 575.4 mm, receiving highest rainfall in January (159.8 mm) (BoM, 2026).

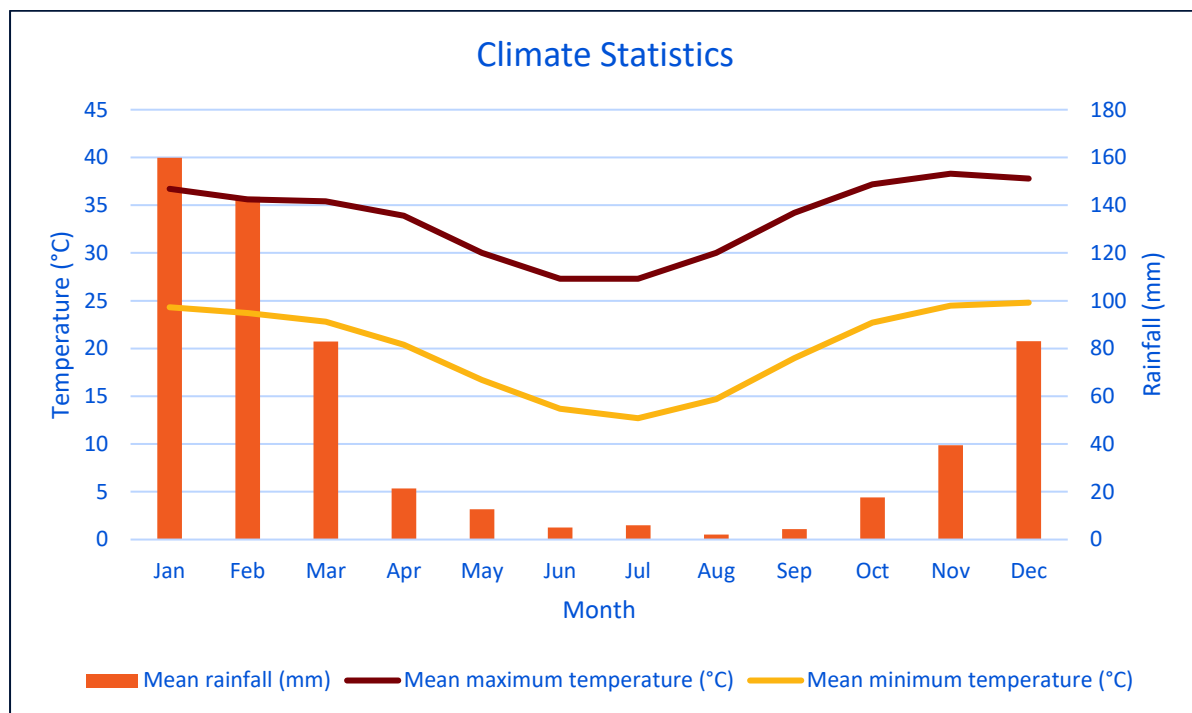


Plate 4-1 Climate statistics for Halls Creek Meteorological Office (Site No. 002012) (BoM, 2026).

4.2 Geology, landform and soils

The Proposed Action is located within the Springvale Foothills Zone, which is described as: *'Hills and plateaux (with some undulating plains) on granitic, volcanic and sedimentary rocks of the Halls Creek Orogen (western Lamboo Complex) with Stony soils, Red shallow loams and Deep sands'* (GoWA, 2026; DPIRD-017). The Proposed Action overlaps one land system: the O'Donnell system (

Figure 4-1) (GoWA, 2026; DPIRD-064). This system is described as *'Stony undulating country with scattered hills, loamy skeletal soils, open woodlands with short grasses and restricted cracking clay plains'* (Payne & Schoknecht, 2011). A summary of associated landforms and soils as identified from Payne & Schoknecht (2011) is provided in Table 4-1.

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Table 4-1 Land Systems within the DE

Land system	Landform	Soil
O'Donnell System	Hills and ridges	Outcrop with limited areas of reddish, shallow, gravelly skeletal soil.
	Hill-footslopes	Outcrop, with reddish skeletal soil; some shallow red sands.
	Interfluves	Outcrop, with reddish sandy and loamy skeletal soils with shallow brownish sands and loams over red clay.
	Cracking clay plains	Dark brown self-mulching clays.
	Alluvial drainage floors	– Complex of greyish to brownish sands and loams over tough domed clays. – Mottled yellowish sandy to loamy soils. – Clayey alluvial soils.
	Channels	Channels, bed-loads range from deep sand to cobbles. Banks, brownish loamy alluvial soils.

The Proposed Action is within an extremely low probability of occurrence of Acid Sulfate Soils (ASS) (Fitzpatrick *et al.*, 2011). ASS risk within and surrounding the DE is shown in Figure 4-2.

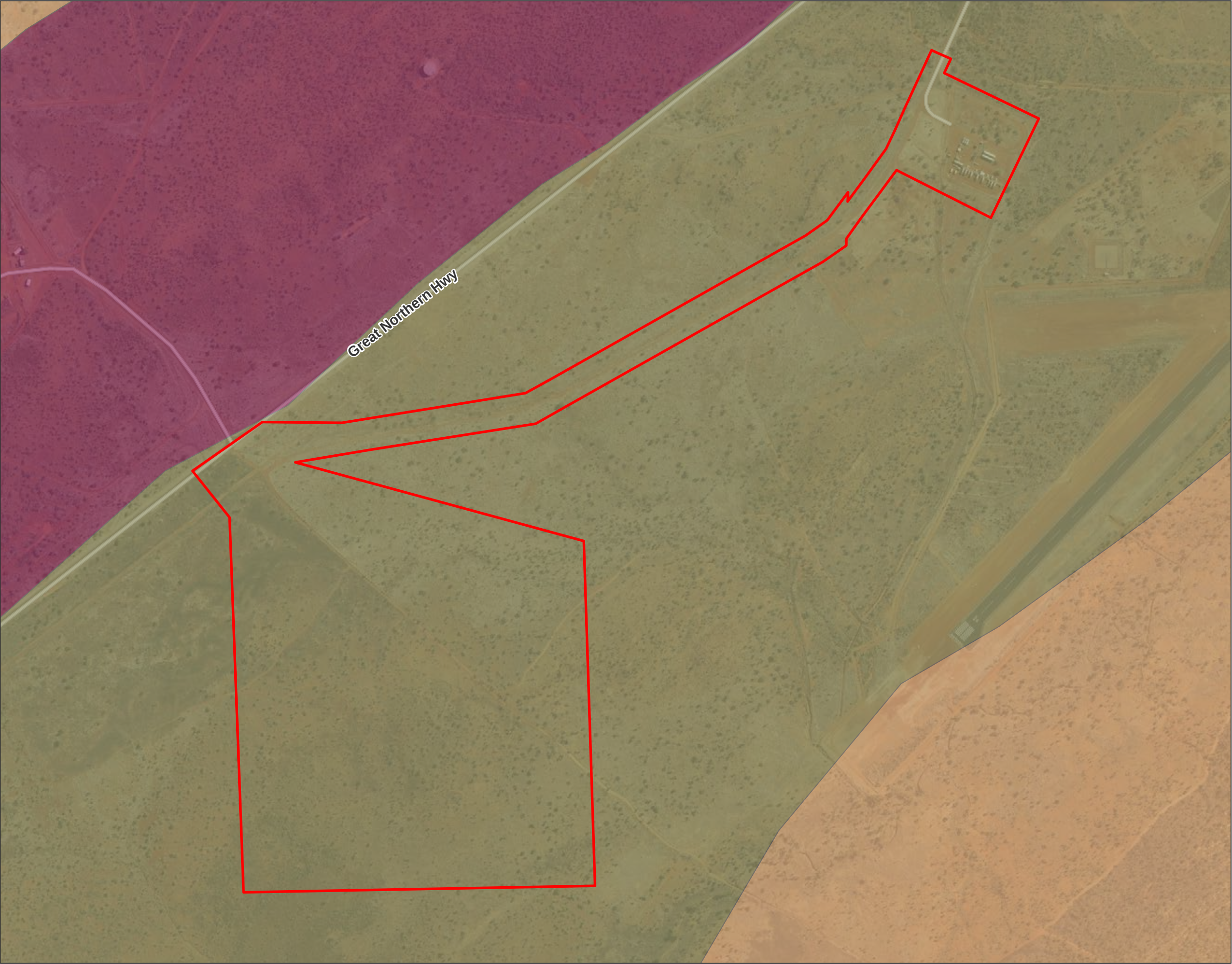
4.2.1 Contamination investigation – thermal power station site

Horizon Power engaged RPS Consultants (2026) to conduct a site inspection and soil sampling study within the thermal power station section of the DE. The study aimed to understand the current contamination status of the site and potential implications for development. The program undertaken comprised collection of shallow soil sampling at ten locations from across the site, submission of the samples to a NATA accredited laboratory, and analysis for a broad contamination suite appropriate for sites with similar development history and site usage.

No significant soil contamination was identified from the samples analysed, with results from the majority of samples below the laboratory limit of reporting (LOR) for each of the analytes, and all samples below the ecological and human health guidelines for commercial / industrial sites.

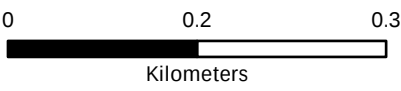
Based on the findings of the investigations completed, the site was considered suitable for continued use for power generation, with no impediment to further development of the surrounding area to support battery installation and solar power identified.

Figure 4-1 Land systems within and surrounding the Development Envelope

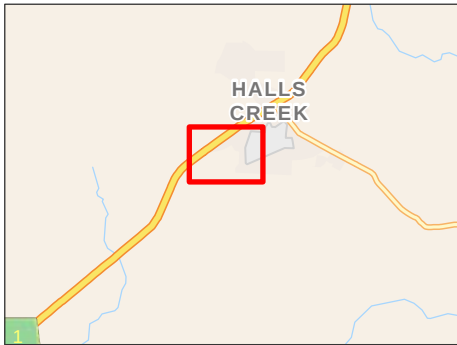


LEGEND

- Development envelope
- Soil Landscape Mapping - Systems (DPIRD-064)
 - Dockrell system
 - Koongie system
 - O'Donnell system
- Roads



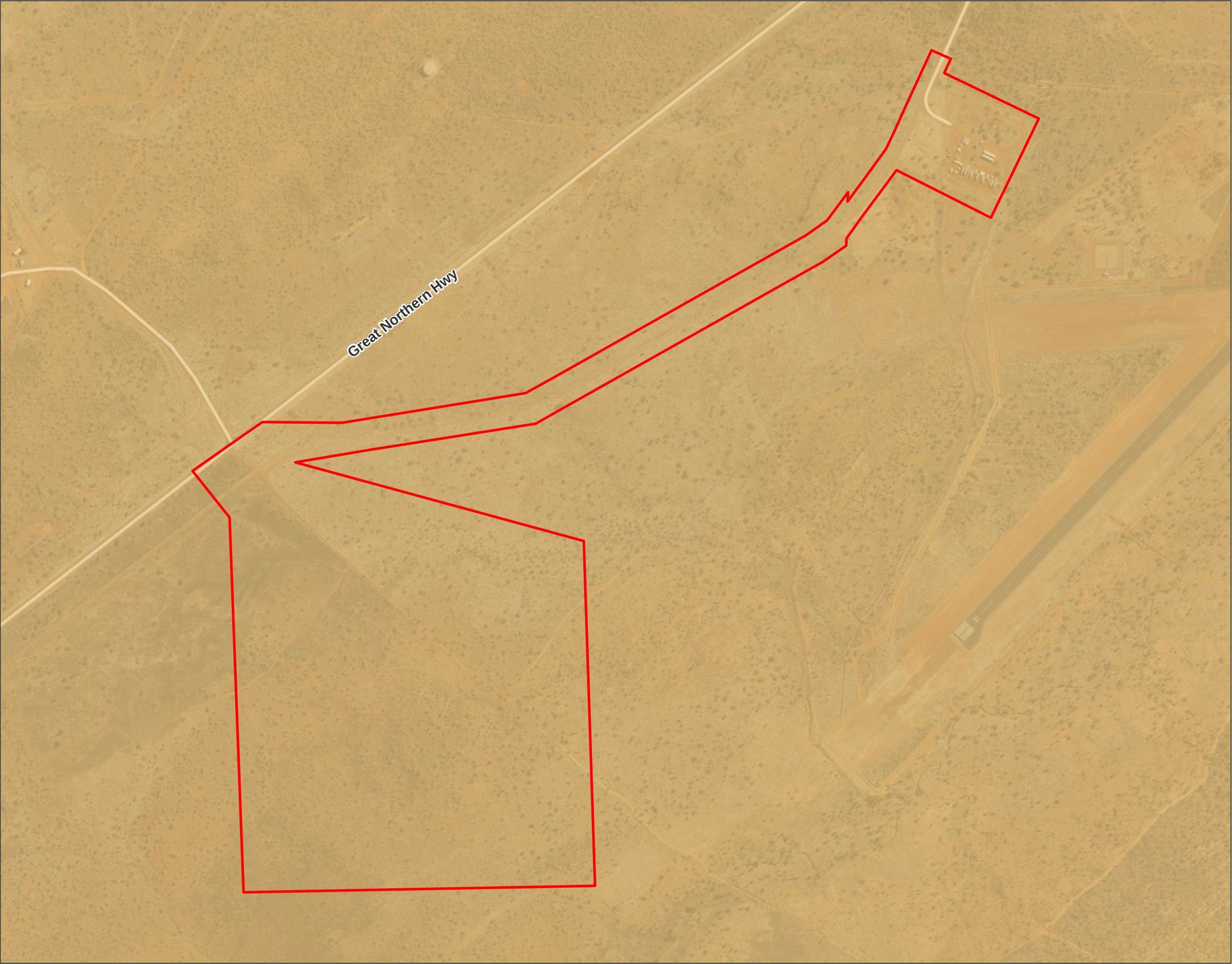
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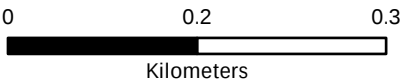


Figure 4-2 Acid Sulfate Soils within the Development Envelope

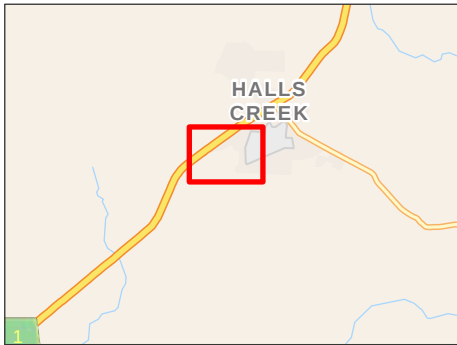


LEGEND

- Development envelope
- Acid Sulfate Soils (Fitzpatrick et al., 2011)
 - Cq(p4); extremely low probability of occurrence of ASS
- Roads



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4.3 Hydrology

Horizon Power engaged Engeny (2025) to undertake a desktop geotechnical and hydrology study of Halls Creek (Appendix B Geotechnical and Hydrology Desktop Assessment (Engeny, 2025)). This included an assessment of groundwater levels within the existing power station section of the DE and the proposed solar section of the DE.

4.3.1 Surface hydrology

The DE is within the Ord River (upper) catchment (GoWA; DWER-028) and Elvire River sub-catchment (GoWA; DWER-30). The biological survey (GHD, 2024) identified three minor drainage lines within the Survey Area, however, the DE has been selected to avoid all of these (see Figure 4-4). No significant or nationally important wetlands, rivers or watercourses are located in proximity to the Proposed Action. The closest RAMSAR site is the draft proposed Lake Gregory, approximately 150 km south of the DE (GoWA; DBCA-045, DBCA-010).

4.3.2 Groundwater

The Halls Creek Water Reserve Public Drinking Water Source Area (PDWSA) is located in close proximity of the DE (GoWA; DWER-033), with the Priority 3 area within 350 m and the Priority 1 area within 1 km east of the DE. The DE was selected to avoid this PDWSA. The DE overlaps the Canning-Kimberley Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) (GoWA; DWER-034).

Based on publicly available data, 19 groundwater monitoring bores are located within 1.5 km of the existing power station and comprise of (Engeny, 2025):

- Clay (with occasional gravel and sand) from surface depths ranging from 1.5 m to 12 m bgl, overlying:
 - Mixture of sedimentary, metamorphic and volcanic rock.

Groundwater monitoring bores within 2 km of the solar section of the DE include (Engeny, 2025):

- ID 80910044: comprising clay from surface to 33 m bgl, underlain by sandstone until termination depths
- ID 80910409: comprising clay from surface to 4 m bgl, underlain by basalt until termination depths.

No groundwater abstraction is proposed for the Proposed Action. The groundwater and surface water features in the vicinity of the DE are shown in Figure 4-3.

4.4 Elevation

The elevation within the DE is relatively flat throughout and ranges from 416 m to 426 m Australian Height Datum (AHD) (Topographic Map, n.d.).

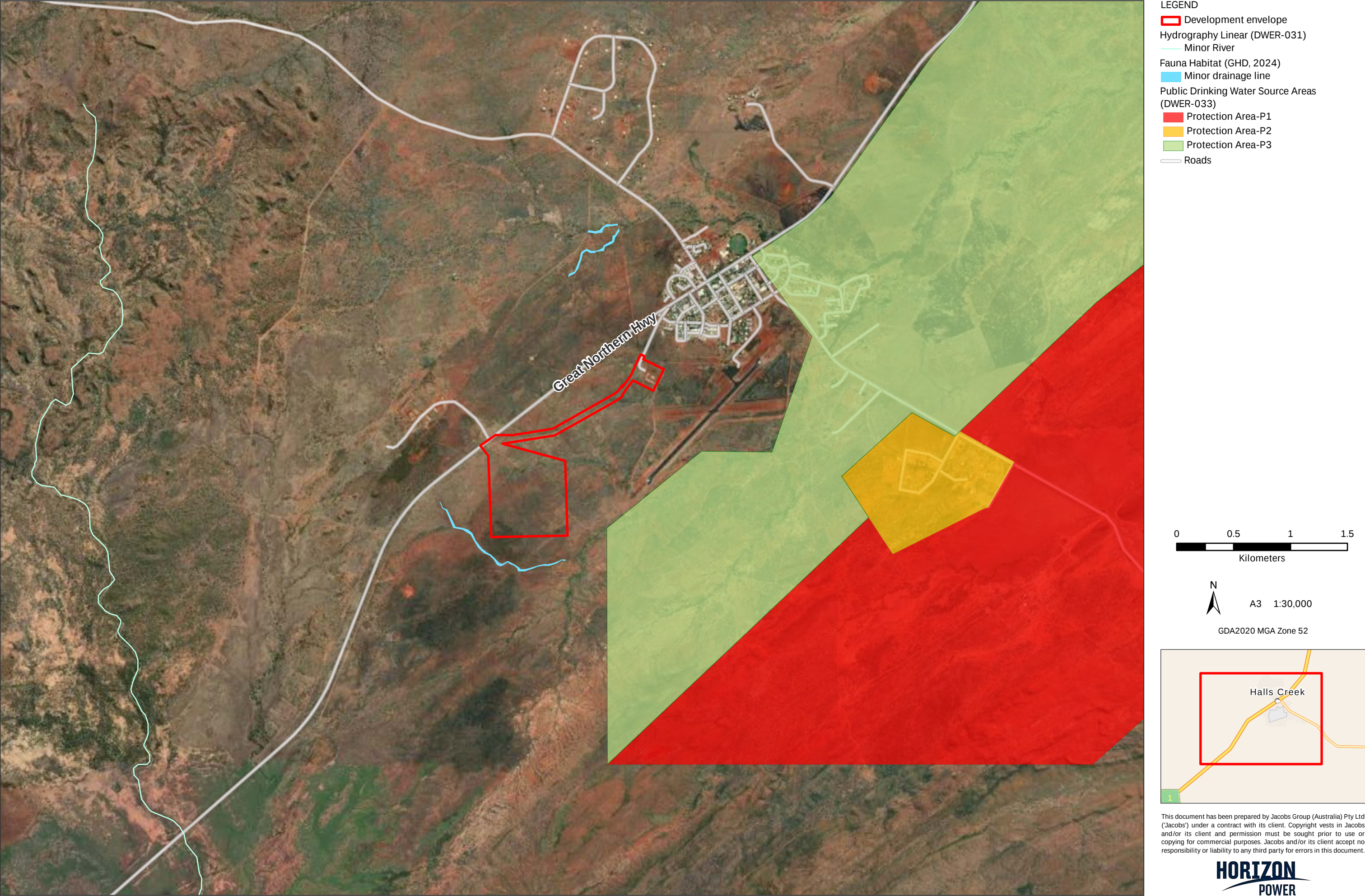
4.5 Regional biogeography

The Proposed Action is located within the Central Kimberley bioregion and Hart subregion as described by the Interim Biogeographic Regionalisation of Australia (IBRA).

The Central Kimberley bioregion is hilly to mountainous country with low plains. Vegetation is mainly curly spinifex savanna woodland with areas of semidesert spinifex steppe. Open forests of River Red Gum (*Eucalyptus camaldulensis*) and *Pandanus* spp. occur along drainage lines (DBCA, n.d.).

The Hart subregion is dominated by Hart dolerite and is described as hilly to mountainous country with parallel siliceous ranges of Proterozoic sedimentary rocks with skeletal sandy soils. This is the driest part of the Central Kimberley bioregion. Vegetation is mainly savannah woodland over *Triodia* spp. and/or bunch grasses (Graham, 2001).

Figure 4-3 Hydrology features within and surrounding Development Envelope



4.6 Flora and fauna

4.6.1 Surveys

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

- Environmental Protection Authority (EPA) Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- EPA Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA, 2020)
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) Survey Guidelines for Australia’s Threatened Mammals (DSEWPC, 2011a)
- DBCA Guidelines for surveys to detect the presence of bilbies, and assess the importance of habitat in WA (DBCA, 2017)
- DSEWPC Survey guidelines for Australia’s Threatened Reptiles (DSEWPC, 2011b)
- DSEWPC Survey Guidelines for Australia’s Threatened Mammals (DSEWPC, 2011c)
- DEWHA Survey Guidelines for Australia’s Threatened Bats (DEWHA, 2010a)
- DEWHA Survey Guidelines for Australia’s Threatened Birds (DEWHA, 2010b).

The GHD (2024) survey covered three sites under consideration, including the connection corridor and two solar farm options. These three sites surveyed are referred to as the Survey Area. The Survey Area totals to 195.14 ha.

The vegetation, flora and fauna surveys within the DE are outlined in Table 4-2 with the extent of survey coverage shown on Figure 4-4. The biological survey is provided in Appendix C Biological Survey: Kimberley IRP (GHD, 2024).

It should be noted that the existing thermal power station section of the DE was not surveyed. This area is 4.28 ha in size and is directly adjacent to the Survey Area. Approximately half of the site is already cleared for the existing power station. This area has been extrapolated using the survey data and aerial imagery and is assumed to be commensurate with the surrounding landscape.

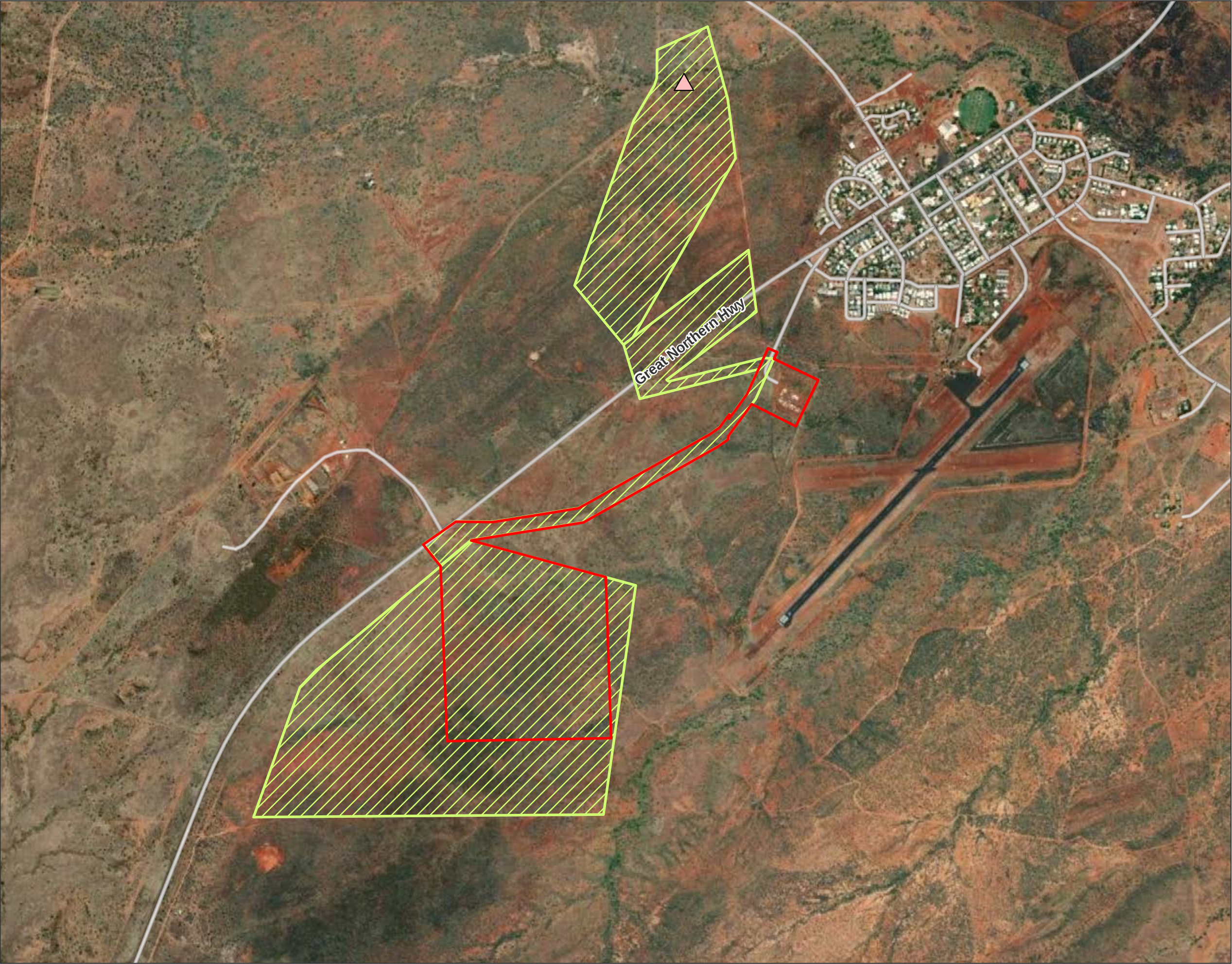
Table 4-2 Summary of flora, vegetation and fauna surveys conducted within and surrounding the Proposed Action

Survey	Details
Kimberley IRP: Biological Survey (GHD, 2024) – Halls Creek IBSA-2024-0323	Flora and vegetation scope: Detailed (single season) flora and vegetation survey, including a desktop assessment and field survey. Three sites were surveyed in Halls Creek. This survey was undertaken in accordance with EPA <i>Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment</i> (EPA, 2016). 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 3 quadrats and 1 relevé across the three Halls Creek sites. Fauna scope: Targeted and Basic fauna survey, including a desktop assessment and field survey. Three sites were surveyed in Halls Creek. This survey was undertaken in accordance with EPA <i>Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i> (EPA, 2020). 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 intermedia</i>), Northern Quoll (<i>Dasyurus hallucatus</i>) and Ghost Bat (<i>Macroderma gigas</i>) were undertaken in the Survey Area. The Basic survey also identified and recorded all fauna occurring in the area at the time of the survey.

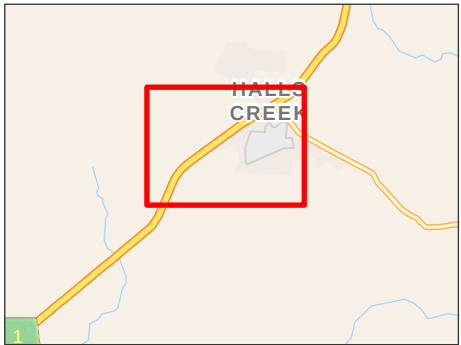
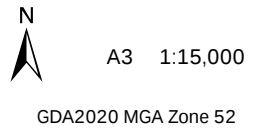
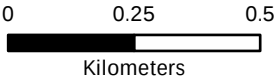
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Survey	Details
	Remote motion sensitive cameras were deployed in areas of suitable habitat to target fauna of conservation significance including Bilby and Northern Brushtail Possum. SM4 ® and Anabat Swift bat call detectors were set for general bat activity and to target the Ghost Bat. Survey dates: 22 to 26 April 2024. Survey Area: Survey Area in Halls Creek covered 195.14 ha. Limitations: One minor limitation was listed for the Halls Creek field survey, mapping reliability. Data was recorded using field hand-held GPS tools. According to GHD, certain atmospheric factors and other sources of error can affect the accuracy of GPS receivers, including tree canopies. These are typically +/-5m.

Figure 4-4 Survey Area



- LEGEND
- Development envelope
 - Survey Area
 - Roads
 - Fauna recorded
 - Gouldian Finch



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4.6.2 Flora diversity

A total of 135 vascular flora species from 39 families and 93 genera (including subspecies and variants) were recorded within the Survey Area. The dominant plant families were Fabaceae, Poaceae and Malvaceae, with *Acacia*, *Goodenia*, *Indigofera* and *Ptilotus* the most frequently recorded genera. A total of seven taxa were tentatively identified (six to genus level and one to species level) due to insufficient material for identification (such as flowers/fruit). Of the flora species recorded 93% were native taxa (GHD, 2024).

4.6.3 Introduced species

A total of nine introduced flora species were recorded, including (GHD, 2024):

- **Aerva javanica*
- **Ipomoea nil*
- **Clitoria ternatea*
- **Leucaena leucocephala* subsp. *leucocephala*
- **Stylosanthes hamata*
- **Azadirachta indica*
- **Passiflora foetida* var. *hispida*
- **Cenchrus ciliaris*
- **Eragrostis tenella*

**Azadirachta indica* is a Declared Pest under the *Biosecurity and Agriculture Act 2007*.

4.6.4 Significant flora

The EPBC Act Protected Matters Search Tool (PMST), NatureMap and DBCA databases identified the presence/potential presence of six significant flora taxa within a 20 km buffer of the Survey Area (GHD, 2024).

Three individuals of a significant flora species were recorded, the Priority 3 *Goodenia crenata*. A DBCA listed Priority flora species. This species is not listed under the EPBC Act.

No EPBC Act or *Biodiversity and Conservation 2016* (BC Act) listed Threatened flora taxa were recorded within the DE during the field survey (GHD, 2024). Further, no flora taxa recorded represented range extensions or flora of interest (such as undescribed species or taxonomic anomalies).

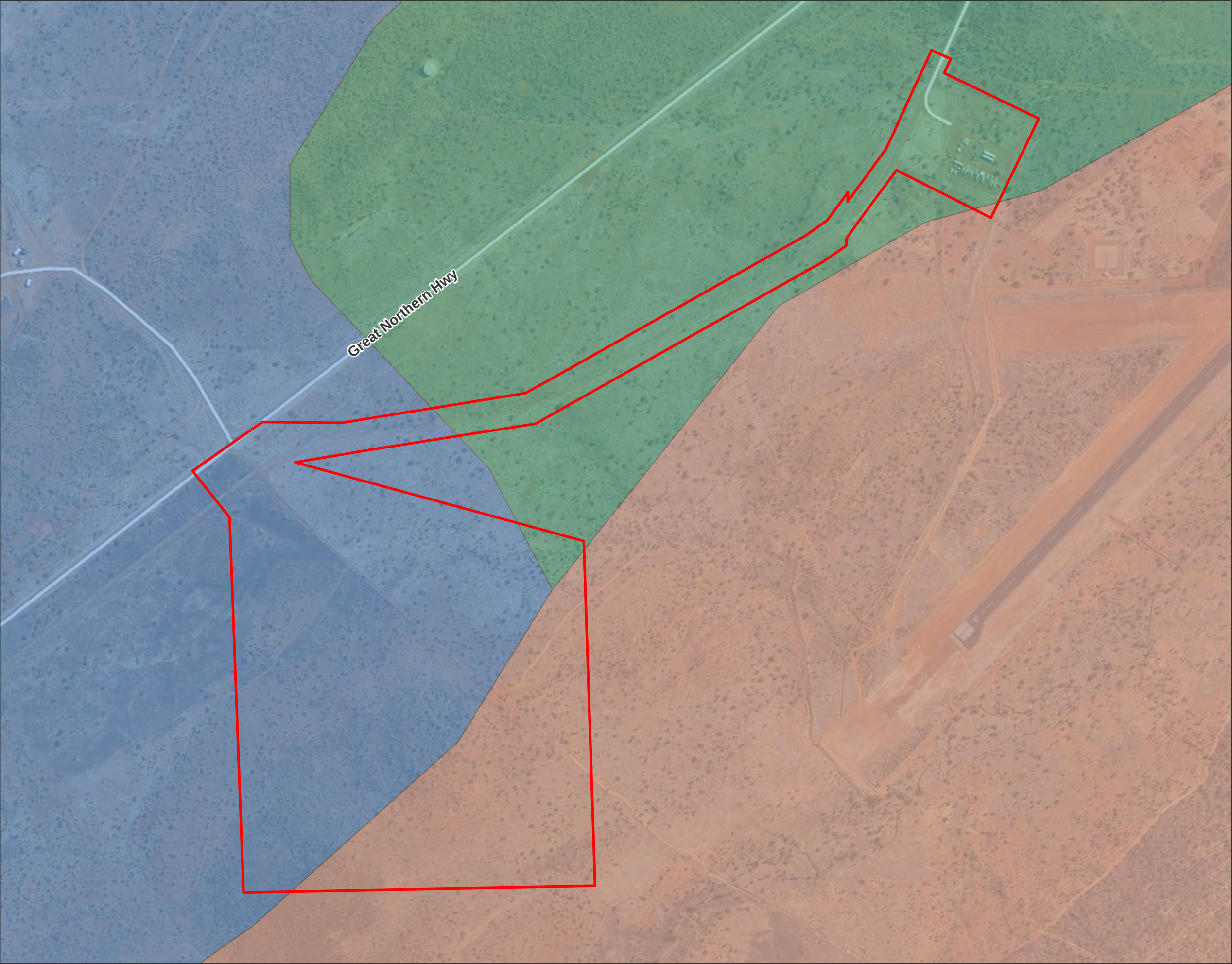
4.6.5 Vegetation

Broadscale (1:250,000) pre-European vegetation (Beard, 2013) indicates that the DE intersects three vegetation association (Table 4-3 and Figure 4-5):

- Bow River Hills 871: Curly spinifex or short grass low tree savanna / grass-steppe.
- Bow River Hills 837: Grasslands, short bunch-grass low-tree savana, short grasses with scattered trees.
- Bow River Hills 834: Grasslands, tall bunch-grass savanna, mainly Mitchell grass.

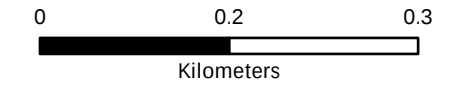
Vegetation associations 871, 837 and 834 are well above the Commonwealth and State Government targets of 30% of pre-European extent.

Figure 4-5 Pre-european vegetation within the Development Envelope

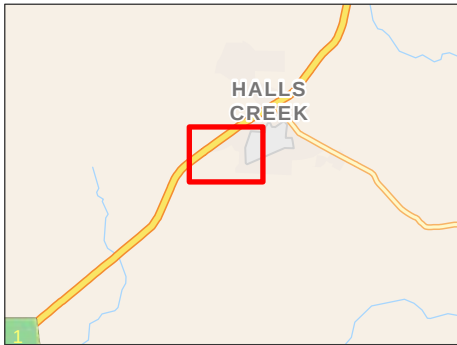


LEGEND

- Development envelope
- Pre-European Vegetation (DPIRD-006)
 - 834; Bow River Hills
 - 837; Bow River Hills
 - 871; Bow River Hills
- Roads



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Table 4-3 Vegetation associations within the DE

Vegetation association	Scale	Pre-European extent (ha)	Current extent (ha)	% Remaining
871	State: WA	230,547.71	230,264.07	99.88
	IBRA Bioregion: Central Kimberley	230,415.48	230,131.84	99.88
	IBRA Subregion: Hart	230,415.48	230,131.84	99.88
	LGA: Shire of Halls Creek	230, 547.71	230,131.84	99.88
837	State: WA	172,815.95	172,553.02	99.85
	IBRA Bioregion: Central Kimberley	151,537.39	151,274.46	99.83
	IBRA Subregion: Hart	148,106.42	147,843.49	99.82
	LGA: Shire of Halls Creek	151,971.74	151,708.81	99.83
834	State: WA	32,597.17	32,588.83	99.97
	IBRA Bioregion: Central Kimberley	24,391.01	24,382.67	99.97
	IBRA Subregion: Hart	24,391.01	24,382.67	99.97
	LGA: Shire of Halls Creek	27,748.71	27,740.37	99.97

4.6.6 Vegetation type and condition

The DE comprises of native vegetation representing three vegetation types (GHD, 2024). Development of the Proposed Action requires permanent clearing of up to 11.37 ha within the DE. Table 4-4 provides a summary of the vegetation types within the DE and Figure 4-6 shows the distribution of the vegetation types.

The GHD (2024) survey also recorded vegetation condition across the DE. The vegetation condition ranges from Excellent to Degraded, with majority of the vegetation (76.63%) in Excellent condition (GHD, 2024). Table 4-4 provides a summary of the vegetation condition within the DE and Figure 4-7 shows the distribution of the vegetation condition.

It should be noted that the existing power station section of the DE was not surveyed (see Figure 4-4), this area is 4.28 ha in size. This unsurveyed area is directly adjacent to the GHD (2024) Survey Area and therefore has been extrapolated using the survey data and via aerial imagery.

Table 4-4 Mapped vegetation types within the DE

Vegetation type	Vegetation description	Vegetation extent within DE (ha) - (GHD, 2024)	Vegetation extent within DE (ha) - extrapolated	Total vegetation extent within DE – GHD (2024) + extrapolated
VT09	Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> and <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> over closed shrubland of <i>Acacia trachycarpa</i> , <i>Acacia colei</i> and <i>Grevellea pyramidalis</i> subsp. <i>pyramidalis</i> on red/brown sandy loam on rocky gentle slopes/low rise to minor drainage line.	2.96	-	2.96
VT10	Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> and <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> over open shrubland of <i>Acacia colei</i> , <i>Grevellea pyramidalis</i> subsp.	19.12	-	19.12

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Vegetation type	Vegetation description	Vegetation extent within DE (ha) - (GHD, 2024)	Vegetation extent within DE (ha) - extrapolated	Total vegetation extent within DE – GHD (2024) + extrapolated
	<i>pyramidalis</i> and <i>Acacia ancistrocarpa</i> on brown sandy loam on rocky low hills and slopes.			
VT11	Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> , <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> and <i>Lysiphyllum cunninghamii</i> over open shrubland of <i>Acacia coleii</i> , <i>Ehretia saligna</i> and <i>Gossypium australe</i> on brown sandy clay on clay flats and rocky plains with a minor drainage line.	36.53	2.31	38.84
Cleared	Areas devoid of native vegetation, such as tracks and historically cleared areas.	1.53	1.97	3.50
Total		60.14	4.28	64.42

Table 4-5 Mapped vegetation condition within the DE

Vegetation condition	Vegetation condition extent within the DE (ha) – GHD (2024)	Vegetation condition extent within DE (ha) - extrapolated	Total vegetation condition extent within DE (ha) – GHD (2024) + extrapolated	% of DE
Excellent	49.37	-	49.37	76.63
Good	8.91	2.31	11.22	17.42
Degraded	0.33	-	0.33	0.51
Cleared	1.53	1.97	3.50	5.44
Total	60.14	4.28	64.42	100

4.6.7 Threatened Ecological Communities

The GHD (2024) survey did not identify any vegetation types that represent Threatened Ecological Communities (TECs) within the DE.

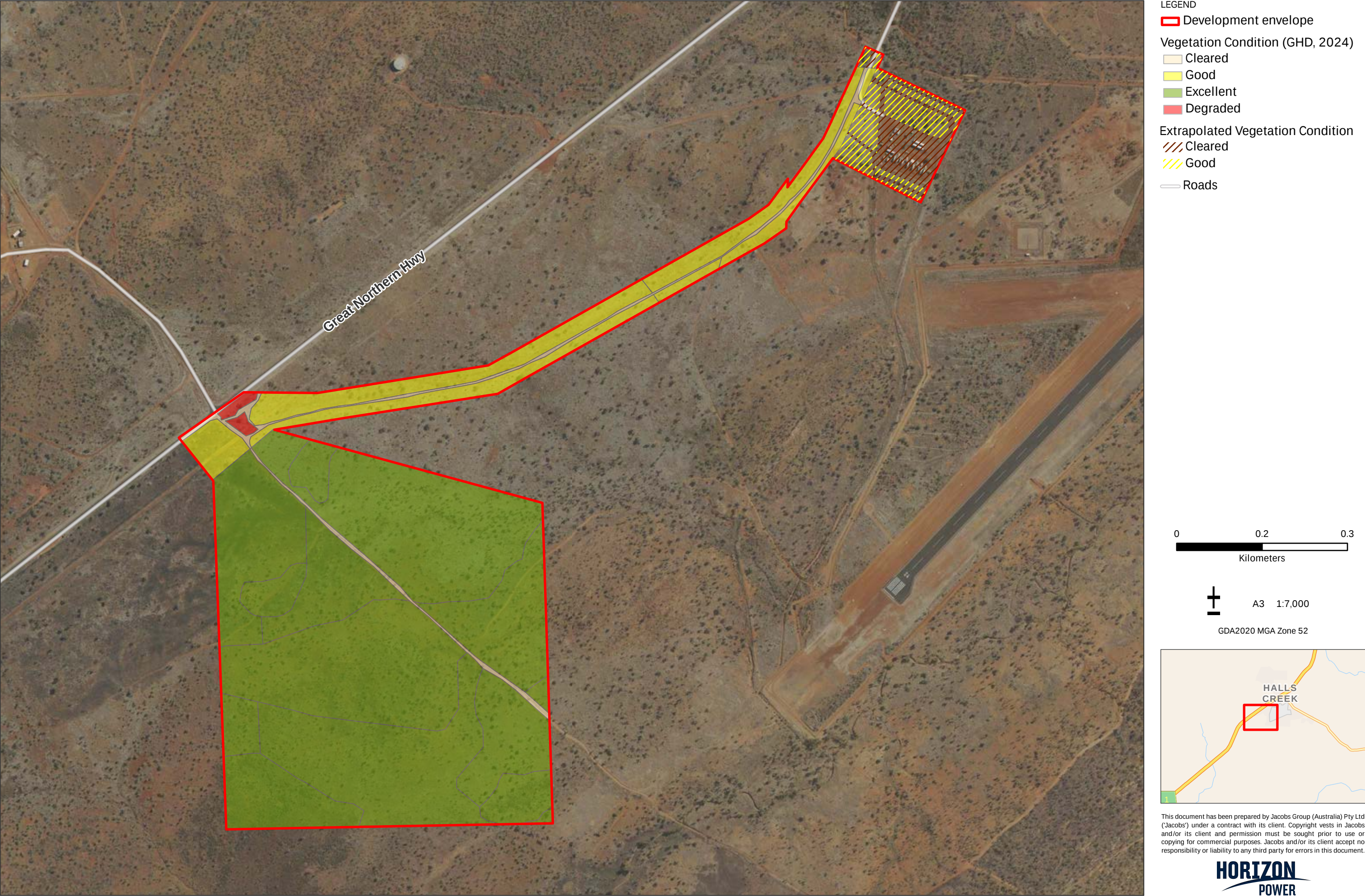
4.6.8 Riparian vegetation

VT09 and part of VT11 are considered riparian vegetation (GHD, 2024). The riparian areas were identified as minor drainage lines, containing mature *Eucalyptus* and *Corymbia* and *Lysiphyllum cunninghamii* trees, and moderate drainage lines containing mature *Eucalyptus* and *Corymbia* and *Melaleuca bracteata* trees over isolated shrubs of *Flueggea virosa* subsp. *Melanthesoides* and *Leucaena leucocephala* subsp. *leucocephala*.

Figure 4-6 Vegetation types within the Development Envelope



Figure 4-7 Vegetation condition within the Development Envelope



4.6.9 Fauna habitat

Three fauna habitat types have been mapped across the DE (GHD, 2024).

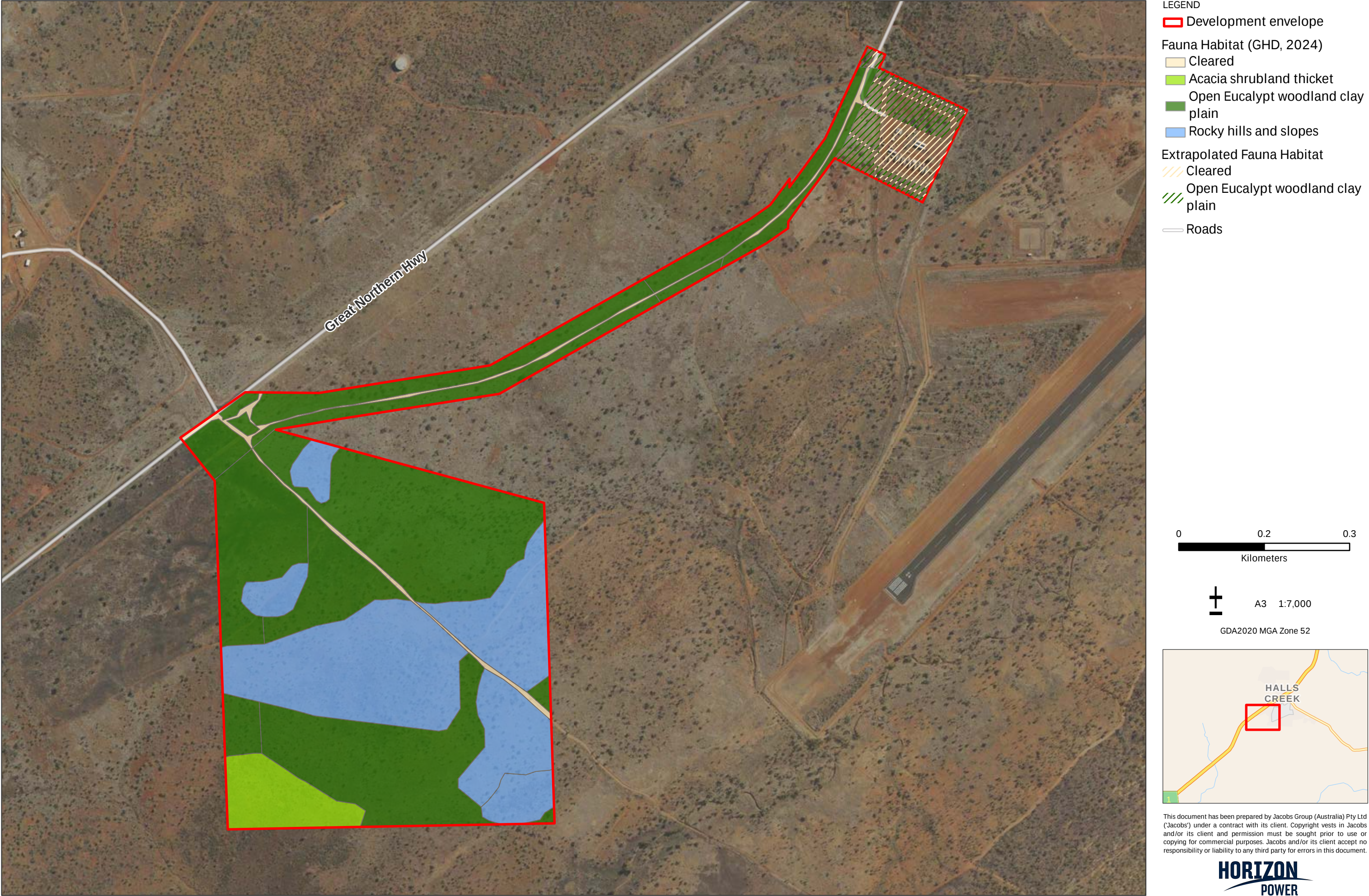
A summary of fauna habitat types present within the DE are detailed in Table 4-6 below and shown on Figure 4-8. As noted above, the existing power station section of the DE was not surveyed (see Figure 4-4), this area is 4.28 ha in size. This unsurveyed area is directly adjacent to the GHD (2024) Survey Area and therefore has been extrapolated using the survey data and via aerial imagery.

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Table 4-6. Fauna habitats recorded within the DE

Fauna habitat types	Fauna habitat value	Extent within the DE (ha) – GHD (2024)	Extent within DE (ha) – extrapolated	Total extent within DE – GHD (2024) + extrapolated
Open Eucalypt woodland clay plain Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> , <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> and <i>Lysiphyllum cunninghamii</i> over open shrubland of <i>Acacia colei</i> , <i>Ehretia saligna</i> and <i>Gossypium australe</i> on brown loam clay on clay flats and rocky plains with a minor drainage line.	Habitat value: High – Gouldian Finch (<i>Chloebeia gouldiae</i>) – supporting habitat – Ghost Bat (<i>Macroderma gigas</i>) – supporting habitat – Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>) – supporting habitat – Grey Falcon (<i>Falco hypoleucos</i>) – supporting habitat – Barn Swallow (<i>Hirundo rustica</i>) – supporting habitat – Oriental Pratincole (<i>Glareola maldivarum</i>) – supporting habitat – Yellow Wagtail (<i>Motacilla flava</i>) – supporting habitat	36.53	2.31	38.84
Acacia shrubland thicket Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> and <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> over closed shrubland of <i>Acacia trachycarpa</i> , <i>Acacia colei</i> and <i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i> on red/brown sandy loam on rocky gentle slopes/low rise to minor drainage line.	Habitat value: High – Gouldian Finch (<i>Chloebeia gouldiae</i>) – supporting habitat – Ghost Bat (<i>Macroderma gigas</i>) – supporting habitat – Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>) – supporting habitat – Grey Falcon (<i>Falco hypoleucos</i>) – supporting habitat – Barn Swallow (<i>Hirundo rustica</i>) – supporting habitat – Yellow Wagtail (<i>Motacilla flava</i>) – supporting habitat	2.96	-	2.96
Rocky hills and slopes Open woodland of <i>Eucalyptus alba</i> var. <i>australasica</i> and <i>Corymbia ferruginea</i> subsp. <i>stypophylla</i> over open shrubland of <i>Acacia colei</i> , <i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i> and <i>Acacia ancistrocarpa</i> on brown sandy loam on rocky low hills and slopes.	Habitat value: High – Gouldian Finch (<i>Chloebeia gouldiae</i>) – supporting habitat – Ghost Bat (<i>Macroderma gigas</i>) – supporting habitat	19.12	-	19.12
Cleared	-	1.53	1.97	3.50
TOTAL		60.14	4.28	64.42

Figure 8-2 Fauna Habitats within the Development Envelope



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4.6.10 Significant fauna

Based on the database searches (NatureMap, DBCA database and PMST), GHD (2024) identified 41 significant terrestrial vertebrate taxa as likely or known to be present within 20 km of the Survey Area. These species included:

- 27 bird species
- 6 mammal species
- 6 reptile species
- 2 freshwater fish species

The GHD (2024) survey recorded one conservation significant fauna species, the Gouldian Finch (*Chloebeia gouldiae* - Endangered). Post-survey an additional eight conservation significant fauna were identified as likely to occur within the Survey Area. Conservation significant fauna known or likely to occur include the:

- Gouldian Finch (*Chloebeia gouldiae*) - Endangered
- Ghost Bat (*Macroderma gigas*) – Vulnerable
- Grey Falcon (*Falco hypoleucos*) – Vulnerable
- Northern Blue-tongue Skink (*Tiliqua scincoides intermedia*) – Critically Endangered
- Mitchell's Water Monitor (*Varanus mitchelli*) – Critically Endangered
- Merten's Water Monitor (*Varanus mertensi*) – Endangered
- Barn Swallow (*Hirundo rustica*) – Migratory
- Oriental Pratincole (*Glareola malvidarum*) – Migratory
- Yellow Wagtail (*Motacilla flava*) – Migratory

The Merten's Water Monitor (*Varanus mertensi*) and Mitchell's Water Monitor (*Varanus mitchelli*) were both considered likely to occur within the Survey Area by GHD (2024) due to the suitable minor drainage line habitat. Noting that GHD did state that if present within the Survey Area, both species would occur in lower numbers as it is on the outer end of its range. However, the DE has been designed to avoid this drainage habitat.

The Merten's Water Monitor is highly aquatic and seldom ventures more than 5-10 m from water's edge (DCCEEW, 2023a). Merten's Water Monitor is therefore considered unlikely to occur in the DE.

Mitchell's Water Monitor is semi-aquatic and typically inhabits freshwater and saline wetlands including seasonal gorges in upper catchments, large rivers and coastal floodplains (DCCEEW, 2023b). The species is known to shelter under bark and in hollow tree branches overhanging water bodies (Wilson & Knowles), it is often associated with Pandanus and other areas of woody vegetation directly adjacent to waterbodies (Wilson & Knowles 1988; Doody *et al.*, 2009, 2015; de Laive *et al.*, 2021). Given the GHD (2024) assessment that suitable habitat for the species occurs within the drainage line of the Survey Area, and that the species may be present in low numbers at the outer extent of its range, combined with the fact that this drainage habitat has been avoided, Mitchell's Water Monitor is considered unlikely to occur within the DE. As these monitor species are considered unlikely to occur within the DE, they are not discussed further within this document.

A new Protected Matter Search Tool (PMST) was undertaken in February 2026 and no new species have been identified, therefore the GHD (2024) likelihood assessment (Appendix D Protected Matters Search Tool (20 km buffer)) remains appropriate. Conservation significant species considered known or likely to occur are discussed in Table 4-7.

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Table 4-7 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
Gouldian Finch (<i>Chleobia gouldiae</i>)	Endangered	Priority 4	Known to occur There are regional records of this species, and a Gouldian Finch individual was recorded approximately 1 km north of the DE (within the drainage line habitat with flowing water) during the GHD (2024) survey. This drainage line habitat has been avoided, however the surrounding habitats (particularly within the connection corridor section of the DE) would be utilised for foraging by the species and provides supporting habitat.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE) - Rocky hills and slopes: foraging (19.12 ha within the DE)
Ghost Bat (<i>Macroderma gigas</i>)	Vulnerable	Vulnerable	Likely to occur While the species was not recorded during the GHD (2024) survey and there is no suitable roosting habitat present within the DE, the species is considered likely to occur due to historical records in the region and extensive potential roosting habitat in the surrounding area (GHD, 2024). The species is considered likely to forage within the DE on an at least an occasional basis.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE) - Rocky hills and slopes: foraging (19.12 ha within the DE)
Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>)	Critically Endangered	Critically Endangered	Likely to occur The Northern Blue-tongue Skink has records from the area and is considered likely to occur in the Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats within the DE, utilising the drainage lines within the Survey Area as a water source. There are numerous drainage networks across the region that would support movement of this species within the landscape, after heavy rainfall events (GHD, 2024). The species may occur in low numbers throughout the DE as it is on the outer edge of its range.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE)
Barn Swallow (<i>Hirundo rustica</i>)	Migratory	Migratory	Likely to occur While the species was not recorded during the GHD (2024) survey, it is considered likely to occur (at least on an occasional basis during the non-breeding season) within the DE due to regional records as well as suitable foraging habitat present within the DE.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE)
Grey Falcon (<i>Falco hypoleucos</i>)	Vulnerable	Vulnerable	Likely to occur	Supporting habitat Acacia shrubland thicket: foraging (2.96 ha within the DE)

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Fauna species	EPBC Act status	BC Act/DBCA status	Likelihood of occurrence	Suitable habitat within the DE
			The Grey Falcon was not recorded during the GHD (2024) survey, however, there is suitable supporting habitat available within the DE and surrounds. Additionally, local and regional occurrences have been recorded. Therefore, the species is likely to occur within the DE on an occasional or seasonal basis when water is available (GHD, 2024).	Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE)
Oriental Pratincole <i>(Glareola maldivarum)</i>	Migratory	Migratory	Likely to occur The species was not recorded during the GHD (2024) survey, however it is known to occur locally and suitable foraging habitat is present within the DE. The species is considered likely to occur aerially over the DE, hawking for insects on at least an occasional basis.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE)
Yellow Wagtail <i>(Motacilla flava)</i>	Migratory	Migratory	Likely to occur The species was not recorded during the GHD (2024) survey; however, it is considered likely to occur due to being recorded locally as well as suitable habitat within the DE. The species is considered likely to occur on at least an occasional seasonal basis.	Supporting habitat - Acacia shrubland thicket: foraging (2.96 ha within the DE) - Open Eucalypt woodland clay plain: foraging (38.84 ha within the DE)

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4.6.10.1 Threatened species

4.6.10.1.1 Gouldian Finch (*Chleobia gouldiae*) – Endangered – Known to Occur

Table 4-8 Gouldian Finch species profile

Gouldian Finch (<i>Chleobia gouldiae</i>)	
Protection status	Endangered under EPBC Act; Priority 4 DBCA
Conservation advice	Threatened Species Scientific Committee (2016a). Conservation Advice <i>Erythrura gouldiae</i> Gouldian Finch.
Recovery plan	O'Malley, C. (2006). National Recovery Plan for the Gouldian Finch (<i>Erythrura gouldiae</i>).
Threat abatement plan(s)	– Department of Climate Change, Energy, the Environment and Water (2024). Threat abatement plan for predation by feral cats 2024. – Department of Sustainability, Environment, Water, Population and Communities (2012). Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses. – Department of the Environment and Energy (2017). Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (<i>Sus scrofa</i>) (2017).
Abundance and distribution	The Gouldian Finch is found in northern Australia from Cape York Peninsula through to north-west Queensland and the north of the Northern Territory to the Kimberley region of Western Australia (Higgins <i>et al.</i> , 2006; O'Malley, 2006). The species has an estimated area of occupancy of 1,896 km ² (TSSC, 2016a).
Habitat preferences	The Gouldian Finch is primarily found in open woodlands that are dominated by <i>Eucalyptus</i> 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 <i>Eucalyptus</i> trees (especially <i>E. tintinnans</i> , <i>E. brevifolia</i> and <i>E. leucophloia</i>) (Higgins <i>et al.</i> , 2006).
Relevant biology	The Gouldian Finch nests between April-July (although this period is extended some years) (Tidemann <i>et al.</i> , 1999).
Threats	The species conservation advice (TSSC, 2016a) lists the following threats: vegetation change through altered fire regimes, grazing by introduced herbivores, and ongoing localised threats to some breeding habitat from developments such as mining.
Species presence in DE	The Gouldian Finch was recorded during the GHD (2024) survey, approximately 1.1 km north of the DE in a minor drainage line habitat (see Figure 4-4). The minor drainage line habitat has been removed from the DE to reduce potential impacts to this species. There are 9 records of the Gouldian Finch on the DBCA database within 20 km of the DE.
Habitat importance	The National Recovery Plan for the Gouldian Finch defines habitat critical to the survival of the Gouldian Finch as (O'Malley, 2006) as: – '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'. GHD (2024) states that the species would likely utilise all habitat types apart from the Rocky hills and slopes. However, based on the species habitat preferences, it is considered possible that the species would utilise the Rocky hills and slopes habitat. Therefore, all habitat types within the DE are considered suitable for the Gouldian Finch. This includes: – Open Eucalypt woodland clay plain; 38.84 ha in DE – Acacia shrubland thicket; 2.96 ha in DE – Rocky hills and slopes; 19.12 ha in DE.

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Gouldian Finch (<i>Chloebia gouldiae</i>)	
	These habitats do not contain known breeding habitat for the species (O'Malley, 2006), with the hollow-bearing smooth-barked gum (<i>Eucalyptus brevifolia</i> or <i>Eucalyptus tintinnans</i>) absent from the Survey Area and DE. Further, the minor drainage habitat is not perennial, it is seasonal and was recorded following the wet season (GHD, 2024). Therefore, these habitats are not considered critical habitat to the species. However, based on these habitats containing suitable feeding habitat within 2 km of a seasonal drainage line, all habitats recorded are considered supporting habitat to the Gouldian Finch. A total of 60.92 ha of supporting habitat for this species was recorded within the DE. Approximately 134,377.4 ha of suitable habitat for the species has been identified within a 20 km buffer¹ of the DE, indicating that suitable habitat is regionally abundant around Halls Creek.

4.6.10.1.2 Ghost Bat (*Macroderma gigas*) – Vulnerable – High Likelihood of Occurrence

Ghost Bat (<i>Macroderma gigas</i>)	
Protection status	Vulnerable under EPBC Act; Vulnerable under BC Act
Conservation advice	Threatened Species Scientific Committee (2016b). Conservation Advice <i>Macroderma gigas</i> Ghost Bat.
Recovery plan	DCCEEW, 2025. Draft National Recovery Plan for the Ghost Bat (<i>Macroderma gigas</i>).
Threat abatement plan(s)	- Department of Climate Change, Energy, the Environment and Water (2024). Threat abatement plan for predation by feral cats 2024. - Department of the Environment, Water, Heritage and the Arts (2008). Threat abatement plan for predation by the European red fox.
Abundance and distribution	The species has a fragmented distribution, with isolated colonies found across the Pilbara, Kimberley, Northern Territory, the Gulf of Carpentaria, eastern Queensland and parts of Western Queensland. Only 14 breeding sites are currently known (Worthington Wilmer, 2012). The WA population (comprising the Pilbara and Kimberley) is estimated to be around 4,300 – 6,000 individuals (TSSC, 2016b). With the Kimberley population size around 3,000 – 4,000 individuals (TSSC, 2016b). Ghost Bat populations display genetic variation as they are fragmented, with Pilbara populations being isolated from those in the Kimberley and NT (Armstrong and Wilmer, 2004). Given this, it is considered that all Ghost Bat populations represent an important population.
Habitat preferences	The Ghost Bat occupies a range of habitats, ranging from arid regions to tropical savanna woodland and rainforests. The species is known to roost within caves, rock crevices and disused mines during the day. While foraging, the species perches in vegetation, typically within 1.9 km from their daytime roosts. There is limited survey data available for this species in the Kimberley region, however, the Kimberley colonies are likely to be relatively stable (TSSC, 2016b). The species may forage over large areas depending on the productivity of the landscape (McKenzie & Bullen, 2009). The occurrence of pools of water is a critical component of Ghost Bat foraging habitat (Armstrong, 2001). With the species foraging in cave entrances, drainage lines, along riparian corridors, on alluvial plains, and in mulga woodlands and tussock grassland (Cramer <i>et al.</i>, 2022).
Relevant biology	There is no reliable public information regarding the breeding cycle of this species.
Threats	Threats to the Ghost Bat include (TSSC, 2016b): - Habitat loss due to mining - Disturbance of breeding sites - Modification of breeding habitat

¹ The methodology used for the habitat buffers in this document involves generating the specified buffer distance (e.g., 20 km) around the DE, removing the DE itself from that buffer, and intersecting the remaining area with the Native Vegetation Extent layer (GoWA, 2026; DPIRD005). This output is then further intersected with the Pre-European Vegetation layer (GoWA, 2026; DPIRD006). The total potential habitat available to each species is determined by comparing these intersected areas with the species' described habitat preferences. This approach does not confirm that a species actively uses these areas; rather, it identifies surrounding vegetation that may be suitable based on known habitat characteristics.

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Ghost Bat (<i>Macroderma gigas</i>)	
	– Collision with fences – Collapse or reworking of old mine adits – Disease – Poisoning of cane toads – Competition for prey with foxes and feral cats The Recovery Plan (DCCEEW, 2025) also identifies particular areas that may be under pressure and include the Kimberley region due to recent cane toad arrival (from 2009 – 2025), possible mining activities, and entanglement in barbed wire.
Species presence in DE	The Ghost Bat was not recorded during the GHD (2024) survey despite a targeted search for the species (i.e., SM4 [®] and Anabat Swift bat call detectors), and there are no records of the Ghost Bat on the DBCA database within 20 km of the DE.
Habitat importance	Critical Habitat includes maternity roosts, permanent roosts and regular roosts and their surrounding foraging area. With opportunistic roosts occasionally critical in some circumstances (DCCEEW, 2025). GHD (2024) did not locate any suitable roosting habitat within the DE. However, due to the extensive potential roosting habitats present within the region, the species is considered likely to occur in all three habitat types within the DE on at least an occasional basis, likely for foraging. Therefore, the following habitat types within the DE are suitable for the Ghost Bat: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE – Rocky hills and slopes (supporting); 19.12 ha in DE. Based on no suitable roosting habitat within the DE or wider Survey Area, these habitats are considered supporting habitat to the Ghost Bat. There is 60.92 ha of supporting habitat for this species within the DE and approximately 134,377.4 ha of suitable habitat for the species within 20 km of the DE. A 20 km buffer is considered suitable for this species due to its highly mobile nature when dispersing between roosting and foraging sites.

4.6.10.1.3 Northern Blue-tongue Skink (*Tiliqua scincoides intermedia*) – Critically Endangered - High Likelihood of Occurrence

Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>)	
Protection status	Critically Endangered under EPBC Act; Priority 4 DBCA
Conservation advice	Department of Climate Change, Energy, the Environment and Water (2023). Conservation Advice for <i>Tiliqua scincoides intermedia</i> (Northern Blue-tongue Skink).
Recovery plan	There is no recovery plan available for this species.
Threat abatement plan(s)	– Department of Climate Change, Energy, the Environment and Water (2024). Threat abatement plan for predation by feral cats 2024. – Department of the Sustainability, Environment, Water, Population and Communities (2011). Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads.
Abundance and distribution	The abundance of Northern Blue-tongue Skink can be high but locally heterogenous in areas that are free of Cane Toads (DCCEEW, 2023c), which have been recorded in Halls Creek. Studies show that there may be a minimum of 0.3 to 5.6 mature skink individuals per km of linear suitable habitat (Bruton and Smith, 2019). Most movements of the Northern Blue-tongue Skink are shorter than 20 m and their home ranges are approximately 2 to 12 ha (Price-Rees <i>et al.</i>, 2014). Based on this, low numbers of individual skink may be utilising the DE.
Habitat preferences	The species moves 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 <i>et al.</i> , 2013).

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Northern Blue-tongue Skink (<i>Tiliqua scincoides intermedia</i>)	
Relevant biology	The mating season for the Northern Blue-tongue Skink typically occurs during the dry season from August to September and births occur after a 3–4-month gestation period (December – January) at the beginning of the wet season (DCCEEW, 2023c).
Threats	Threats to the Northern Blue-tongue Skink include (DCCEEW, 2023c): – Exotic invasive species – Fire regimes that cause declines in biodiversity – Habitat loss, disturbance, and modification – Natural water resource use – Human intrusion
Species presence in DE	A targeted survey effort was undertaken by GHD (2024) for this species; however it was not recorded. While this species was not recorded during the GHD (2024) survey, it is considered likely to occur due to the presence of suitable habitat within the DE and surrounds. Additionally, there are no records of the Northern Blue-tongue Skink on the DBCA database within 20 km of the DE.
Habitat importance	The conservation advice for the species (DCCEEW, 2023b) defines habitat critical to the survival of the species as: <i>‘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.</i> <i>Examples of habitat critical to the survival of the Northern Blue-tongue Skink include, but are not limited to:</i> – 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. The following habitat types within the DE are considered supporting habitat for the Northern Blue-tongue Skink: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE There is 41.80 ha of supporting habitat in the DE for this species, and within a 5 km buffer of the DE there is approximately 134,377.4 ha of suitable habitat for the species. This species has a limited home range (2 – 12 ha) and may only move up to 20 m a day, therefore a smaller buffer of 5 km is considered suitable for regional context.

4.6.10.1.4 Grey Falcon (*Falco hypoleucos*) – Vulnerable – High Likelihood of Occurrence

Grey Falcon (<i>Falco hypoleucos</i>)	
Protection status	Vulnerable under EPBC Act; Vulnerable under BC Act.
Conservation advice	Threatened Species Scientific Community (2020). Conservation Advice for <i>Falco hypoleucos</i> (Grey Falcon).
Recovery plan	There is no recovery plan available for this species.
Threat abatement plan(s)	– Department of Climate Change, Energy, the Environment and Water (2024). Threat abatement plan for predation by feral cats 2024.
Abundance and distribution	The Grey Falcon’s distribution is largely restricted to areas with the highest annual average temperatures and an average annual rainfall of less than 500 mm. The species is confined to arid

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Grey Falcon (<i>Falco hypoleucos</i>)	
	and semi-arid inland Australia west or north of the Great Dividing Range from Queensland to Victoria, the northern two-thirds of South Australia, and north of latitude 26°S in WA (TSSC, 2020). The estimated number of mature individuals is less than 1,000 (TSSC, 2016). Important populations or important sites are not listed within the species Conservation Advice. However, as all Grey Falcons are considered a single population (Marchant & Higgins, 1993) individuals potentially utilising the DE are considered part of an important population.
Habitat preferences	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). The species hunts in treeless areas such as tussock grasslands and open woodlands (TSSC, 2020).
Relevant biology	Breeding occurs from June to November (TSSC, 2020).
Threats	Threats to the Grey Falcon include (TSSC, 2020): – Invasive species – Climate change – Demographic and genetic stochastic events – Habitat loss and fragmentation – Disturbance – Direct mortality – Harvesting
Species presence in DE	The GHD (2024) survey did not record the Grey Falcon, however, there are 3 records of the Grey Falcon on the DBCA database within 20 km of the DE.
Habitat importance	Critical habitat has not been defined for this species. The following habitat types within the DE are suitable for the Grey Falcon: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE There is 41.80 ha of supporting habitat in the DE for this species, and approximately 134,377.4 ha of suitable habitat within 20km, indicating an abundance of alternative habitat within the immediate region. A 20 km buffer is considered suitable due to the highly mobile nature of this species.

4.6.10.2 Migratory species

4.6.10.2.1 Barn Swallow (*Hirundo rustica*) – Migratory – High Likelihood of Occurrence

Barn Swallow (<i>Hirundo rustica</i>)	
Protection status	Migratory under EPBC Act; CAMBA, JAMBA, ROKAMBA. Migratory under BC Act.
Conservation advice	There is no approved conservation advice for this species.
Recovery plan	There is no recovery plan available for this species.
Threat abatement plan(s)	No threat abatement plans have been identified as relevant to this species.
Abundance and distribution	The Barn Swallow usually occurs in northern Australia, on islands and patchily along the north coast of the mainland from the Pilbara region, Western Australia to Fraser Island in Queensland. The species has been recorded irregularly further south in WA (Higgins <i>et al.</i>, 2006). The global estimate is 190,000,000 (Birdlife International, 2010). In Australia, flocks of 220 and 300 birds are noted, but of estimate of total abundance have been recorded (Blakers <i>et al.</i>, 1984).
Habitat preferences	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 (Schodde & Mason, 1999).
Relevant biology	The Barn Swallow does not breed in Australia.
Threats	Threats to the Barn Swallow include (Cramp, 1988):

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Barn Swallow (<i>Hirundo rustica</i>)	
	– Habitat loss – Pesticide use
Species presence in DE	The GHD (2024) survey did not record the Barn Swallow, there are no records of the Barn Swallow on the DBCA database within 20 km of the DE.
Habitat importance	Important sites or habitat is not defined for this species. GHD (2024) noted that migratory species move frequently between resource areas and are unlikely to rely solely on habitats within the Survey Area, though they may return seasonally when conditions are favourable. The Survey Area also does not support large numbers of migratory birds, likely due to its inland location and limited drainage. As a result, habitats within the DE that may be used by the Barn Swallow are not considered important for the species. The following habitat types within the DE are suitable for the Barn Swallow: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE There is 41.80 ha of supporting habitat in the DE for this species, and approximately 134,377.4 ha of suitable habitat for the species within 20km. Due to the highly mobile nature of the Barn Swallow, his habitat is not considered important to the species.

4.6.10.2.2 Oriental Pratincole (*Glareola maldivarum*) – Migratory – High Likelihood of Occurrence

Oriental Pratincole (<i>Glareola maldivarum</i>)	
Protection status	Migratory under EPBC Act; CAMBA, JAMBA, ROKAMBA. Migratory under BC Act.
Conservation advice	There is no approved conservation advice for this species.
Recovery plan	There is no recovery plan available for this species.
Threat abatement plan(s)	No threat abatement plans have been identified as relevant to this species.
Abundance and distribution	Within Australia, the Oriental Pratincole is widespread in northern areas, especially along the coasts of the Pilbara and Kimberley region in WA. It is also widespread but scattered inland (Higgins <i>et al.</i> , 1996). Important sites in WA include Eighty Mile Beach, Roebuck Plains, Port Hedland Saltworks, Taylors Lagoon, Lake Argyle and Parry River floodplain.
Habitat preferences	During the non-breeding season, the Oriental Pratincole is usually found in open plains, floodplains or short grassland with extensive bare areas. The species roosts near water at the edges of terrestrial wetlands or bare areas such as claypans, saltmarsh or airfields (DCCEEW, 2025).
Relevant biology	The species does not breed in Australia. Most of the migratory population of the species is thought to spend the non-breeding season in Australia (Higgins & Davies, 1996).
Threats	Threats to the Oriental Pratincole include: collision with vehicles and aircrafts, changes in patterns of grazing or modification of grasses and increasing levels of disturbance (i.e. developments and human visitors) (DCCEEW, 2025).
Species presence in DE	The GHD (2024) survey did not record the Oriental Pratincole, there are no records of the Oriental Pratincole on the DBCA database within 20 km of the DE.
Habitat importance	The DE does not occur within or near the important sites listed for the species. The closest important site is Lake Argyle which is approximately 200 km north-east of the Proposed Action. Further, GHD (2024) stated that Migratory species move frequently between resources and are not likely to rely solely on habitats within the Survey Area, although may return seasonally when conditions are good. The Survey Area is not known to support large numbers of Migratory birds, likely due to its inland position and minor drainage features. Therefore, the habitats within the DE that the Oriental Pratincole may utilise are not considered important to the species. The following habitat types within the DE are suitable for the Oriental Pratincole: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE

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Oriental Pratincole (<i>Glareola maldivarum</i>)	
	There is 41.80 ha of supporting habitat in the DE for this species, and 134,377.4 ha of suitable habitat for the species within 20 km. Due to the highly mobile nature of the Oriental Pratincole, his habitat is not considered important to the species..

4.6.10.2.3 Yellow Wagtail (*Motacilla flava*) – Migratory – High Likelihood of Occurrence

Yellow Wagtail (<i>Motacilla flava</i>)	
Protection status	Migratory under EPBC Act; CAMBA, JAMBA, ROKAMBA. Migratory under the BC Act.
Conservation advice	There is no approved conservation advice for this species.
Recovery plan	There is no recovery plan available for this species.
Threat abatement plan(s)	No threat abatement plans have been identified as relevant to this species.
Abundance and distribution	There is limited information on this species abundance and distribution.
Habitat preferences	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, 2023).
Relevant biology	There is limited information on this species breeding.
Threats	The Yellow Wagtail does not breed in Australia.
Species presence in DE	The GHD (2024) survey did not record the Yellow Wagtail, there are no records of the Yellow Wagtail on the DBCA database within 20 km of the DE.
Habitat importance	Important sites or habitats is not defined for this species. Additionally, GHD (2024) stated that the Survey Area is not known to support large numbers of Migratory birds. Therefore, the habitats within the DE that the Yellow Wagtail may utilise are not considered important to this species. The following habitat types within the DE are suitable for the Yellow Wagtail: – Open Eucalypt woodland clay plain (supporting); 38.84 ha in DE – Acacia shrubland thicket (supporting); 2.96 ha in DE There is 41.80 ha of supporting habitat in the DE for this species, and approximately 134,377.4 ha of suitable habitat for the species. Due to the highly mobile nature of the Yellow Wagtail, this habitat is not considered important to the species.

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4.7 Conservation reserves and Environmentally Sensitive Areas

No conservation reserves or estates were identified within the DE, and no National Heritage or World Heritage places were located within a 20 km buffer (GoWA; DBCA-011). No Environmentally Sensitive areas were recorded within the DE (GoWA; DWER-046).

4.8 Social context

4.8.1 Native title

The DE does not intersect any Native Title or Indigenous Land Use Agreement (ILUA) areas (GoWA; LGATE-067; LGATE-004).

4.8.2 Aboriginal cultural heritage features

A search of the Aboriginal Cultural Heritage Inquiry System indicates that there is one Registered site that intersects the DE (Figure 4-9). There are no Lodged or Historic sites intersecting the DE.

Table 4-9. Registered sites overlapping the DE

Name	ID	Status	Place Type	Location
Halls Creek	14324	Registered	Creation/ Dreaming Narrative; Painting	Existing power station and portion of the network connection route.

The registered Aboriginal site overlaps only a small, largely cleared portion of the Development Envelope (DE) associated with the existing power station. In 2025, Horizon Power received written advice from the Department of Planning, Lands and Heritage (DPLH) confirming that no further approvals are required under the Aboriginal Heritage Act 1972 (AHA) for works in this area, as the proposed works do not intersect with the actual site boundaries. The remainder of the DE does not intersect any registered heritage sites and has been partially disturbed by historic land use activities.

As the area has not previously been surveyed, the presence of Aboriginal cultural heritage values cannot be entirely ruled out. There is no native title determination or registered claim over this area. Consultation with the Kimberley Land Council (KLC) did not identify any relevant knowledge holders, and KLC was unable to assist further.

On advice from the DPLH, Horizon Power undertook a public notice process in late 2025 inviting Aboriginal people with relevant cultural knowledge of the DE to come forward. Two separate parties initially responded to Horizon Power; however, only one has progressed to participation in a heritage survey.

A group of Aboriginal Knowledge holders, represented by Lunga Kitja Aboriginal Corporation completed a heritage survey in May 2026 with the results and report outstanding at this stage. Horizon Power is committed to avoid impacting on Aboriginal cultural heritage whenever and wherever possible, in line with its Aboriginal Heritage Management Policy. The outcomes of the survey will inform decisions relating to site suitability, construction activities and asset placement and ensure avoidance of any heritage values.

4.8.3 European heritage

A search of the Heritage Council WA inherit database found no state heritage places intersecting the DE (DPLH, 2025).

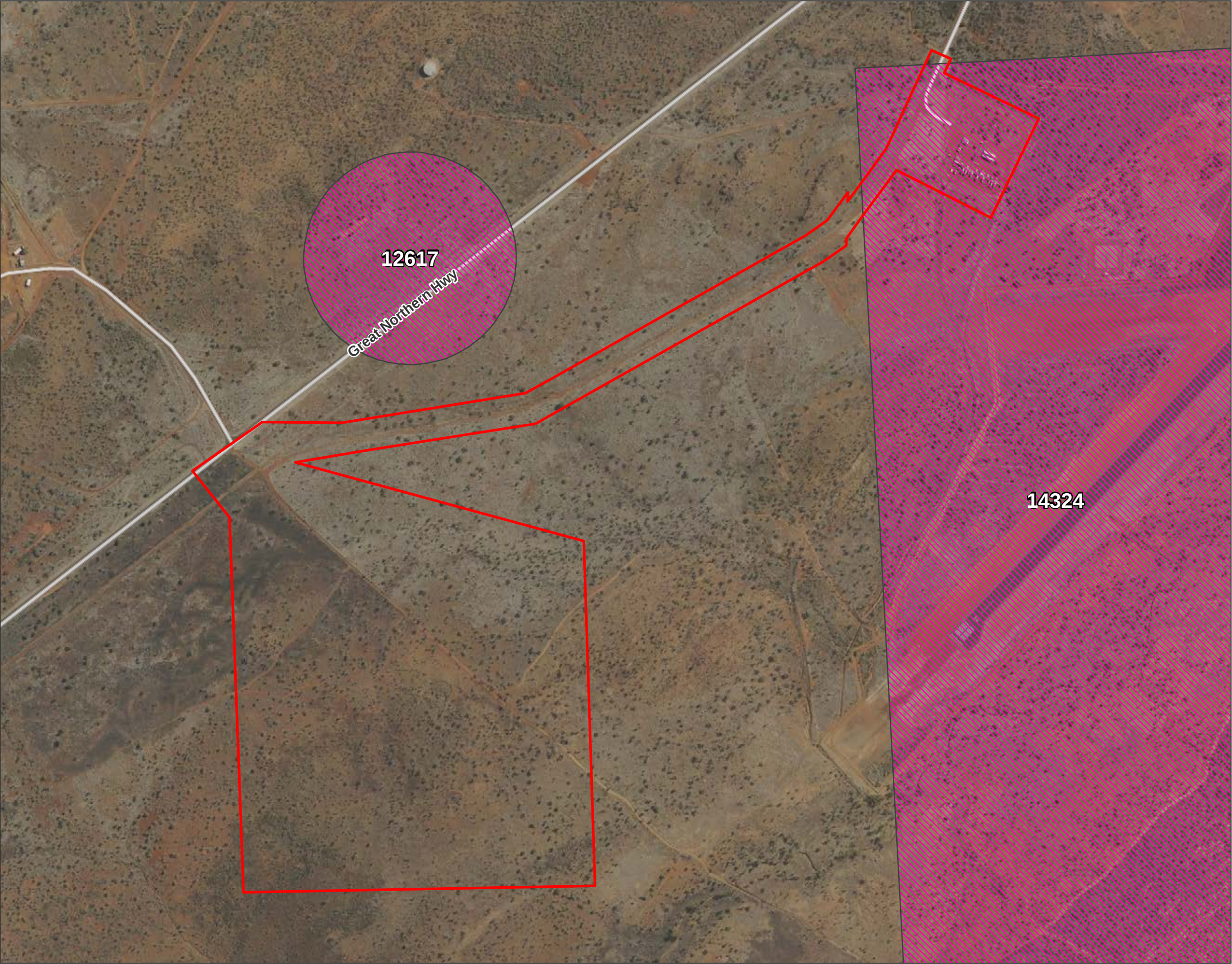
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4.8.4 Other projects in the surrounding area

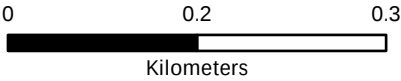
There are several reasonably foreseeable developments within the region of the Proposed Action and, more broadly, within the Hart subregion of the Central Kimberley bioregion generally with similar dominant land systems. These developments include:

Three active Native vegetation Clearing Permits within the Hart Subregion, totalling to 26.33 ha of clearing, related to mineral exploration, waste disposal and energy infrastructure.

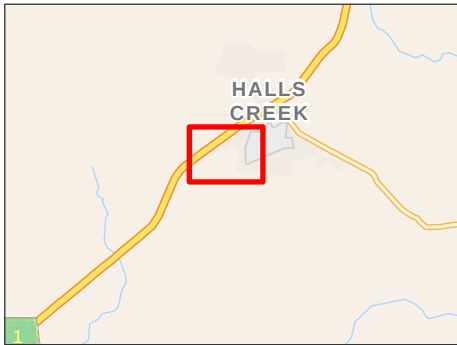
Figure 4-9 Aboriginal Cultural Heritage Sites



- LEGEND
- Development envelope
 - Aboriginal Cultural Heritage - Register (DPLH-099)
 - Roads



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5 Matters of National Environmental Significance

A search of the EPBC Act Protected Matters database (PMST search) was conducted for the Proposed Action, including a conservative 20 km buffer (Appendix D Protected Matters Search Tool (20 km buffer)). Table 5-1 presents an assessment of the relevance of each MNES to the Proposed Action based on the protected matters search. MNES that are not relevant to the Proposed Action are not discussed further.

Table 5-1 Matters of National Environmental Significance Screening

Matter of National Environmental Significance	Relevance to the Proposed Action
World Heritage Properties	Not relevant.
National Heritage Places	Not relevant.
Wetlands of International Importance	Not relevant.
Great Barrier Reef Marine Park	Not relevant.
Commonwealth Marine Area	Not relevant.
Listed Threatened Species and Ecological Communities	Relevant – Potential impacts that can be managed with standard measures.
Listed Migratory Species	Relevant – Potential impacts that can be managed with standard measures.
Nuclear actions (including uranium mines)	Not relevant.
Protection of water resources from coal seam gas development or large coal mining development	Not relevant.

The relevant matters; Threatened species and ecological communities and Migratory species and the potential impacts are discussed in Section 5.1 and 0 respectively below.

5.1 Threatened species and ecological communities

As detailed in Section 4.6.10.1, the Threatened fauna species that are known to occur or a likely to occur in the DE are the Gouldian Finch, Ghost Bat, Northern Blue-tongue Skink and Grey Falcon.

No Threatened flora species or TECs were recorded in the DE during the GHD (2024) survey.

Potential impacts

5.1.1.1 Direct impacts

Construction of the Proposed Action will result in the direct loss of fauna habitat, including habitat suitable for Threatened fauna species, through clearing. The IDF is 12.98 ha in total (11.37 ha of which is comprised of fauna habitat and 1.61 ha of cleared areas). Of the total area, 0.8 ha is within the extrapolated area discussed in Section 4.6.

Table 5-2 Fauna Habitats within the IDF

Fauna Habitat	Total extent in DE (ha)	GHD (2024) mapped extent in IDF (ha)	Extrapolated extent in IDF (ha) -	Total extent within IDF – GHD (2024) + extrapolated
Open Eucalypt woodland clay plain	38.84	5.36	0.40	5.76
Acacia shrubland thicket	2.96	-	-	-

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Fauna Habitat	Total extent in DE (ha)	GHD (2024) mapped extent in IDF (ha)	Extrapolated extent in IDF (ha) -	Total extent within IDF – GHD (2024) + extrapolated
Rocky hills and slopes	19.12	5.61	-	5.61
Cleared	3.50	1.21	0.40	1.61
TOTAL	64.42	12.18	0.80	12.98

Direct impacts to Threatened fauna during construction of the Proposed Action will be limited to clearing of up to 11.37 ha across the three fauna habitats, including:

- Up to 5.76 ha of Open Eucalypt woodland clay plain, which provides habitat for:
 - Ghost Bat (supporting habitat (see Section 4.6.10.1.2)
 - Gouldian Finch (supporting habitat (see Section 4.6.10.1.1)
 - Grey Falcon (supporting habitat (see Section 6.1.2.2)
 - Northern Blue-tongue skink (supporting habitat (see Section 4.6.10.1.3).
- Up to 5.61 ha of Rocky hills and slopes, which provides habitat for:
 - Ghost Bat (supporting habitat (see Section 4.6.10.1.2)
 - Gouldian Finch (supporting habitat (see Section 4.6.10.1.1).

5.1.1.2 Indirect impacts

Construction and operation of the Proposed Action may result in the following indirect impacts to Threatened fauna:

- Fauna injury/death from vehicle strike, clearing activities (i.e. from entrapment in the open trench) or direct collision with infrastructure
- Fauna activity disturbance from temporary increase in noise/vibration/light, attraction of feral animals, increased risk of fire, and generation of dust during construction.

5.1.2 Mitigation

5.1.2.1 Avoidance

The Proposed Action has been designed to avoid and/or mitigate impacts to Threatened fauna where possible. During selection phase, particular focus has been placed on reducing the amount of fauna habitat clearing required for construction, particularly habitat for Gouldian Finch, which is abundant around Halls Creek and was present at all sites surveyed during site selection. Three minor drainage lines within the Survey Area were identified and avoided, including one site where Gouldian Finch were recorded (at one of the alternative sites under consideration).

The current site was selected to:

- Avoid drainage line habitat and recorded habitat being utilised by Gouldian Finch
- Reduce impact to foraging habitat for Gouldian Finch
- Reduce clearing required for connection infrastructure to the existing power station site to the minimum required.

Additionally, sites within the PDWSA were initially considered during the desktop review and removed from consideration due to the potential risk.

In addition, the Proposed Action has been amended to:

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- Reduce Gouldian Finch foraging habitat from 20 ha to 11.37 ha of clearing required
- Underground the connection infrastructure to avoid direct collisions and associated injury/mortality of Threatened fauna, particularly birds.

A licensed fauna specialist will be engaged prior to the commencement of clearing activities to supervise avoidance, dispersal and relocation of any fauna during clearing activities.

5.1.2.2 Construction

Impacts to Threatened fauna species 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 project infrastructure to minimise impacts to fauna habitat, with existing cleared areas used where possible.
- Construction will not occur during the wet season and will therefore avoid the breeding period of the Northern Blue-tongue Skink.
- Dust, noise, vibration and light management measures will be implemented during construction (see Appendix A Environmental Management Plan for further detail).
- Implementation of the management measures in the EMP (Appendix A) to minimise risks to Threatened species, and to provide monitoring during construction.

5.1.2.3 Operation

Operational activities associated with the Proposed Action include operation of the solar, BESS, thermal power station and network connection, along with maintenance inspections and repairs. Operation of the Proposed Action will mainly utilise existing roads and access tracks. Operational impacts to Threatened fauna from the Proposed Action are limited to potential fauna injury/death from vehicle strike direct collision with infrastructure. However, as discussed in Section 5, this would be limited to a small number of individuals, and it is unlikely that any isolated deaths of individuals will affect the conservation status and distribution of the Threatened fauna species. The following management measures will be implemented during operation of the Proposed Action to minimise impacts to Threatened fauna species:

- Maintenance and repair activities will be limited to existing cleared areas where possible.
- Implementation of the management measures in the EMP (Appendix A) to minimise risks to Threatened species.

5.1.3 Assessment of impacts

5.1.3.1 Direct impacts

5.1.3.1.1 Habitat Loss

The Proposed Action will result in the loss of up to 11.37 ha of potential fauna habitat. The habitats present comprise a mixture of Acacia shrubland thicket, Open Eucalypt woodland clay plain and Rocky hills and slopes, and provides habitat for various significant fauna species that have the potential to occur within the DE. The potential impacts to supporting habitat of the threatened fauna are detailed in Table 5-3.

Table 5-3 Threatened species habitat clearing within the DE

Threatened fauna species	Habitat importance	Total mapped extent in DE (ha)	Maximum clearing extent (ha)	Summary of Assessment of Significance
Gouldian Finch	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Potentially Significant

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Threatened fauna species	Habitat importance	Total mapped extent in DE (ha)	Maximum clearing extent (ha)	Summary of Assessment of Significance
	Rocky hills and slopes – supporting habitat	19.12	5.61	
	Total Gouldian Finch supporting habitat	60.92	11.37	
Ghost Bat	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Rocky hills and slopes – supporting habitat	19.12	5.61	
	Total Ghost Bat supporting habitat	60.92	11.37	
Northern Blue-tongue Skink	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Total Northern Blue-tongue Skink supporting habitat	41.80	5.76	
Grey Falcon	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Total Grey Falcon supporting habitat	41.80	5.76	

5.1.3.2 Indirect impacts

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

Construction of the Proposed Action and associated infrastructure (including new access tracks) will result in an increase in vehicle movements to and from the DE. 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 a requirement of pre-clearance fauna relocation, driving conditions to prevent the likelihood of fauna road deaths, and minimising driving at dusk and dawn, 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 the threatened fauna species. The risk of fauna injury/death from vehicle strike during operations would be reduced compared to baseline conditions (the thermal power station) due to the reduced maintenance inspection requirements and a reduction in heavy fuel truck deliveries required. Therefore, the risk of fauna injury/death from vehicle strikes would only increase temporarily during construction.

There is some potential risk to the Gouldian Finch, Grey Falcon and Ghost Bats they may be attracted to ‘false’ waterbodies, prey attraction or provision of shade. This could increase risk of collision with solar and BESS facility infrastructure. The presence of waterbirds within the DE is expected to be low, as there are no waterbodies within the DE. Research on how solar facilities influence birds and bats is very limited (Taylor *et al.*, 2019 and Yuzyk, 2024), with no species specific research on these species. A review by Harrison *et al.*, (2017) of impacts of solar farms on birds and bats, found that collision risk with solar panels is very low. Another study estimated 2.49 bird mortalities per year per MW installed (Kosciuch *et al.*, 2020), whereas Visser *et al.*, (2019) found there is no definitive evidence of bird collision mortality due to solar panels. Therefore, it is unlikely

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that any isolated deaths of individuals will affect the conservation status and distribution of any fauna species.

5.1.3.2.2 Fauna activity disturbance from temporary increase in noise/vibration/light attraction of feral animals, increased risk of fires, 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 and vibration will increase during this construction phase then decrease during operations. The loudest construction activities would occur during the day when construction activity is higher, and therefore nocturnal species (such as the Ghost Bat) would be at a lower risk of impact given their reduced activity during the day. There are limited studies at a species level of the effects of construction noise. However, a before and after impact assessment to understand the potential impacts of highway construction on an endangered songbird found no evidence to suggest that highway construction of traffic noise had a negative impact on the endangered bird during the study (Long *et al.*, 2017). Therefore, it is unlikely that the construction noise would significantly negatively affect similar species such as the Gouldian Finch.

Altered lighting and increased artificial light may cause behavioural changes to fauna. Additional low level security lighting may be installed during construction of the Proposed Action. Artificial light can cause changes to invertebrate behaviours (such as increased levels around light sources) which consequently can cause changes in behaviour of species that predate on insects. This would predominately affect nocturnal species however, during nocturnal movements such as foraging or dispersal (Adams *et al.*, 2021). Therefore, the increase in artificial light at night during construction may temporarily affect the nocturnal Ghost Bat species. Other threatened species (the Gouldian Finch, Northern Blue-tongue Skink and Grey Falcon) are unlikely to be impacted by increased artificial light during construction.

These impacts associated with construction of the Proposed Action 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 Proposed Action will increase the potential for noise, vibration and light, given the presence of existing roads such as Great Northern Highway and the existing power station within and in close proximity to the DE. Therefore, the Proposed Action is unlikely to result in significant impacts on Threatened fauna from noise, vibration and light emissions.

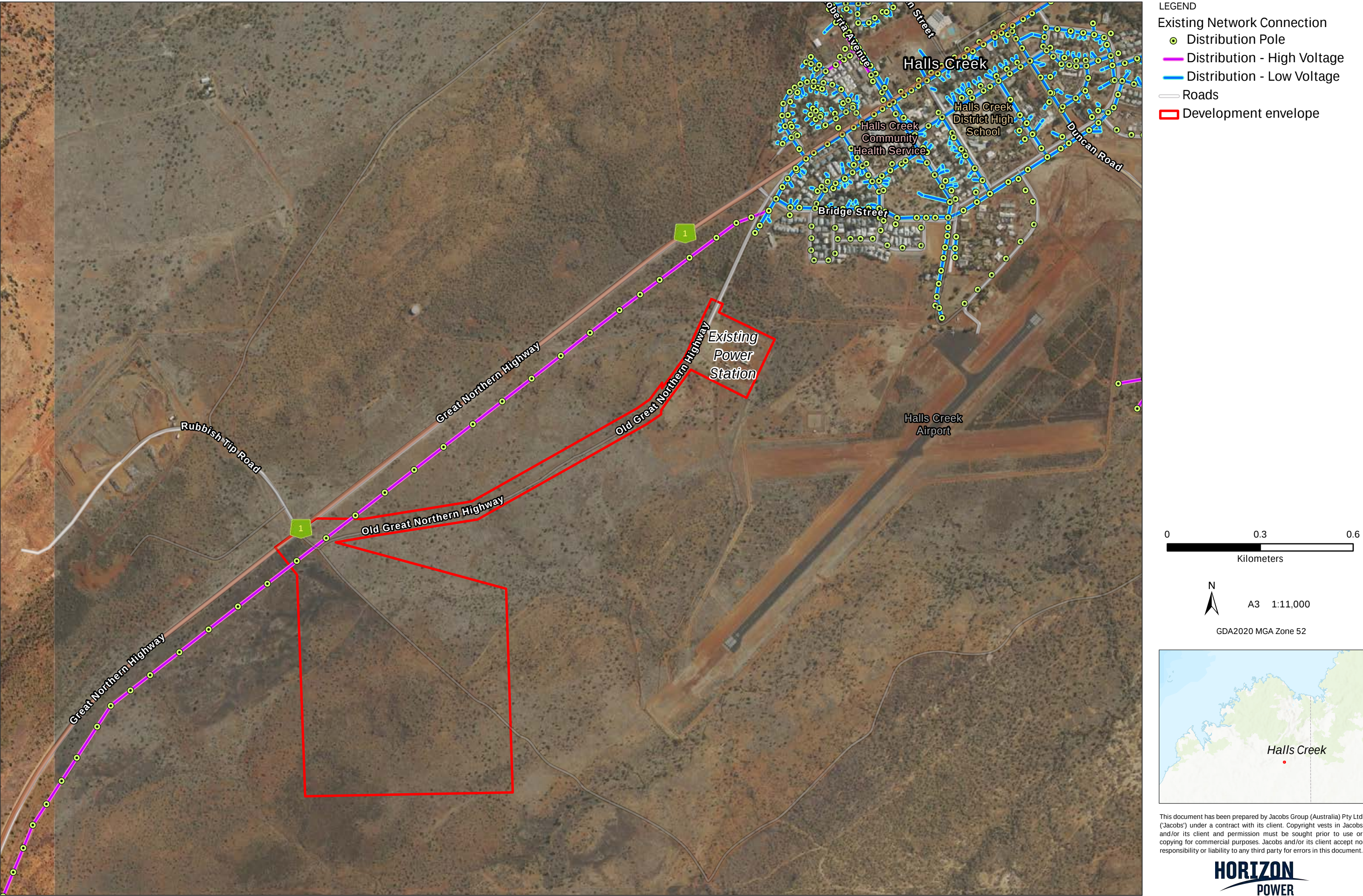
The construction of the Proposed Action is unlikely to pose an impact to fauna from attraction of feral animals as construction will be temporary, and feral animals will be managed in accordance with the EMP (Appendix A). Therefore, the Proposed Action is unlikely to result in significant impacts on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

Given the size of the Proposed Action and its location adjacent to existing infrastructure and roads, the Proposed Action 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 Proposed Action) spreading to nearby vegetation. Therefore, the Proposed Action is unlikely to result in significant impacts on Threatened fauna from altered fire regimes.

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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 Proposed Action 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 Proposed Action 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.

Figure 5-1 Existing Infrastructure within and surrounding the DE



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5.2 Migratory species

As detailed in Section 4.6.10, the Migratory fauna species that are likely to occur in the DE are the Barn Swallow, Oriental Pratincole and Yellow Wagtail.

5.2.1 Potential impacts

5.2.1.1 Direct impacts

Construction of the Proposed Action will result in the direct loss of fauna habitat, including habitat suitable for Migratory fauna species, through clearing.

Direct impacts to Migratory fauna during construction of the Proposed Action will be limited to clearing of up to 5.76 ha across one fauna habitat, comprising:

- Clearing of up to 5.76 ha of Open Eucalypt woodland clay plain habitats, which provides habitat for:
 - o Barn Swallow (supporting habitat (see Section 4.6.10.2.1))
 - o Oriental Pratincole (supporting habitat (see Section 4.6.10.2.2))
 - o Yellow Wagtail (supporting habitat (see Section 4.6.10.2.3))

5.2.1.2 Indirect impacts

Construction and operation of the Proposed Action may result in the following indirect impacts to the Migratory fauna:

- 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, and increased generation of dust during construction.

5.2.2 Mitigation

The mitigation measures outlined for Threatened fauna species remain appropriate for Migratory fauna, refer to Section 5.1.2 for mitigation measures. This includes a commitment to an underground connection to avoid impacts (i.e. direct collisions) from an overhead connection.

5.2.3 Assessment of impacts

5.2.3.1 Direct impacts

5.2.3.1.1 Habitat loss

The Proposed Action will result in the loss of up to 11.37 ha of potential fauna habitat. The habitats suitable for the Migratory species within the IDF is limited to the Open Eucalypt woodland clay plain habitat, and provides habitat for various significant migratory species that have the potential to occur within the DE. The potential impacts to habitat of the Migratory fauna are detailed in Table 5-4.

Table 5-4 Migratory species habitat clearing within the DE

Threatened fauna species	Habitat importance	Total mapped extent in DE (ha)	Maximum clearing extent (ha)	Summary of Assessment of Significance
Barn Swallow	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Total Barn Swallow supporting habitat	41.80	5.76	

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Threatened fauna species	Habitat importance	Total mapped extent in DE (ha)	Maximum clearing extent (ha)	Summary of Assessment of Significance
Oriental Pratincole	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Total Oriental Pratincole supporting habitat	41.80	5.76	
Yellow Wagtail	Open Eucalypt woodland clay plain – supporting habitat	38.84	5.76	Not significant
	Total Yellow Wagtail supporting habitat	41.80	5.76	

5.2.3.2 Indirect impacts

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

Construction of the Proposed Action and associated infrastructure will result in an increase in vehicle movements to and from the DE. Maintenance inspections of the Proposed Action during operation may also increase vehicle movements, however vehicle movements will be restricted to the cleared access tracks. Construction activities will be undertaken in accordance with measures identified in the EMP (Appendix A), including a requirement for pre-clearance fauna relocation, driving to conditions to prevent the likelihood 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 Migratory fauna species.

There may be risk associated with the construction of solar and BESS facility infrastructure on birds as they may be attracted to ‘false’ waterbodies, prey attraction or provision of shade. This may increase risk of collision with solar and BESS facility infrastructure. The presence of waterbirds within the DE is expected to be low, as there are no waterbodies within the DE and birds are more likely to be attracted to the wetlands. Very little research evidence has been found on the effect of solar facilities on birds (Taylor *et al.*, 2019 and Yuzyk, 2024). Harrison *et al.*, (2017) conducted a review of impacts of solar farms on birds and found that collision risk with solar panels is very low. Another study estimated 2.49 bird mortalities per year per MW installed (Kosciuch *et al.*, 2020), whereas Visser *et al.*, (2019) concluded that there is no definitive evidence of bird collision mortality due to solar panels. Therefore, it is unlikely that any isolated deaths of individuals will affect the conservation status and distribution of any fauna species.

5.2.3.2.2 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 Proposed Action have the potential to result in short-term disturbance to migratory birds on a local scale, however, impacts during construction will be managed in accordance with the EMP (Appendix A) and are considered consistent with existing land uses (highway traffic noise and existing power station). It is unlikely that maintenance inspections during operation of the Proposed Action will increase the potential for noise, vibration and light, given the presence of existing roads such as Great Northern Highway and the Halls Creek airport in close proximity; and the existing power station within the DE. Therefore, the Proposed Action is unlikely to result in significant impacts on Migratory fauna from noise, vibration and light emissions.

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The construction of the Proposed Action 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 Proposed Action is unlikely to result in significant impacts on Migratory fauna from attraction of feral animals.

Given the size of the Proposed Action and its location adjacent to existing infrastructure and roads, the Proposed Action 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 Proposed Action) spreading to nearby vegetation. Therefore, the Proposed Action is unlikely to result in significant impacts on Migratory 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 Proposed Action 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 Proposed Action will not cause significant impacts to Migratory birds from dust emissions given the transient and localised nature of dust generation mostly limited to the construction phase.

6 Impact Assessment

6.1 Significant Impact Guidelines

6.1.1 Critically Endangered and Endangered species

6.1.1.1 Gouldian Finch (*Chleobia gouldiae*) – Endangered – Known to Occur

An assessment against the *Matters of National Environmental Significance – Significant impact guidelines 1.1* (CoA, 2013) (significant impact criteria) for Endangered species is provided in Table 6-1 and shows that a significant impact to the Gouldian Finch is not expected to result from the Proposed Action.

Table 6-1 Significant impact criteria assessment for the Gouldian Finch

Endangered species significant impact criteria	Assessment
Lead to a long-term decrease in the size of a population	Not significant As described in Section 4.6.10.1.1, the Gouldian Finch was recorded during the GHD (2024) survey, approximately 1.1 km north of the DE. The Proposed Action may clear two habitats within the IDF which are supporting habitat for the species, due to the presence of foraging grasses, habitat trees and proximity to seasonal drainage lines. Further, there was 9 DBCA records of the species within a 20 km buffer of the DE. Therefore, it is anticipated that a small population is utilising the DE and surrounding habitat in Halls Creek, likely around drainage lines identified in the survey outside of the DE. Suitable habitat for the species is common and widespread at a local and regional level, with 134,377.4 ha of suitable habitat estimated within 20 km of the DE. Clearing of up to 11.37 ha of supporting habitat for the Gouldian Finch represents 0.012% of habitat within 20 km of the DE. Potential impacts on the Gouldian Finch may also arise from interactions with project infrastructure or disturbance during construction activities. Any such impacts are expected to affect only a small number of individuals, given the existing infrastructure (highway and power station) in the immediate vicinity, and the abundance of alternative habitat.

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Endangered species significant impact criteria	Assessment
	The Recovery Plan for Gouldian Finch identifies that long term decrease to populations is likely due to fire regimes and grazing impact of stock. The proposed clearing is unlikely to contribute to either of these key threats. Indirect impacts may include temporary avoidance behaviour, this is anticipated to be limited to a small number of individuals, primarily during the construction phase. Due to an abundance of suitable habitat in adjacent areas and the small size of the DE, this is not anticipated to contribute to a long term decrease in the size of the local Gouldian Finch population. Additionally, Halls Creek is not listed as a key site for the persistence of the Gouldian Finch (O'Malley, 2006). Any impacts as a result of the Proposed Action are expected to be limited to a small number of individuals displaced from foraging habitat. Given the abundant foraging habitat in the region, it is considered unlikely that the Proposed Action will result in a long-term decrease in the size of a population for the Gouldian Finch.
Reduce the area of occupancy of the species	Not significant The area of occupancy for the species is estimated to be 1,896 km², which is considered limited (TSSC, 2016a). However, the species is highly mobile and the significant variability in survey effort, methodology and available records are not considered to be sufficient to accurately assess distribution (TSSC, 2016a). Further, the species' conservation advice (TSSC, 2016a) also notes that based on genetic evidence, the species is not severely fragmented and occurs at a large number of locations; and that long-term monitoring data currently doesn't show a trend (i.e., whether this is a decrease, stable etc) in the area of occupancy. The suitable habitats within the DE are common and widespread in the surrounding environment. These habitats primarily occur within the Vegetation Associations 834 and 837, which have more than 99% of the pre-European extent remaining at a local and regional scale. Additionally, the GHD (2024) survey, recorded 171.42 ha of suitable Gouldian Finch habitat outside of the DE in Halls Creek, within the Survey Area. This habitat was mostly in Very Good condition, ranging from Degraded to Very Good condition. The DE is not considered to be important habitat for the local population, given that the species is mobile and the portion of clearing is small compared to the available habitat in the surrounding area, estimated to be 134,377.4 ha within a 20 km buffer. Therefore, clearing for the Proposed Action is not considered to result in a significant reduction to the area of occupancy of the species.
Fragment an existing population into two or more populations	Not significant The DE does not represent a significant barrier which would fragment Gouldian Finch populations. While individuals may be temporarily displaced by the clearing associated with the Proposed Action, this is considered to be a temporary impact due to an abundance of suitable habitat in the surrounding area. The species is not severely fragmented and occurs at a large number of locations (TSSC, 2016a). The DE has been placed close to existing infrastructure (i.e., the existing power station and access tracks) to reduce the risk of habitat fragmentation and new impacts. Further, the species would be able to move through and around the project infrastructure. It would not present a permanent barrier to the species' movement. As such, it is not predicted that the Proposed Action will result in the fragmentation of an existing population of the Gouldian Finch.
Adversely affect habitat critical to the survival of a species	Not significant There is no critical habitat for the Gouldian Finch within the DE.
Disrupt the breeding cycle of a population	Not significant The breeding season for the Gouldian Finch is typically July to January in Western Australia (Save the Gouldian Fund, 2013). Clearing of up to 11.37 ha of supporting habitat for the Gouldian Finch is unlikely to disrupt the breeding cycle of the species due to an abundance of suitable habitat in the surrounding environment. In the short term (particularly during the construction), the species may be temporarily displaced from the DE, however this is anticipated to be a short-term impact limited to a small number of individuals. The Gouldian Finch are

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Endangered species significant impact criteria	Assessment
	expected to disperse into adjacent foraging habitat, which is abundant in the region (approximately 134,377.4 ha). GHD (2024) stated there is suitable habitat trees (<i>Eucalyptus</i> and <i>Corymbia</i> sp.) within the DE, however, did not state if these were suitable for breeding for the species. Given the lack of breeding trees in the DE and abundance of foraging habitat surrounding the DE, the Proposed Action is not anticipated to disrupt the breeding cycle of the Gouldian Finch.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Not significant The Gouldian Finch is considered to be a highly mobile species (DEWHA, 2010) and there is an abundance of suitable habitat in the surrounding area available to disperse into. In the short term, particularly during construction, the species may be temporarily displaced from the DE, however this is anticipated to be a short term impact limited to a small number of individuals. Habitat types occur primarily within Vegetation Associations 834 and 837, which will not be reduced to less than 99% of the pre-European extent at any scale by the clearing for the Proposed Action. Additionally, there is 134,377.4 ha of suitable habitat for the Gouldian Finch within 20 km of the DE. The Proposed Action is not expected to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	Not significant Grazing by introduced herbivores and routing by feral pigs are identified as threats in the conservation advice for the Gouldian Finch (TSSC, 2016a). The presence of introduced herbivores is unlikely to be exacerbated by the Proposed Action. The introduction and/or spread of weeds resulting from the Proposed Action is not expected to occur as vehicle hygiene, weed control and ground disturbance procedures will be implemented. The implementation of these weed hygiene measures will be conducted in line with the EMP (Appendix A). Therefore, the Proposed Action does not introduce any credible impact pathways that could introduce an invasive species that may become established in the Gouldian Finch's habitat.
Introduce disease that may cause the species to decline	Not significant The conservation advice for the Gouldian Finch identified air-sac mites as a threat to the species (TSSC, 2016a), however there is no credible impact pathway associated with the Proposed Action that could result in the introduction of a disease that may cause a decline in the species.
Interfere with the recovery of the species.	Not significant The threats to the Gouldian Finch identified in the conservation advice for the species (TSSC, 2016a) and the National Recovery Plan (O'Malley, 2006) are: – Inappropriate fire regimes – Grazing impacts – Air sac mites – Climate change The Gouldian Finch was recorded within the Survey Area in a drainage line outside of the DE. The Open Eucalypt woodland clay plain and Rocky Hills and slopes habitats provide habitat supporting foraging habitat for the species. The Acacia shrubland thicket is also suitable habitat to the species and has been avoided in the IDF and will not be cleared. These habitats are common throughout both the surrounding remnant vegetation areas and the overall bioregion and subregion. Clearing of up to 11.37 ha of potential Gouldian Finch habitat represents 0.012% of available habitat within 20 km of the DE. Therefore, the Proposed Action is not anticipated to exacerbate the threats identified in the species' conservation advice and is not predicted to interfere the recovery of the species.

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6.1.1.2 Northern Blue-tongue Skink (*Tiliqua scincoides intermedia*) – Critically Endangered - High Likelihood of Occurrence

An assessment against the impact guidelines 1.1 (CoA, 2013) (significant impact criteria) for Critically Endangered species is provided in Table 6-2 and shows that a significant impact to the Northern Blue-tongue Skink is not expected to result from the Proposed Action.

Table 6-2 Significant impact criteria assessment for the Northern Blue-tongue Skink

Critically Endangered species significant impact criteria	Assessment
Lead to a long-term decrease in the size of a population	Not significant As described in Section 4.6.10, the Northern Blue-tongue Skink is considered highly likely to occur within the DE. The Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats provide suitable supporting habitat for the species. The Acacia shrubland thicket habitat has been avoided in the IDF and will not be cleared. Studies show that there may be a minimum of 0.3 to 5.6 mature skink individuals per km of linear suitable habitat (Bruton and Smith, 2019). Most movements of the Northern Blue-tongue Skink are shorter than 20 m and their home ranges are approximately 2 to 12 ha (Price-Rees <i>et al.</i>, 2014). Based on this, low numbers of individual skink may be utilising the DE. Clearing of up to 5.76 ha of potential habitat for the Northern Blue-tongue Skink represents 0.012% of available habitat within 20 km of the DE. Suitable habitat found within the DE is common and widespread at both the local and regional scale. Given the relatively small portion of suitable habitat to be cleared by the Proposed Action (up to 5.76 ha), the DE is not regarded as important to a local population. A pre-clearance survey will be conducted and any Northern Blue-tongue Skinks within the DE will be relocated to nearby suitable habitat. Therefore, it is not predicted that this clearing will result in a decline in population of the Northern Blue-tongue Skink. As discussed, other impacts to Northern Blue-tongue Skinks may occur as a result of interaction or disturbance from construction activities. This includes risk of entrapment in the open trenches leading to injury or mortality. The EMP (Appendix A) includes measures to address this risk. Any impacts occurring as a result of this would be limited to a small number of individuals. Indirect impacts may result in temporary avoidance behaviour and would potentially only impact a small number of individuals. Given this, it is considered unlikely that the Proposed Action will result in a long-term decrease in size of a population for the Northern Blue-tongue Skink.
Reduce the area of occupancy of the species	Not significant This species was not recorded during the GHD (2024) survey but is considered highly likely to occur. The Eucalypt woodland clay plain habitats provide suitable supporting habitat for the species. This habitat is common and widespread at both the local and regional scale, with the clearing of up to 5.76 ha of potential habitat for the Northern Blue-tongue Skink representing 0.012% of available habitat within 20 km of the DE. Clearing of up to 5.76 ha of potential Northern Blue-tongue Skink habitat represents 0.012% of available habitat within 20 km of the DE. Given the small portion of suitable habitat to be cleared by the Proposed Action (up to 5.76 ha), the DE is not regarded as important. Therefore, it is not predicted that this clearing will result in a reduction in area of occupancy of the species.
Fragment an existing population into two or more populations	Not significant Given the relatively small area of the DE, the Proposed Action infrastructure will not provide a large enough barrier to fragment Northern Blue-tongue Skink populations. Northern Blue-tongue Skinks have home ranges of 2-12 ha (DCCEEW, 2023c) and suitable habitat for the species is common throughout both the surrounding areas and the overall bioregion and subregion. In addition, the DE has been placed close to existing infrastructure to reduce potential fragmentation impacts. The fencing for the solar facility poses the greatest barrier to the species, however, the fence would be designed to allow passage and movement of the Northern Blue-tongue Skink and not prevent access to the species.

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Critically Endangered species significant impact criteria	Assessment
	In the short term (if individuals are utilising the DE), they would be displaced by the Proposed Action. Thus, the Proposed Action is not expected to fragment habitat to the extent that it separates a population into two or more populations.
Adversely affect habitat critical to the survival of a species	Not significant There is no critical habitat for the Northern Blue-tongue Skink within the DE.
Disrupt the breeding cycle of a population	Not significant This species was not recorded during the GHD (2024) survey but is considered highly likely to occur. The Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats provide suitable supporting habitat for the species and is not considered suitable breeding habitat. Therefore, the clearing of potential habitat is unlikely to disrupt the breeding cycle of a population given the availability of suitable habitat for the species in the region. Other indirect impacts (interaction with infrastructure) would be limited to a small number of individuals. Disturbance from construction activities will be reduced during this species breeding season as construction will not occur during the wet season. These indirect impacts may result in temporary avoidance behaviour and would potentially only impact a small number of individuals and unlikely to impact breeding cycles. These potential direct and indirect impact are considered unlikely to disrupt the breeding cycle of the Northern Blue-tongue Skink population.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Not significant The Northern Blue-tongue Skink is considered highly likely to occur within the DE. The Open Eucalypt woodland clay plain habitats provide suitable supporting habitat for the species. The suitable habitat within the DE is common throughout both the surrounding remnant vegetation areas and the overall bioregion and subregion, with 134,377.4 ha of habitat present within 20 km of the DE. In the short term (if present), individuals would be temporary dispersed. Thus, the Proposed Action is not expected to significantly impact isolation or connectivity of habitat on a local or regional scale. Clearing of up to 5.76 ha of potential Northern Blue-tongue Skink habitat represents 0.012% of available habitat within 20 km of the DE. Therefore, it is not anticipated that the Proposed Action will modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the Northern Blue-tongue Skink species is likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	Not significant The presence of introduced predators is unlikely to be exacerbated by the Proposed Action. The introduction and/or spread of weeds resulting from the Proposed Action is not expected to occur as vehicle hygiene, weed control and ground disturbance procedures will be implemented. 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 Proposed Action is not expected to be significant. Therefore, the Proposed Action does not introduce any credible impact pathways that could introduce an invasive species (or spread an existing invasive species) that may become established in the Northern Blue-tongue Skink's habitat.
Introduce disease that may cause the species to decline	Not significant The conservation advice for the Northern Blue-tongue Skink does not report disease as a potential threat to the species (DCCEEW, 2023c). There is no credible impact pathway associated with the Proposed Action that could result in the introduction of a disease that may cause a decline in these species.
Interfere with the recovery of the species.	Not significant The threats to the Northern Blue-tongue Skink in the species' conservation advice (DCCEEW, 2023c) are:

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Critically Endangered species significant impact criteria	Assessment
	– Exotic invasive species – Fire regimes that cause declines in biodiversity – Habitat loss, disturbance and modification – Natural water resource use – Human intrusion The Northern Blue-tongue Skink is considered highly likely to occur within the DE. The Open Eucalypt woodland clay plain habitat provides suitable supporting habitat for the species. This habitat is common throughout both the surrounding remnant vegetation areas and the overall bioregion and subregion. In the short term (if present) individuals displaced by the Proposed Action would be expected to disperse into nearby suitable habitat. Therefore, the Proposed Action is not expected to significantly impact isolation or connectivity of habitat on a local or regional scale. Clearing of up to 5.76 ha of potential Northern Blue-tongue Skink habitat represents 0.012% of available habitat within 20 km of the DE. Therefore, the Proposed Action is not anticipated to exacerbate the threats identified in the species' conservation advice and is not predicted to interfere the recovery of the species.

6.1.2 Vulnerable species

6.1.2.1 Ghost Bat (*Macroderma gigas*) – Vulnerable – High Likelihood of Occurrence

An assessment against the vulnerable species significant impact criteria is provided in Table 6-3 and shows that a significant impact to the Ghost Bat is not expected to result from the Proposed Action.

Table 6-3 Significant impact criteria assessment for the Ghost Bat

Vulnerable species significant impact criteria	Assessment
Lead to a long-term decrease in the size of an important population of a species	Not significant As described in Section 4.6.10.1.2, the Ghost Bat was not recorded in the GHD (2024) survey, however is considered likely to occur within the DE due to the presence of suitable habitat within the DE. The open Eucalypt woodland clay plain, Acacia shrubland thicket and Rocky hills and slopes habitats provide suitable supporting foraging habitat for the species. The Acacia shrubland thicket habitat has been avoided in the IDF. A maximum extent of 11.37 ha of supporting Ghost Bat habitat will be cleared for the Proposed Action. Ghost Bat populations display genetic variation as they are fragmented, with Pilbara populations being isolated from those in the Kimberley and NT (Armstrong and Wilmer, 2004). Given this, it is considered that all Ghost Bat populations represent an important population. Therefore, the Ghost Bats that may be utilising the DE are considered part of an important population. If the Ghost Bat is utilising the DE, they are anticipated to occur sporadically in low numbers due to there being no known roosts in the area. Given the small portion of suitable habitat to be cleared for the Proposed Action (up to 11.37 ha), the DE is not regarded as important to the local population. Therefore, it is not predicted that this clearing will result in a decline in population of the Ghost Bat. Other impacts to the Ghost Bat may occur as a result of interaction with infrastructure or disturbance from construction activities. Any impacts occurring as a result of this would be limited to a small number of individuals. Additional management measures will be implemented as detailed in the EMP. Indirect impacts may result in temporary avoidance behaviour and would potentially only impact a small number of individuals. Given the above, it is considered unlikely that the Proposed Action will result in a long-term decrease in the size of an important population of the Ghost Bat.
Reduce the area of occupancy of an important population	Not significant The Ghost Bats that may occur within the DE are considered part of an important population.

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Vulnerable species significant impact criteria	Assessment
	As described in Section 4.6.10.1.2, the Ghost Bat was not recorded in the GHD (2024) survey, however is considered likely to occur within the DE due to the presence of suitable habitat within the DE. The area of occupancy for the species is estimated at 1,104 km². The Open Eucalypt woodland clay plain, Acacia shrubland thicket and Rocky hills and slopes habitats provide suitable supporting foraging habitat for the species. A maximum extent of 11.37 ha of supporting Ghost Bat habitat will be cleared for the Proposed Action, representing 0.012% of available habitat within 20 km. Given that the species is mobile and the small portion of suitable supporting habitat to be cleared for the Proposed Action, the DE is not regarded as important to the local population. Therefore, it is not predicted that this clearing will result in a reduction of the area of occupancy of an important population.
Fragment an existing important population into two or more populations	Not significant As mentioned, the Ghost Bats that may occur within the DE are considered part of an important population. Given the small area of clearing required for the Proposed Action and the underground nature of the transmission line, it is not expected to create a large enough barrier to fragment existing populations of Ghost Bats. Suitable habitat for the species is common throughout the surrounding environment. In the short-term, individuals displaced by the Proposed Action are expected to disperse into nearby suitable habitat. The Proposed Action is not predicted to result in the fragmentation of an existing important population of the Ghost Bat into two or more populations.
Adversely affect habitat critical to the survival of a species	Not significant There is no critical habitat for the Ghost Bat within the DE.
Disrupt the breeding cycle of an important population	Not significant The DE does not contain suitable breeding habitat for the Ghost Bat and as such, clearing for the Proposed Action is not anticipated to disrupt the breeding cycle for this species.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Not significant A maximum extent of 11.37 ha of supporting habitat will be cleared for the Proposed Action. In the short term, individuals are expected to disperse into nearby suitable habitat. Thus, the Proposed Action is not expected to significantly impact isolation or connectivity of habitat on a local or regional scale. Clearing will be restricted to the DE and clearing locations will be demarcated prior to the commencement of clearing activities. No clearing of native vegetation or ground disturbance is to occur outside of the demarcated area. The small size of the DE represents only a small area of total available habitat in the surrounding habitat. Clearing of up to 11.37 ha of potential Ghost Bat habitat within the DE represents 0.012% of all available habitat within 20 km of the DE. It is not anticipated that the Proposed Action will modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	Not significant The presence of introduced predators is unlikely to be exacerbated by the Proposed Action. The measures outlined in the EMP are expected to reduce the introduction of weeds into new areas. These mitigation measures include, limiting vehicle access to designated access roads and implementing weed control and ground disturbance procedures. As such, the Proposed Action is not anticipated to result in an increase in invasive species that are harmful to the Ghost Bat.
Introduce disease that may cause the species to decline	Not significant While the Conservation advice for the Ghost Bat lists disease as a potential threat to the species, it does not identify any specific diseases as a threat to the Western Australian population of the species (TSSC, 2016). There is no credible impact pathway associated with the Proposed Action that could result in the introduction of a disease that may cause a decline in these species.

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Vulnerable species significant impact criteria	Assessment
Interfere substantially with the recovery of the species	Not significant The key threat identified in the Conservation Advice for the Ghost Bat (TSSC, 2016) is habitat loss and degradation due to mining activities. The Proposed Action is not anticipated to exacerbate this threat due to the limited extent of clearing in relation to available habitat in the surrounding environment. The Proposed Action is not expected to substantially interfere with the recovery of the Ghost Bat.

6.1.2.2 Grey Falcon (*Falco hypoleucos*) – Vulnerable – High Likelihood of Occurrence

An assessment against the vulnerable species significant impact criteria is provided in Table 6-5 and shows that a significant impact to the Grey Falcon is not expected to result from the Proposed Action.

Table 6-4 Significant impact criteria assessment for the Grey Falcon

Vulnerable species significant impact criteria	Assessment
Lead to a long-term decrease in the size of an important population of a species	Not significant As described in Section 4.6.10.1.4, Grey Falcon individuals potentially utilising the DE are considered part of an important population. The species was not recorded during the GHD (2024) survey but is considered highly likely to occur. If present, the species would likely use the Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats for foraging habitat and are considered supporting habitat. The IDF has avoided the Acacia shrubland thicket habitat. This species is anticipated to occur sporadically within the DE in low numbers due to lack of a permanent water source. The Open Eucalypt woodland habitat is common and widespread at both the local and regional scale. Clearing of up to 5.76 ha of potential Grey Falcon habitat represents 0.012% of available habitat within 20 km of the DE. Grey Falcons are highly mobile (Marchant and Higgins, 1993) and the Proposed Action will only clear a relatively small portion (up to 5.76 ha) of suitable foraging habitat, the DE is not regarded as important to the local population. The DE represents only a fraction of the area that would comprise the long-term range typically occupied by the species. Therefore, it is not predicted that this clearing will result in a decline in the Grey Falcon population. Other impacts to Grey Falcons may occur as a result of interaction with infrastructure or disturbance from construction activities. Any impacts occurring as a result would be limited to a small number of individuals. Additional management measures will be implemented as detailed in the EMP. Therefore, it is considered unlikely that the Proposed Action would result in a long-term decreased in the size of the important population of the Grey Falcon.
Reduce the area of occupancy of an important population	Not significant The Grey Falcons that may utilise the DE are considered part of an important population. The area of occupancy of this species is estimated to be 6,000 km² (Garnett <i>et al.</i>, 2011). The species was not recorded during the GHD (2024) survey but is considered highly likely to occur. If present, the species would likely use the Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats for foraging habitat and are considered supporting habitat. The Acacia shrubland thicket habitat has been avoided in the IDF. The Open Eucalypt Woodland habitat is common and widespread at both the local and regional scale. Clearing up to 5.76 ha of potential Grey Falcon habitat represents 0.012% of available habitat within 20 km of the DE. Given this, and the highly mobile nature and large area of occupancy of the species, the DE is not regarded as important to the local population. The DE represents only a fraction of the area that would comprise the long-term range typically occupied by the species. Therefore, it is not

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Vulnerable species significant impact criteria	Assessment
	predicted that this clearing will result in a reduction of area of occupancy of an important population.
Fragment an existing important population into two or more populations	Not significant As mentioned, the individuals potentially utilising the DE are part of an important population. However, given the relatively small area of the DE, the project infrastructure will not provide a large enough barrier to fragment the population. This species is highly mobile (Marchant and Higgins, 1993) and suitable habitat for the species is common throughout the region. In the short term, individuals displaced would disperse into nearby suitable habitat. Therefore, the Proposed Action is not expected to fragment the population of Grey Falcons into two or more populations.
Adversely affect habitat critical to the survival of a species	Not significant There is no critical habitat for the Grey Falcon within the DE.
Disrupt the breeding cycle of an important population	Not significant The DE does not contain suitable breeding habitat for the Grey Falcon and as such, clearing for the Proposed Action is not anticipated to disrupt the breeding cycle for this species.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Not significant The species was not recorded during the GHD (2024) survey but is considered highly likely to occur. If present, the species would likely use the Acacia shrubland thicket and Open Eucalypt woodland clay plain habitats for foraging habitat and are considered supporting habitat. The Acacia shrubland thicket habitat has been avoided in the IDF. The Open Eucalypt Woodland habitat is common and widespread at both the local and regional scale. Clearing up to 5.76 ha of potential Grey Falcon habitat represents 0.012% of available habitat within 20 km of the DE. Therefore, it is not anticipated that the Proposed Action will modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the Grey Falcon is likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	Not significant Predation by cats is reported as a threat in the species' conservation advice (TSSC, 2020). The presence of introduced predators is unlikely to be exacerbated by the Proposed Action. The measures outlined in the EMP are expected to reduce the introduction of weeds into new areas. These mitigation measures include, limiting vehicle access to designated access roads and implementing weed control and ground disturbance procedures. As such, the Proposed Action is not anticipated to result in an increase in invasive species that are harmful to the Grey Falcon.
Introduce disease that may cause the species to decline	Not significant The Grey Falcons conservation advice (TSSC, 2020) does not list disease as a threat. Further, there is no credible impact pathway associated with the Proposed Action that could result in the introduction of a disease that may cause a decline in this species.
Interfere substantially with the recovery of the species	Not significant According to the species conservation advice the main threats are (TSSC, 2020): – Invasive species – Climate change – Demographic and genetic stochastic events – Habitat loss and fragmentation – Disturbance – Direct mortality – Harvesting As described, the species was not recorded during the GHD (2024) survey but is considered highly likely to occur. If present, the species would likely use the Acacia shrubland thicket and

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Vulnerable species significant impact criteria	Assessment
	Open Eucalypt woodland clay plain habitats for foraging habitat and are considered supporting habitat. Grey Falcons are highly mobile (Marchant and Higgins, 1993) and suitable habitat for the species is common throughout the region. If present, in the short-term, individuals displaced by the Proposed Action would be expected to disperse into nearby suitable habitat. Hence, the Proposed Action is not anticipated to significantly impact isolation or connection of habitat. The small size of the DE represents only a fraction of the area that would comprise the long-term range typically occupied by individuals of the species. Clearing of up to 5.76 ha of potential Grey Falcon habitat represents 0.012% of available habitat within 20 km of the DE. Therefore, the Proposed Action is not expected to exacerbate the threats identified in the species' conservation advice and is not inconsistent with the objectives. Therefore, the Proposed Action is not predicted to interfere with the recovery of the species.

6.1.3 Migratory species

6.1.3.1 Migratory birds – High Likelihood of Occurrence

Assessment against the significant impact criteria (CoA, 2013) for Migratory species in Table 6-5 shows that the Proposed Action is not likely to have a significant impact on the Migratory species; the Barn Swallow, Oriental Pratincole and Yellow Wagtail.

Table 6-5. Significant impact criteria assessment for Migratory species - Barn Swallow, Oriental Pratincole and Yellow Wagtail

Migratory species significant impact criteria	Assessment
Substantially modify including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	Not significant The Barn Swallow, Oriental Pratincole and Yellow Wagtail may utilise the Open Eucalypt woodland clay plain and Acacia shrubland thicket habitats within the DE for foraging. The Acacia shrubland thicket habitat has been avoided in the IDF. As discussed in Section 4.6.10.2, these habitats in the DE are not considered important habitat for these species. With the use of these habitats limited to foraging/overfly habitat during the non-breeding season. Migratory birds are constantly moving from resource to resource and are not likely to rely on the habitats solely in the Survey Area (and hence DE) but may return on a seasonal basis if conditions are good (GHD, 2024). The Survey Area is not known to support large numbers of migratory birds, probably as it is inland and the drainage areas are minor (GHD, 2024). If the species are utilising these habitats it is anticipated to be in low numbers, and they would not rely on the habitats for survival. The Proposed Action is not expected to result in increased fragmentation, altered fire regimes or altered hydrological cycles.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	Not significant These Migratory species may utilise the Open Eucalypt woodland clay plain and Acacia shrubland thicket habitats within the DE for foraging. The habitats in the DE are not considered important habitat for these species, with the use of these habitats limited to foraging/overfly habitat during the non-breeding season. If the species are utilising these habitats it is anticipated to be in low numbers and they would not rely on the habitats for survival. The introduction and/or spread of weeds resulting from the Proposed Action is not expected to be significant as vehicle hygiene, weed control and ground disturbance procedures will be implemented. These 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

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Migratory species significant impact criteria	Assessment
	therefore, the introduction and/or spread of weeds resulting from the Proposed Action is not expected to be significant. The presence of introduced predators is unlikely to be exacerbated by the Proposed Action. Therefore, the Proposed Action does not introduce any credible impact pathways that could introduce an invasive species (or spread an existing invasive species) that may harm important habitat for the Barn Swallow, Oriental Pratincole and Yellow Wagtail.
Seriously disrupt the life cycle (breeding, feeding, migration or resting behaviour of an ecologically significant proportion of the population of a migratory species	Not significant The habitats in the DE are not considered important habitat for these species, with the use of these habitats limited to foraging/overfly habitat during the non-breeding season. If the species are utilising these habitats it is anticipated to be in low numbers and they would not rely on the habitats for survival. Any populations of these species within the DE are expected to be low density as the species are unlikely to be dependent on the habitats within the DE. These species do not breed in Australia. With habitats in the DE limited to overfly/foraging habitat. Given the extent of remaining habitat within the surrounding area that can be used for foraging for the species, it is not predicted that the Proposed Action will seriously disrupt the lifecycle of an ecologically significant proportion of the population of these Migratory species. Other impacts to these species may occur as a result of interaction or disturbance from construction activities. Any impacts occurring as a result of this would be limited to a small number of individuals and the management measures in the EMP (Appendix A) would reduce these impacts. Given this, it is considered unlikely that the Proposed Action will seriously disrupt the lifecycle of an ecologically significant proportion of the populations of the Barn Swallow, Oriental Pratincole and Yellow Wagtail.

7 Offsets

The Proposed Action is not anticipated to result in any significant residual impacts to Matters of National Environmental Significance. An offset strategy is not proposed as management and mitigation measures developed are expected to adequately reduce impacts as a result of the Proposed Action.

8 Conclusion

Horizon Power is proposing to construct a FES in Halls Creek in the east Kimberley region of WA. The Proposed Action will nominally consist of solar photovoltaic (PV) system (up to 4 megawatts alternating current (MWAC)), battery energy storage systems (BESS) (up to 2 megawatts MW / 2 megawatt-hour (MWh)), a network connection route (up to 3 km) and new thermal power station (up to 4 MW). The Proposed Action involves disturbance of up to 11.37 ha within a 64.42 ha DE.

The Proposed Action will result in up to 11.37 ha of fauna habitat which provides habitat for Threatened and/or Migratory fauna species. However, these habitats provide supporting habitat only for these species and clearing of this fauna habitat is not anticipated to result in a significant impact to the Gouldian Finch, Northern Blue-tongue Skink, Ghost Bat, Grey Falcon, Barn Swallow, Oriental Pratincole and Yellow Wagtail.

Other potential direct and indirect impacts to Threatened and/or Migratory fauna associated with the Proposed Action will not be significant at a local or regional scale. The avoidance with minimisation of impacts (including the minor drainage lines) will result in the ecological integrity of the DE being maintained.

As a renewable energy project, the Proposed Action has the potential to reduce up to 4,200 tonnes of CO₂e per annum compared to the emissions of the existing Halls Creek power station. The Proposed Action will ensure security of energy supply to Halls Creek after the expiry of the existing PPA and contribute to the local economy through construction and operation phase job opportunities.

9 References

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- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Ramsar Sites (DBCA-010)
- Public Drinking Water Source Areas (DWER-033)
- RIWI Act, Groundwater Areas (DWER-034)
- Clearing Regulations – Environmentally Sensitive Areas (DWER-046)
- DBCA – Legislated Lands and Waters (DBCA-011)
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Appendix A Environmental Management Plan

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Appendix B Geotechnical and Hydrology Desktop Assessment (Engeny, 2025)

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Appendix D Protected Matters Search Tool (20 km buffer)



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Feb-2026

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	16
Listed Migratory Species:	11

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	None
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)		[Resource Information]
Ramsar Site Name	Proximity	Buffer Status
Lakes argyle and kununurra	150 - 200km upstream from Ramsar site	In feature area
Ord river floodplain	200 - 300km upstream from Ramsar site	In feature area

Listed Threatened Species			[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.			
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat known to occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat may occur within area	In feature area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat may occur within area	In feature area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat may occur within area	In feature area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat may occur within area	In feature area
SHARK			
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area	In buffer area only
Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Marine Species			
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area	In buffer area only
Migratory Terrestrial Species			
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area	In feature area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Services Australia		
Lot 105 P057860 [AGPR6045]	WA	In feature area
Lot 87 D205582 [AGPR6052]	WA	In feature area

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area	In feature area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area	In buffer area only
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis as Rostratula benghalensis (sensu lato)			
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Reptile			
Crocodylus johnstoni			
Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area	In feature area

Extra Information

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

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